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

11/1/2003

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SECOND QUARTER 2003
Operation and Maintenance Status Report
April 1, 2003 – June 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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A Laboratory Analytical Reports for Soil Samples (on CD only)
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C 2nd Quarter 2003 Groundwater Sampling Logs
D 2nd 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.

James L. Young, P.G., REM President/CEO TERRAINE, Inc	11-17-03 Date	PG-FL2090, REM-6089 Registration Nos.

JAMES L YOUNG
LICENSE
NO. 2090
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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 Second Quarter 2003 O&M Report is to provide a summary of activities performed at the site during the period of April 1, 2003 to June 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).

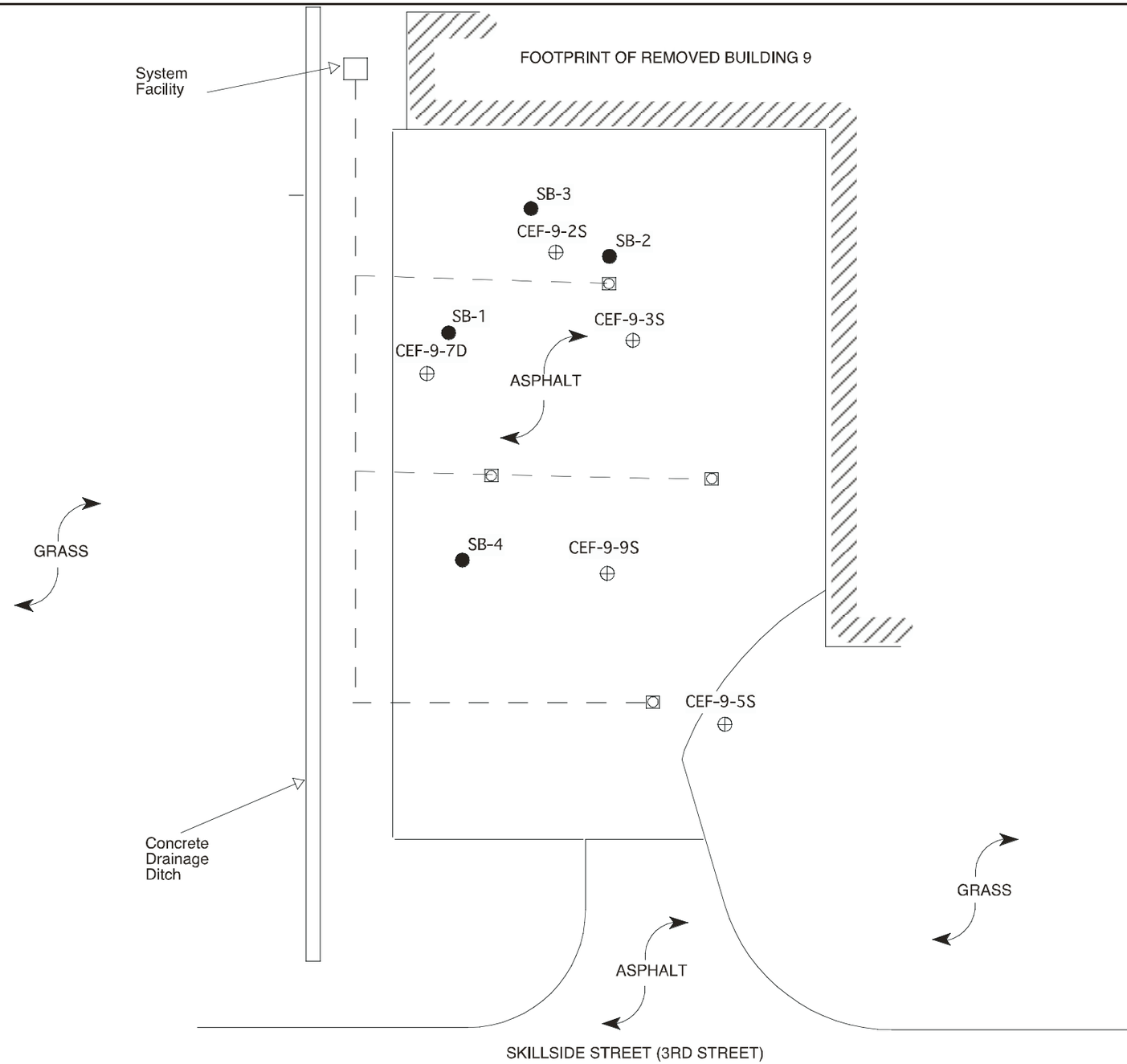
A Site Assessment Report (SAR) prepared for Building 9 (Harding Lawson Associates [HLA], 1998) concluded that operation of the two former USTs had resulted in contamination of soil and groundwater with fuel-related compounds, including Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX), Naphthalene, 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

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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

2nd QTR. 2003	Period	To Date
*Hours of Possible Operation:	2,184	21,624
*Hours of Actual Operation:	2,184	21, 154
*Percent Hours of Operation:	100	97.8

*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 April 1, 2003 to June 30, 2003, the nutrient injection system ran a total of 91 days out of a possible 91 days resulting in no system downtime.

2.3 Pressure/Flow Rate Monitoring

2.3.1 Nutrient Injection System

During the second 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 3.67 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 second quarter totaled 17.8 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

Second quarter depth-to-water measurements were recorded at selected monitoring wells on June 9, 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	01/09/01	100	3
	02/28/01	100	4.75
	03/30/01	100	4
	04/13/01	0	0
	05/10/01	0	0
	06/07/01	0	0
	07/02/01	0	0
	08/06/01	0	0
	09/11/01	0	0
	10/03/01	0	0
	11/15/01	0	0
	12/10/01	0	0
	01/11/02	100	4
	02/04/02	0	0
	03/11/02	25	1
	04/15/02	25	0
	05/13/02	25	1
	06/17/02	0	0
	07/16/02	0	0
	08/19/02	0	0
	09/25/02	0	0
	10/16/02	0	0
	11/19/02	0	0
	12/17/02	0	0
	01/30/03	100	3
	02/26/03	100	3
	03/25/03	100	3
	04/16/03	100	3
	05/28/03	100	2
	06/06/03	100	2

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	01/09/01	100	4
	02/28/01	50	4
	03/30/01	100	4
	04/13/01	100	5
	05/10/01	0	0
	06/07/01	0	0
	07/02/01	0	0
	08/06/01	0	0
	09/11/01	0	0
	10/03/01	0	0
	11/15/01	100	4
	12/10/01	0	0
	01/11/02	0	0
	02/04/02	0	0
	03/11/02	0	0
	04/15/02	0	0
	05/13/02	0	0
	06/17/02	25	1
	07/16/02	25	1
	08/19/02	25	1
	09/25/02	25	2
	10/16/02	25	1
	11/19/02	25	1
	12/17/02	15	2
	01/30/03	5	2
	02/26/03	15	2
	03/25/03	15	2
	04/16/03	15	2
	05/28/03	15	1
	06/06/03	15	1

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	01/09/01	100	4
	02/28/01	0	0
	03/30/01	100	3
	04/13/01	100	5
	05/10/01	100	3
	06/07/01	100	3
	07/02/01	100	3
	08/06/01	100	3
	09/11/01	100	3
	10/03/01	0	0
	11/15/01	0	0
	12/10/01	100	4
	01/11/02	100	4
	02/04/02	0	0
	03/11/02	0	0
	04/15/02	100	0
	05/13/02	0	0
	06/17/02	100	8
	07/16/02	100	8
	08/19/02	0	0
	09/25/02	100	0
	10/16/02	0	0
	11/19/02	100	8
	12/17/02	0	0
	01/30/03	0	0
	02/26/03	0	0
	03/25/03	0	0
	04/16/03	0	0
	05/28/03	0	0
	06/06/03	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	01/09/01	100	2.75
	02/28/01	50	5
	03/30/01	100	3
	04/13/01	100	4
	05/10/01	100	3
	06/07/01	100	3
	07/02/01	100	3
	08/06/01	100	3
	09/11/01	100	3
	10/03/01	100	6
	11/15/01	0	0
	12/10/01	0	0
	01/11/02	0	0
	02/04/02	100	4
	03/11/02	100	4
	04/15/02	100	0
	05/13/02	100	4
	06/17/02	0	0
	07/16/02	0	0
	08/19/02	100	8
	09/25/02	0	6
	10/16/02	100	8
	11/19/02	0	0
	12/17/02	100	5
	01/30/03	0	0
	02/26/03	0	0
	03/25/03	0	0
	04/16/03	0	0
	05/28/03	0	0
	06/06/03	0	0

NR = No Reading Taken
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)
01/09/01	NR	13.75	1	--
02/28/01	17	13.75	0.8	1.78
03/30/01	16	14	0.8	1.52
04/13/01	19	14	0.8	0.00
05/10/01	28	6	0.5	2.68
06/07/01	28	6	0.5	3.57
07/02/01	23	6	0.5	1.78
08/06/01	24	6	0.5	1.78
09/11/01	18	6	0.5	7.14
10/03/01	35	6	0.5	1.78
11/15/01	30	4	0.25	0.89
12/10/01	30	4	0.25	1.78
01/11/02	24	8	0.4	1.78
02/04/02	21	4	0.4	0.89
03/11/02	30	5	0.4	0.89
04/15/02	28	0	0.01	0.71
05/13/02	30	9	0.4	1.07
06/17/02	36	0	0.5	1.16
07/16/02	42	3.75	0.5	0.00
08/19/02	48	6	0.5	0.00
09/25/02	33	5	0.5	0.80
10/16/02	34	9	0.05	1.07
11/19/02	32	9	0.05	1.16
12/17/02	39	7	0.05	3.57
01/30/03	33	8.5	0.1	0.98
02/26/03	32	5	0.1	1.07
03/25/03	32	5	0.1	0.00
04/16/03	33	5	0.1	0.00
05/28/03	33	3	0.1	9.57
06/06/03	33	3	0.1	8.01

NR = No Reading Taken
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	12/18/00	78.74	no product	7.93	70.81
		01/18/01		no product	8.55	70.19
		01/24/01		no product	8.60	70.14
		01/31/01		no product	8.74	70.00
		02/07/01		no product	8.58	70.16
		02/14/01		no product	8.72	70.02
		02/21/01		no product	8.75	69.99
		03/07/01		no product	8.49	70.25
		03/20/01		no product	7.46	71.28
		04/03/01		no product	6.99	71.75
		04/17/01		no product	7.61	71.13
		05/01/01		no product	8.13	70.61
		06/14/01		no product	7.62	71.12
		07/24/01		no product	6.62	72.12
		08/13/01		no product	5.38	73.36
		09/17/01		no product	3.41	75.33
		10/22/01		no product	5.72	73.02
		11/13/01		no product	6.50	72.24
		12/17/01		no product	6.73	72.01
		03/18/02		no product	6.56	72.18
		06/05/02		no product	7.95	70.79
		09/26/02		no product	4.48	74.26
		12/11/02		no product	6.40	72.34
		03/13/03		no product	4.18	74.56
		06/09/03		no product	5.35	73.39
CEF-9-3S	15.54	12/18/00	78.81	no product	8.04	70.77
		01/18/01		no product	8.67	70.14
		01/24/01		no product	8.72	70.09
		01/31/01		no product	8.89	69.92
		02/07/01		no product	8.69	70.12
		02/14/01		no product	8.83	69.98
		02/21/01		no product	8.87	69.94
		03/07/01		no product	8.60	70.21
		03/20/01		no product	7.55	71.26
		04/03/01		no product	7.12	71.69
		04/17/01		no product	7.72	71.09
		05/01/01		no product	8.50	70.31
		06/14/01		no product	7.75	71.06
		07/24/01		no product	6.47	72.34
		08/13/01		no product	5.50	73.31
		09/17/01		no product	3.51	75.30
		10/22/01		no product	5.86	72.95
		11/13/01		no product	6.62	72.19
		12/17/01		no product	6.87	71.94
		03/18/02		no product	6.75	72.06
		06/05/02		no product	8.04	70.77
		09/16/02		no product	4.59	74.22
		12/11/02		no product	6.55	72.26
		03/13/03		no product	4.28	74.53
		06/09/03		no product	5.30	73.51

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	12/18/00	78.93	no product	8.34	70.59
		01/18/01		no product	8.96	69.97
		01/24/01		no product	9.03	69.90
		01/31/01		no product	9.13	69.80
		02/07/01		no product	8.97	69.96
		02/14/01		no product	9.11	69.82
		02/21/01		no product	9.10	69.83
		03/07/01		no product	8.81	70.12
		03/20/01		no product	7.61	71.32
		04/03/01		no product	7.40	71.53
		04/17/01		no product	8.02	70.91
		05/01/01		no product	8.25	70.68
		06/14/01		no product	7.99	70.94
		07/24/01		no product	6.91	72.02
		08/13/01		no product	5.78	73.15
		09/17/01		no product	3.70	75.23
		10/22/01		no product	6.21	72.72
		11/13/01		no product	6.97	71.96
		12/17/01		no product	7.17	71.76
		03/18/02		no product	7.02	71.91
		06/05/02		no product	8.36	70.57
		09/16/02		no product	4.75	74.18
		12/11/02		no product	6.90	72.03
		03/13/03		no product	4.57	74.36
		06/09/03		no product	5.50	73.43
CEF-9-7D	29.23	12/18/00	78.59	no product	7.83	70.76
		01/18/01		no product	8.45	70.14
		01/24/01		no product	8.50	70.09
		01/31/01		no product	8.63	69.96
		02/07/01		no product	8.46	70.13
		02/14/01		no product	8.61	69.98
		02/21/01		no product	8.62	69.97
		03/07/01		no product	8.36	70.23
		03/20/01		no product	7.29	71.30
		04/03/01		no product	6.90	71.69
		04/17/01		no product	7.52	71.07
		05/01/01		no product	8.02	70.57
		06/14/01		no product	7.51	71.08
		07/24/01		no product	6.38	72.21
		08/13/01		no product	5.28	73.31
		09/17/01		no product	3.25	75.34
		10/22/01		no product	5.66	72.93
		11/13/01		no product	6.42	72.17
		12/17/01		no product	6.65	71.94
		03/18/02		no product	6.48	72.11
		06/05/02		no product	7.83	70.76
		09/16/02		no product	4.31	74.28
		12/11/02		no product	6.34	72.25
		03/13/03		no product	4.05	74.54
		06/09/03		no product	4.90	73.69

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	12/18/00	78.89	no product	8.39	70.50
		01/18/01		no product	8.81	70.08
		01/24/01		no product	8.88	70.01
		01/31/01		no product	9.00	69.89
		02/07/01		no product	8.85	70.04
		02/14/01		no product	8.98	69.91
		02/21/01		no product	8.97	69.92
		03/07/01		no product	8.72	70.17
		03/20/01		no product	7.66	71.23
		04/03/01		no product	7.28	71.61
		04/17/01		no product	7.89	71.00
		05/01/01		no product	8.38	70.51
		06/14/01		no product	7.87	71.02
		07/24/01		no product	6.78	72.11
		08/13/01		no product	5.67	73.22
		09/17/01		no product	3.63	75.26
		10/22/01		no product	6.09	72.80
		11/13/01		no product	6.80	72.09
		12/17/01		no product	7.01	71.88
		03/18/02		no product	6.90	71.99
		06/05/02		no product	8.21	70.68
		09/16/02		no product	4.73	74.16
		12/11/02		no product	6.73	72.16
		03/13/03		no product	4.34	74.55
		06/09/03		no product	5.40	73.49

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 June 9, 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 June 9, 2003. The water table was encountered at 5 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
06/09/2003	SB-4	4	ND	ND	ND

Note: Laboratory sample collected at 4 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 June 9, 2003 during the second 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	Xylenes, Total	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) pyre	Dibenzo (a,h) anthrace	Benzo (g,h,i) perylene	TRPH (mg/kg)
SB-1	01/04/01	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
	06/27/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	09/20/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/12/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	03/07/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	06/20/02	<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
	09/26/02	<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
	12/10/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	03/14/03	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SB-2	01/04/01	<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
	06/27/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	09/20/01	<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
	12/12/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	03/07/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	06/20/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	09/26/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/10/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	03/14/03	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	01/04/01	<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
	06/27/01	<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
	09/20/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/12/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	03/07/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	06/20/02	NS	NS	NS	NS	N	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	09/26/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/10/02	NS	NS	NS	NS	N	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	03/14/03	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	01/04/01	<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
	06/27/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	09/20/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/12/01	<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
	03/07/02	<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
	06/20/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	09/26/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/10/02	<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
	03/14/03	<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
	06/09/03	<0.0011	<0.0011	<0.0011	0.0018	<0.0018	<0.005	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	35.9
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 s(SCTL) reported in mg/kg
Highlighted values indicate compounds that exceed SCTL
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	Xylenes, Total	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	12/18/00	<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
	01/18/01	<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
	01/24/01	<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
	01/31/01	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
	02/07/01	<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
	02/14/01	<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
	02/21/01	<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
	03/07/01	<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
	03/20/01	<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
	04/03/01	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
	04/17/01	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
	05/01/01	<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
	06/14/01	<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
	07/24/01	<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
	08/13/01	<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
	09/17/01	<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
	10/22/01	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
	11/13/01	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
	12/17/01	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
	03/18/02	<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
	06/05/02	<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
	09/16/02	0.756	19	<1.0	11.7	31.46	<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
	12/10/02	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
	03/13/03	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
	06/09/03	<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

TABLE 3-2
GROUNDWATER ANALYTICAL RESULTS

BUILDING 9 NUTRIENT INJECTION SYSTEM
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well Identificaltion	Sample Date	Benzene	Ethyl Benzene	Toluene	Xylenes, Total	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	12/18/00	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
	01/18/01	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
	01/24/01	<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
	01/31/01	<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
	02/07/01	0.36	12	1.9	89	103.3	<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
	02/14/01	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
	02/21/01	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
	03/07/01	<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
	03/20/01	<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
	04/03/01	<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
	04/17/01	<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
	05/01/01	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
	06/14/01	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
	07/24/01	<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
	08/13/01	<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
	09/17/01	<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
	10/22/01	<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
	11/13/01	<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
	12/17/01	<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
	03/18/02	<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
	06/05/02	<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
	09/16/02	<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
	12/10/02	<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
	03/13/03	<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
	06/09/03	<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

TABLE 3-2
GROUNDWATER ANALYTICAL RESULTS

BUILDING 9 NUTRIENT INJECTION SYSTEM
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well Identificaltion	Sample Date	Benzene	Ethyl Benzene	Toluene	Xylenes, Total	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	12/18/00	<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
	01/18/01	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
	01/24/01	<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
	01/31/01	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
	02/07/01	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
	02/14/01	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
	02/21/01	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
	03/07/01	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
	03/20/01	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
	04/03/01	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
	04/17/01	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
	05/01/01	<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
	06/14/01	<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
	07/24/01	<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
	08/13/01	<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
	09/17/01	<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
	10/22/01	<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
	11/13/01	<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
	12/17/01	<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
	03/18/02	<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
	06/05/02	<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
	09/16/02	<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
	12/10/02	<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
	03/13/03	<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
	06/09/03	<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

TABLE 3-2
GROUNDWATER ANALYTICAL RESULTS

BUILDING 9 NUTRIENT INJECTION SYSTEM
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well Identificaltion	Sample Date	Benzene	Ethyl Benzene	Toluene	Xylenes, Total	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	12/18/00	<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
	01/18/01	<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
	01/24/01	<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
	01/31/01	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
	02/07/01	<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
	02/14/01	<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
	02/21/01	<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
	03/07/01	<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
	03/20/01	<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
	04/03/01	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
	04/17/01	<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
	05/01/01	<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
	06/14/01	<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
	07/24/01	<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
	08/13/01	<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
	09/17/01	<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
	10/22/01	<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
	11/13/01	<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
	12/17/01	<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
	03/18/02	<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
	06/05/02	<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
	09/16/02	<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
	12/10/02	<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
	03/13/03	<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
	06/09/03	<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

TABLE 3-2
GROUNDWATER ANALYTICAL RESULTS

BUILDING 9 NUTRIENT INJECTION SYSTEM
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well Identificaltion	Sample Date	Benzene	Ethyl Benzene	Toluene	Xylenes, Total	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	01/18/01	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
	01/24/01	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
	01/31/01	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
	02/07/01	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
	02/14/01	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
	02/21/01	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
	03/07/01	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
	03/20/01	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
	04/03/01	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
	04/17/01	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
	05/01/01	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
	06/14/01	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
	07/24/01	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
	08/13/01	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
	09/17/01	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
	10/22/01	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
	11/13/01	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
	12/17/01	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
	03/18/02	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
	06/05/02	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
	09/16/02	<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
	12/10/02	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
	03/13/03	<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
	06/09/03	<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
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; except Nitrate, Nitrite, and Phosphate, which are reported in mg/L
1 = Ch 62-777 F.A.C Groundwater Cleanup Target Levels (GCTL) reported in ug/L
Highlighted values indicate compounds that exceed the GCTL

TABLE 3-3
GROUNDWATER FIELD ANALYTICAL RESULTS

BUILDING 9 NUTRIENT INJECTION SYSTEM
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

	Date	pH	Conductivity (mS/cm)	Temperature (^oC)	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	12/18/00	6.19	0.192	27.20	0.0	NR	80	1.2	0.3
	01/18/01	6.19	0.106	23.40	2.5	1000+	400+	0.0	0.3
	01/24/01	6.41	0.650	22.30	3.9	1000+	400+	0.0	0.1
	01/31/01	6.49	0.062	25.10	4.7	1000+	400	0.0	0.2
	02/07/01	6.42	0.060	22.40	5.2	1000+	400+	0.2	0.1
	02/14/01	6.30	0.070	23.00	5.8	1000+	400+	0.0	0.7
	02/21/01	6.30	0.070	23.00	6.3	NR	NR	0.0	0.1
	03/07/01	6.60	0.080	22.00	6.0	NR	NR	0.2	0.1
	03/20/01	6.37	0.092	22.60	6.6	1000+	400+	0.0	0.5
	04/03/01	6.40	0.100	23.00	6.5	>	400+	0.2	0.5
	04/17/01	8.55	0.110	23.00	4.0	1000+	400+	0.2	0.1
	05/01/01	6.20	0.110	23.00	3.0	1000+	400+	0.2	0.1
	06/14/01	5.74	0.128	25.00	2.0	1000+	400+	0.0	0.1
	07/24/01	5.71	0.144	26.4	2.1	500	120	0.6	0.1
	08/13/01	6.11	0.153	27.8	1.9	1000+	220	0.0	0.3
	09/17/01	5.59	0.174	27.8	1.7	180	60	1.8	0.2
	10/22/01	6.13	0.167	27.3	1.8	1000+	400+	1.0	0.1
	11/13/01	6.38	0.163	26.1	1.6	160	60	1.0	0.5
	12/17/01	6.00	0.146	25.6	1.5	240	60	1.0	1.0
	03/18/02	6.13	0.140	23.6	1.2	200	60	0.6	0.3
	06/05/02	6.18	0.120	26.6	1.0	240	60	0.2	0.1
	09/16/02	5.91	0.154	28.8	0.2	NR	NR	1.0	0.5
	12/11/02	5.50	NR	25.4	0.2	95	NR	NR	0.4
	03/13/03	6.48	0.148	22.21	0.36	117	40	1.4	0.3
	06/09/03	6.46	0.23	26.14	4.65	181	25	0.0	0.0
CEF-9-3S	12/18/00	6.49	0.348	25.40	0.0	17	160	3.4	0.5
	01/18/01	6.50	0.131	23.00	1.6	1000+	600	0.2	0.5
	01/24/01	6.67	0.087	22.30	1.5	1000+	300	0.4	0.3
	01/31/01	6.67	0.087	23.50	2.6	1000+	400	0.0	0.6
	02/07/01	6.47	0.074	22.20	1.6	1000+	400+	1.2	0.1
	02/14/01	6.50	0.067	22.00	2.4	1000+	400+	0.0	0.5
	02/21/01	6.40	0.070	23.00	2.2	400	100	0.2	0.1
	03/07/01	6.70	0.080	22.00	2.5	300	60	0.8	0.1
	03/20/01	6.14	0.073	22.70	2.6	250	80	0.6	0.3
	04/03/01	6.10	0.080	23.00	3.4	200	400+	0.1	0.1
	04/17/01	5.90	0.080	23.00	1.8	160	80	0.8	0.5
	05/01/01	6.20	0.090	24.00	1.7	120	60	1.2	0.3
	06/14/01	5.41	0.098	26.10	1.9	228	80	1.1	2.0
	07/24/01	6.82	0.111	27.20	3.1	120	40	2.0	2.0
	08/13/01	6.61	0.108	27.90	2.5	84	60	2.2	0.5
	09/17/01	6.24	0.139	28.20	2.1	60	60	1.0	0.3
	10/22/01	6.82	0.119	27.40	1.8	120	80	1.4	0.7
	11/13/01	6.58	0.121	26.30	0.5	100	40	1.4	0.8
	12/17/01	5.00	0.118	25.60	1.7	100	60	1.2	1.0
	03/18/02	6.19	0.138	23.4	3.9	60	40	1.0	0.4
	06/05/02	6.18	0.158	27.5	1.6	80	40	0.8	0.5
	09/16/02	6.20	0.160	29.1	0.6	380	40	0.1	0.5
	12/11/02	5.80	NR	25.9	0.2	30	80	0.9	0.3
	03/13/03	6.32	0.206	22.40	1.06	64	20	1.0	0.3
	06/09/03	6.07	0.187	26.68	2.32	124	10	0.0	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 (^oC)	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	12/18/00	6.20	0.186	22.70	0.0	10	100	0.0	0.1
	01/18/01	6.43	0.158	22.40	3.8	1000+	400+	0.6	0.1
	01/24/01	6.54	0.159	21.40	3.5	200	100	0.4	0.0
	01/31/01	6.51	0.178	22.80	4.2	350	400	0.6	0.1
	02/07/01	6.55	0.163	21.80	4.0	220	120	0.2	0.0
	02/14/01	6.40	0.150	22.00	3.4	1000+	400+	0.0	0.2
	02/21/01	6.40	0.150	21.00	4.5	140	100	0.2	0.1
	03/07/01	6.57	0.141	20.90	3.3	300	80	0.2	0.0
	03/20/01	6.20	0.130	21.00	3.5	300	160	0.1	0.1
	04/03/01	5.90	0.070	21.00	5.7	500	120	0.4	0.1
	04/17/01	6.10	0.080	22.00	4.3	260	100	0.9	0.1
	05/01/01	6.10	0.110	22.00	3.4	280	100	0.4	0.1
	06/14/01	6.11	0.119	25.20	NR	1000+	400+	0.0	3.0
	07/24/01	5.36	0.062	25.50	3.8	260	120	1.0	0.1
	08/13/01	6.85	0.058	26.60	3.8	1000+	180	0.0	0.1
	09/17/01	6.57	0.164	26.50	5.5	200	80	0.6	0.1
	10/22/01	6.27	0.074	25.90	2.5	220	80	0.8	0.1
	11/13/01	6.71	0.075	24.90	2.1	80	60	0.4	0.1
	12/17/01	6.00	0.072	24.20	2.9	140	40	0.6	0.0
	03/18/02	6.44	0.070	22.0	2.3	80	40	0.4	0.0
	06/05/02	6.43	0.117	25.3	1.6	80	40	0.2	0.0
	09/16/02	6.79	0.085	27.9	3.4	110	60	0.1	0.0
	12/11/02	6.09	NR	24.6	1.1	22	60	0.0	0.1
	03/13/03	3.93	0.277	20.36	5.44	68	140	0.0	0.0
	06/09/03	6.52	0.138	24.91	0.01	122	40	2.0	0.0
CEF-9-7D	12/18/00	7.45	0.264	25.20	0.1	8	85	0.0	0.1
	01/18/01	6.69	0.133	24.40	2.0	80	100	0.4	0.1
	01/24/01	6.29	0.079	24.20	1.9	130	100	0.6	0.0
	01/31/01	6.29	0.092	25.40	1.0	50	60	0.1	0.1
	02/07/01	5.93	0.057	24.20	2.4	140	60	0.2	0.0
	02/14/01	5.90	0.050	24.00	2.6	70	40	0.2	0.1
	02/21/01	5.80	0.050	24.00	2.4	100	40	0.4	0.0
	03/07/01	6.10	0.060	23.30	1.9	140	40	0.6	0.0
	03/20/01	5.47	0.049	23.60	2.4	50	40	0.3	0.1
	04/03/01	5.40	0.050	23.00	2.8	80	40	0.4	0.1
	04/17/01	5.30	0.050	24.00	2.7	60	40	0.6	0.0
	05/01/01	5.50	0.050	24.00	2.5	80	40	0.8	0.0
	06/14/01	9.82	0.047	24.40	NR	102	40	0.6	0.0
	07/24/01	5.42	0.043	24.30	2.5	80	20	0.6	0.0
	08/13/01	5.44	0.041	24.80	2.5	66	40	0.8	0.0
	09/17/01	5.47	0.065	25.00	8.1	50	40	0.6	0.1
	10/22/01	4.87	0.029	26.00	2.9	60	20	0.4	0.0
	11/13/01	6.21	0.043	24.50	2.6	80	40	0.6	0.0
	12/17/01	5.00	0.033	25.00	1.7	90	20	0.6	0.0
	03/18/02	5.47	0.036	25.1	1.6	50	20	0.0	0.0
	06/05/02	5.36	0.390	25.9	2.0	90	20	0.6	0.0
	09/16/02	5.30	0.037	26.1	0.4	100	20	0.4	0.0
	12/11/02	4.16	NR	25.3	0.5	63	40	0.8	0.1
	03/13/03	3.90	0.043	23.92	2.20	115	15	0.2	0.0
	06/09/03	5.07	0.041	24.43	0	118	10	0.2	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 (^oC)	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	12/18/01	5.31	0.121	26.30	0.0	NR	NR	NR	NR
	01/18/01	5.44	0.058	23.00	2.1	500	400+	1.0	5.0
	01/24/01	5.53	0.054	22.60	1.7	500	200	0.8	5.0
	01/31/01	5.44	0.059	23.30	2.1	500	400	1.1	5.0
	02/07/01	5.46	0.052	22.60	2.4	260	100	0.6	5.0
	02/14/01	5.40	0.050	23.00	2.0	120	140	1.0	4.0
	02/21/01	5.40	0.050	22.00	1.9	300	80	0.6	5.0
	03/07/01	5.56	0.540	22.00	1.5	200	80	0.6	5.0
	03/20/01	5.28	0.052	22.30	2.3	360	80	0.4	5.0
	04/03/01	5.00	0.060	22.00	2.4	280	160	0.3	5.0
	04/17/01	5.00	0.060	23.00	2.2	200	100	0.6	5.0
	05/01/01	5.20	0.060	23.00	2.2	220	60	0.4	5.0
	06/14/01	5.02	0.064	26.00	NR	88	60	1.8	0.5
	07/24/01	4.35	0.057	26.80	2.1	170	40	1.0	2.0
	08/13/01	8.54	0.049	27.40	2.5	220	40	1.0	5.0
	09/17/01	5.08	0.088	28.20	3.1	130	20	0.8	0.6
	10/22/01	4.94	0.095	27.20	2.7	160	40	1.0	5.0
	11/13/01	5.21	0.080	25.90	1.2	110	40	1.4	1.0
	12/17/01	5.00	0.068	25.40	1.7	80	20	1.0	1.0
	03/18/02	5.15	0.104	23.6	1.2	100	20	0.6	1.0
	06/05/02	5.35	0.119	26.7	1.4	10	20	0.6	0.7
	09/16/02	5.13	0.136	28.4	0.1	380	20	0.7	2.0
	12/11/02	4.62	NR	26.1	4.1	38	40	0.9	2.0
	03/13/03	5.81	0.205	22.5	0.3	53	10	1.0	0.5
	06/09/03	4.88	0.259	25.81	0.00	242	5.0	0.0	0.0

NR = No Reading Taken

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.

Second 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	*June 2003 Laboratory Analytical Reports for Soil Samples*
B	*June 2003 Laboratory Analytical Reports for Groundwater Samples*
C	*2nd Quarter 2003 Groundwater Sampling Logs*
D	*2nd Quarter 2003 Site Visit Reports*

APPENDIX A

June 2003 Laboratory Analytical Reports for Soil Samples

TEST AMERICA ANALYTICAL TESTING CORP.-NASHVILLE

COOLER RECEIPT FORM BC# 335051

Client: Terraine, Inc.

Cooler Received On: 6/10/03 And Opened On: 6/10/03 By: Shane Gambill

Shane Gambill
(Signature)

1. Temperature of Cooler when opened 1.0 Degrees Celsius
2. Were custody seals on outside of cooler?.....YES...NO...NA
   a. ~~If yes, how many, what kind and where:~~ 1/2/3/4 FRONT/BACK/SIDE
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 bottles arrive in good condition(unbroken)?.....YES...NO...NA
11. Were all bottle labels complete (#,date,signed,pres,etc)?.....YES...NO...NA
12. Did all bottle labels and tags agree with custody papers?.....YES...NO...NA
13. Were correct bottles 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 bottle?.....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.

335051

48 HOUR HOLDING

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		TERRAINE PROJECT NO.
TAI ACCOUNT NO: 5463	NAME OF PM TO BILL: James L. Young	0 4 - 4 1 0 0 1
TAI QUOTE NO: 09230210902	PURCHASE ORDER NO: 04-41001/2.4.2	TERRAINE TASK NO.
		[redacted] 2.4.2

DATE: 6/9/03
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/ D. Romero
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:

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	6/9/03	07:55	GW	5		1	3		9			X					X		X				X	X	X					89394
	CEF-9-7D	6/9/03	9:07	GW	5		1	3		9			X					X		X				X	X	X					395
	CEF-9-2S	6/9/03	11:06	GW	5		1	3		9			X					X		X				X	X	X					396
	CEF-9-3S	6/9/03	12:00	GW	5		1	3		9			X					X		X				X	X	X					397
	CEF-9-9S	6/9/03	13:03	GW	5		1	3		9			X					X		X				X	X	X					398
	EB-BLDG9	6/9/03	13:55	GW	5		1	3		9			X					X		X				X	X	X					399
	TRIP BLANK	--	--	GW	1					1			X																		400
	SB-4	6/9/03	07:45	Soil				1	~~3~~	1			X					X		X											89393

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date: 6/10/03	Time: 8:00

05/1/01 Revision

TestAmerica
ANALYTICAL TESTING CORPORATION

2960 Foster Creighton Drive • Nashville, Tennessee 37204
800-765-0980 • 615-726-3404 Fax

6/19/03

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.
Laboratory Project Number: 335051.

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. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980.

Sample Identification	Lab Number	Collection Date
SB-4	03-A89393	6/ 9/03
CEF-9-5S	03-A89394	6/ 9/03
CEF-9-7D	03-A89395	6/ 9/03
CEF-9-2S	03-A89396	6/ 9/03
CEF-9-3S	03-A89397	6/ 9/03
CEF-9-9S	03-A89398	6/ 9/03
EB-BLDG9	03-A89399	6/ 9/03
Trip Blank	03-A89400	

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800-765-0980 • 615-726-3404 Fax

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: _____ Report Date: 6/19/03

Paul E. Lane, Jr., Lab Director
Michael H. Dunn, M.S., Technical Director
Johnny A. Mitchell, Dir. Technical Serv.
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
Project Name: Building 9
Sampler: K.BAER/D.ROMERO

Lab Number: 03-A89393
Sample ID: SB-4
Sample Type: Soil
Site ID:

Date Collected: 6/ 9/03
Time Collected: 8:00
Date Received: 6/10/03
Time Received: 8:00
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
GENERAL CHEMISTRY PARAMETERS									
% Dry Weight	93.3	%		1	6/11/03		M. Ricke	CLP	5137
ORGANIC PARAMETERS									
Benzene	ND	mg/kg	0.0011	1	6/13/03	3:08	J. Redmond	8021B	6104
Ethylbenzene	ND	mg/kg	0.0011	1	6/13/03	3:08	J. Redmond	8021B	6104
Toluene	ND	mg/kg	0.0011	1	6/13/03	3:08	J. Redmond	8021B	6104
Xylenes, total	0.0018	mg/kg	0.0011	1	6/13/03	3:08	J. Redmond	8021B	6104
MTBE	ND	mg/kg	0.005	1	6/13/03	3:08	J. Redmond	8021B	6104
TRPH	35.9	mg/kg	10.7	1	6/16/03	16:53	M.Jarrett	FPRO	8361
Naphthalene	ND	mg/kg	0.071	1	6/14/03	14:06	J.Saiyasak	8270C	8579
Acenaphthene	ND	mg/kg	0.071	1	6/14/03	14:06	J.Saiyasak	8270C	8579
Anthracene	ND	mg/kg	0.071	1	6/14/03	14:06	J.Saiyasak	8270C	8579
Fluoranthene	ND	mg/kg	0.071	1	6/14/03	14:06	J.Saiyasak	8270C	8579
Fluorene	ND	mg/kg	0.071	1	6/14/03	14:06	J.Saiyasak	8270C	8579
Pyrene	ND	mg/kg	0.071	1	6/14/03	14:06	J.Saiyasak	8270C	8579
Benzo(a)anthracene	ND	mg/kg	0.071	1	6/14/03	14:06	J.Saiyasak	8270C	8579
Benzo(a)pyrene	ND	mg/kg	0.071	1	6/14/03	14:06	J.Saiyasak	8270C	8579
Benzo(b)fluoranthene	ND	mg/kg	0.071	1	6/14/03	14:06	J.Saiyasak	8270C	8579
Benzo(k)fluoranthene	ND	mg/kg	0.071	1	6/14/03	14:06	J.Saiyasak	8270C	8579
Chrysene	ND	mg/kg	0.071	1	6/14/03	14:06	J.Saiyasak	8270C	8579
Dibenzo(a,h)anthracene	ND	mg/kg	0.071	1	6/14/03	14:06	J.Saiyasak	8270C	8579
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.071	1	6/14/03	14:06	J.Saiyasak	8270C	8579
Acenaphthylene	ND	mg/kg	0.071	1	6/14/03	14:06	J.Saiyasak	8270C	8579
Benzo(g,h,i)perylene	ND	mg/kg	0.071	1	6/14/03	14:06	J.Saiyasak	8270C	8579
Phenanthrene	ND	mg/kg	0.071	1	6/14/03	14:06	J.Saiyasak	8270C	8579

Sample report continued . . .

TestAmerica
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ANALYTICAL REPORT

Laboratory Number: 03-A89393
Sample ID: SB-4
Project: 04-41001

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
1-Methylnapthalene	ND	mg/kg	0.071	1	6/14/03	14:06	J.Saiyasak	8270C	8579
2-Methylnapthalene	ND	mg/kg	0.071	1	6/14/03	14:06	J.Saiyasak	8270C	8579

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Time	Analyst	Method
FL-PRO	25. g	2.0 ml	6/11/03		M. Cauthen	FDEP
BNA's	30.4 gm	1.0 ml	6/11/03		M. Cauthen	3550
BTX Prep	4.88 g	5.0 ml	6/ 9/03	8:00	J. Redmond	5035

Surrogate	% Recovery	Target Range
UST surr-Trifluorotoluene	88.	65. - 119.
TPH sur, o-Terphenyl	83.	62. - 109.
TPH Surr, C-35	99.	60. - 118.
BNA Surr-Nitrobenzene-d5	83.	44. - 99.
BNA Surr-2-Fluorobiphenyl	74.	45. - 94.
BNA Surr-Terphenyl-d14	84.	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 reported results for metals or Organic analyses have been corrected for dry weight.
Flapro ms/msds recovery could not be determined due to
sample matrix

End of Sample Report.

APPENDIX B

June 2003 Laboratory Analytical Reports for Groundwater Samples

TEST AMERICA ANALYTICAL TESTING CORP.-NASHVILLE

COOLER RECEIPT FORM BC# 335051

Client: Terraine, Inc.

Cooler Received On: 6/10/03 And Opened On: 6/10/03 By: Shane Gambill

Shane Gambill
(Signature)

1. Temperature of Cooler when opened 1.0 Degrees Celsius
2. Were custody seals on outside of cooler?.....YES...NO...NA
   a. ~~If yes, how many, what kind and where:~~ 1/2/3/4 FRONT/BACK/SIDE
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 bottles arrive in good condition(unbroken)?.....YES...NO...NA
11. Were all bottle labels complete (#,date,signed,pres,etc)?.....YES...NO...NA
12. Did all bottle labels and tags agree with custody papers?.....YES...NO...NA
13. Were correct bottles 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 bottle?.....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.

335051

48 HOUR HOLDING

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		TERRAINE PROJECT NO.
TAI ACCOUNT NO: 5463	NAME OF PM TO BILL: James L. Young	0 4 - 4 1 0 0 1
TAI QUOTE NO: 09230210902	PURCHASE ORDER NO: 04-41001/2.4.2	TERRAINE TASK NO.
		[redacted] 2.4.2

DATE: 6/9/03
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/ D. Romero
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:

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	6/9/03	07:55	GW	5		1	3		9			X					X		X				X	X	X					89394
	CEF-9-7D	6/9/03	9:07	GW	5		1	3		9			X					X		X				X	X	X					395
	CEF-9-2S	6/9/03	11:06	GW	5		1	3		9			X					X		X				X	X	X					396
	CEF-9-3S	6/9/03	12:00	GW	5		1	3		9			X					X		X				X	X	X					397
	CEF-9-9S	6/9/03	13:03	GW	5		1	3		9			X					X		X				X	X	X					398
	EB-BLDG9	6/9/03	13:55	GW	5		1	3		9			X					X		X				X	X	X					399
	TRIP BLANK	--	--	GW	1					1			X																		400
	SB-4	6/9/03	07:45	Soil				1	~~3~~	1			X					X		X											89393

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date: 6/10/03	Time: 8:00

05/1/01 Revision

Jim D. Jacobs

From: Paul Buckingham

Sent: Friday, June 06, 2003 7:31 PM

To: Mark Beasley (mbeasley@testamericainc.com); Chris Wilmoth (cwilmoth@testamericainc.com); Jim D. Jacobs (JDJacobs@testamericainc.com); Shawn Gracey; Ben Wright; Marvin Blumhoefer; Mike McBride; Shane Gambill

Subject: The Terraine Alert

I changed 3 sets of waters to 8270 SIMS (from PAH 8270).

The alert should be used for 3 reasons…
SIMS for PAH waters (when the client has been writing only "PAH 8270")
300.0 for nitrate (the client just writes "nitrate and nitrite")
and 300.0 for nitrite

Always try to be suspicious of water requests in FI for regular 8270.
FI only accepts SIMS or 8310 or 610 by HPLC for waters. It is possible but very unlikely.

TestAmerica
ANALYTICAL TESTING CORPORATION

2960 Foster Creighton Drive • Nashville, Tennessee 37204
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6/19/03

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.
Laboratory Project Number: 335051.

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. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980.

Sample Identification	Lab Number	Collection Date
SB-4	03-A89393	6/ 9/03
CEF-9-5S	03-A89394	6/ 9/03
CEF-9-7D	03-A89395	6/ 9/03
CEF-9-2S	03-A89396	6/ 9/03
CEF-9-3S	03-A89397	6/ 9/03
CEF-9-9S	03-A89398	6/ 9/03
EB-BLDG9	03-A89399	6/ 9/03
Trip Blank	03-A89400	

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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: _____ Report Date: 6/19/03

Paul E. Lane, Jr., Lab Director
Michael H. Dunn, M.S., Technical Director
Johnny A. Mitchell, Dir. Technical Serv.
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
Project Name: BUILDING 9
Sampler: K.BAER/D.ROMERO

Lab Number: 03-A89394
Sample ID: CEF-9-5S
Sample Type: Water
Site ID:

Date Collected: 6/ 9/03
Time Collected: 7:58
Date Received: 6/10/03
Time Received: 8:00
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	6/11/03	8:42	I. Ahmed	8021B	4959
Ethylbenzene	ND	ug/L	1.0	1.0	6/11/03	8:42	I. Ahmed	8021B	4959
Toluene	ND	ug/L	1.0	1.0	6/11/03	8:42	I. Ahmed	8021B	4959
Xylenes (Total)	ND	ug/L	1.0	1.0	6/11/03	8:42	I. Ahmed	8021B	4959
Methyl-t-butylether	ND	ug/L	1.0	1.0	6/11/03	8:42	I. Ahmed	8021B	4959
TRPH	ND	ug/L	222.	1.0	6/15/03	13:27	M.Jarrett	FPRO	9365
EXTRACTABLE ORGANICS									
Acenaphthene	ND	ug/L	0.10	1.0	6/17/03	20:23	D. Harris	8270C-SIM	8304
Acenaphthylene	ND	ug/L	0.10	1.0	6/17/03	20:23	D. Harris	8270C-SIM	8304
Anthracene	ND	ug/L	0.10	1.0	6/17/03	20:23	D. Harris	8270C-SIM	8304
Benzo(a)anthracene	ND	ug/L	0.10	1.0	6/17/03	20:23	D. Harris	8270C-SIM	8304
Benzo(a)pyrene	ND	ug/L	0.10	1.0	6/17/03	20:23	D. Harris	8270C-SIM	8304
Benzo(b)fluoranthene	ND	ug/L	0.10	1.0	6/17/03	20:23	D. Harris	8270C-SIM	8304
Benzo(g,h,i)perylene	ND	ug/L	0.10	1.0	6/17/03	20:23	D. Harris	8270C-SIM	8304
Benzo(k)fluoranthene	ND	ug/L	0.10	1.0	6/17/03	20:23	D. Harris	8270C-SIM	8304
Chrysene	ND	ug/L	0.10	1.0	6/17/03	20:23	D. Harris	8270C-SIM	8304
Dibenz(a,h)anthracene	ND	ug/L	0.10	1.0	6/17/03	20:23	D. Harris	8270C-SIM	8304
Fluoranthene	ND	ug/L	0.10	1.0	6/17/03	20:23	D. Harris	8270C-SIM	8304
Fluorene	ND	ug/L	0.10	1.0	6/17/03	20:23	D. Harris	8270C-SIM	8304
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.10	1.0	6/17/03	20:23	D. Harris	8270C-SIM	8304
2-Methylnaphthalene	ND	ug/L	0.10	1.0	6/17/03	20:23	D. Harris	8270C-SIM	8304
Naphthalene	ND	ug/L	0.10	1.0	6/17/03	20:23	D. Harris	8270C-SIM	8304
Phenanthrene	ND	ug/L	0.10	1.0	6/17/03	20:23	D. Harris	8270C-SIM	8304
Pyrene	0.11	ug/L	0.10	1.0	6/17/03	20:23	D. Harris	8270C-SIM	8304
1-Methylnaphthalene	ND	ug/L	0.10	1.0	6/17/03	20:23	D. Harris	8270C-SIM	8304

Sample report continued . . .

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ANALYTICAL REPORT

Laboratory Number: 03-A89394
Sample ID: CEF-9-5S
Project: 04-41001

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
MISCELLANEOUS CHEMISTRY									
Nitrate-N as N	0.13	mg/L	0.10	1.0	6/10/03	14:37	S. Overton	300	4730
Nitrite-N as N	ND	mg/L	0.10	1.0	6/10/03	14:37	S. Overton	300	4730
Ortho Phosphate as P	ND	mg/L	0.100	1.0	6/11/03	8:25	T. Beverly	365.2	4723

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Time	Analyst	Method
PAH-SIM	980. ml	1.0 ml	6/13/03		M. Cauthen	3510C
Fla Pro	900. ml	2.0 ml	6/13/03		M. Cauthen	FDEP

Surrogate	% Recovery	Target Range
TPH Surr., O-Terphenyl	54. #	82. - 142.
TPH Surr, C-35	86.	55. - 118.
BTEX/GRO Surr., a,a,a-TFT	96.	69. - 129.
BNA Surr-Nitrobenzene-d5	86.	34. - 107.
BNA Surr-2-Fluorobiphenyl	87.	40. - 96.
BNA Surr-Terphenyl-d14	116. #	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: 04-41001
~~Project Name: BUILDING 9~~
Sampler: K.BAER/D.ROMERO

Lab Number: 03-A89395
Sample ID: CEF-9-7D
Sample Type: Water
Site ID:

Date Collected: 6/ 9/03
Time Collected: 9:07
~~Date Received: 6/10/03~~
Time Received: 8:00
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	6/11/03	9:13	I. Ahmed	8021B	4959
Ethylbenzene	ND	ug/L	1.0	1.0	6/11/03	9:13	I. Ahmed	8021B	4959
Toluene	ND	ug/L	1.0	1.0	6/11/03	9:13	I. Ahmed	8021B	4959
Xylenes (Total)	ND	ug/L	1.0	1.0	6/11/03	9:13	I. Ahmed	8021B	4959
Methyl-t-butylether	ND	ug/L	1.0	1.0	6/11/03	9:13	I. Ahmed	8021B	4959
TRPH	ND	ug/L	222.	1.0	6/16/03	12:07	M.Jarrett	FPRO	9365
EXTRACTABLE ORGANICS									
Acenaphthene	ND	ug/L	0.10	1.0	6/17/03	20:57	D. Harris	8270C-SIM	8304
Acenaphthylene	ND	ug/L	0.10	1.0	6/17/03	20:57	D. Harris	8270C-SIM	8304
Anthracene	ND	ug/L	0.10	1.0	6/17/03	20:57	D. Harris	8270C-SIM	8304
Benzo(a)anthracene	ND	ug/L	0.10	1.0	6/17/03	20:57	D. Harris	8270C-SIM	8304
Benzo(a)pyrene	ND	ug/L	0.10	1.0	6/17/03	20:57	D. Harris	8270C-SIM	8304
Benzo(b)fluoranthene	ND	ug/L	0.10	1.0	6/17/03	20:57	D. Harris	8270C-SIM	8304
Benzo(g,h,i)perylene	ND	ug/L	0.10	1.0	6/17/03	20:57	D. Harris	8270C-SIM	8304
Benzo(k)fluoranthene	ND	ug/L	0.10	1.0	6/17/03	20:57	D. Harris	8270C-SIM	8304
Chrysene	ND	ug/L	0.10	1.0	6/17/03	20:57	D. Harris	8270C-SIM	8304
Dibenz(a,h)anthracene	ND	ug/L	0.10	1.0	6/17/03	20:57	D. Harris	8270C-SIM	8304
Fluoranthene	ND	ug/L	0.10	1.0	6/17/03	20:57	D. Harris	8270C-SIM	8304
Fluorene	ND	ug/L	0.10	1.0	6/17/03	20:57	D. Harris	8270C-SIM	8304
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.10	1.0	6/17/03	20:57	D. Harris	8270C-SIM	8304
2-Methylnaphthalene	ND	ug/L	0.10	1.0	6/17/03	20:57	D. Harris	8270C-SIM	8304
Naphthalene	ND	ug/L	0.10	1.0	6/17/03	20:57	D. Harris	8270C-SIM	8304
Phenanthrene	ND	ug/L	0.10	1.0	6/17/03	20:57	D. Harris	8270C-SIM	8304
Pyrene	0.12	ug/L	0.10	1.0	6/17/03	20:57	D. Harris	8270C-SIM	8304
1-Methylnaphthalene	ND	ug/L	0.10	1.0	6/17/03	20:57	D. Harris	8270C-SIM	8304

Sample report continued . . .

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ANALYTICAL REPORT

Laboratory Number: 03-A89395
Sample ID: CEF-9-7D
Project: 04-41001

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
MISCELLANEOUS CHEMISTRY									
Nitrate-N as N	ND	mg/L	0.10	1.0	6/10/03	14:37	S. Overton	300	4730
Nitrite-N as N	ND	mg/L	0.10	1.0	6/10/03	14:37	S. Overton	300	4730
Ortho Phosphate as P	ND	mg/L	0.100	1.0	6/11/03	8:25	T. Beverly	365.2	4723

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Time	Analyst	Method
PAH-SIM	1000 ml	1.0 ml	6/13/03		M. Cauthen	3510C
Fla Pro	900. ml	2.0 ml	6/13/03		M. Cauthen	FDEP

Surrogate	% Recovery	Target Range
TPH Surr., O-Terphenyl	51. #	82. - 142.
TPH Surr, C-35	83.	55. - 118.
BTEX/GRO Surr., a,a,a-TFT	96.	69. - 129.
BNA Surr-Nitrobenzene-d5	80.	34. - 107.
BNA Surr-2-Fluorobiphenyl	89.	40. - 96.
BNA Surr-Terphenyl-d14	127. #	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: 04-41001
Project Name: BUILDING 9
Sampler: K.BAER/D.ROMERO

Lab Number: 03-A89396
Sample ID: CEF-9-2S
Sample Type: Water
Site ID:

Date Collected: 6/ 9/03
Time Collected: 11:06
Date Received: 6/10/03
Time Received: 8:00
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	6/11/03	9:44	I. Ahmed	8021B	4959
Ethylbenzene	1.3	ug/L	1.0	1.0	6/11/03	9:44	I. Ahmed	8021B	4959
Toluene	ND	ug/L	1.0	1.0	6/11/03	9:44	I. Ahmed	8021B	4959
Xylenes (Total)	2.0	ug/L	1.0	1.0	6/11/03	9:44	I. Ahmed	8021B	4959
Methyl-t-butylether	ND	ug/L	1.0	1.0	6/11/03	9:44	I. Ahmed	8021B	4959
TRPH	994.	ug/L	200.	1.0	6/18/03	14:51	M.Jarrett	FPRO	1440
EXTRACTABLE ORGANICS									
Acenaphthene	ND	ug/L	0.10	1.0	6/17/03	21:31	D. Harris	8270C-SIM	8304
Acenaphthylene	ND	ug/L	0.10	1.0	6/17/03	21:31	D. Harris	8270C-SIM	8304
Anthracene	ND	ug/L	0.10	1.0	6/17/03	21:31	D. Harris	8270C-SIM	8304
Benzo(a)anthracene	ND	ug/L	0.10	1.0	6/17/03	21:31	D. Harris	8270C-SIM	8304
Benzo(a)pyrene	ND	ug/L	0.10	1.0	6/17/03	21:31	D. Harris	8270C-SIM	8304
Benzo(b)fluoranthene	ND	ug/L	0.10	1.0	6/17/03	21:31	D. Harris	8270C-SIM	8304
Benzo(g,h,i)perylene	ND	ug/L	0.10	1.0	6/17/03	21:31	D. Harris	8270C-SIM	8304
Benzo(k)fluoranthene	ND	ug/L	0.10	1.0	6/17/03	21:31	D. Harris	8270C-SIM	8304
Chrysene	ND	ug/L	0.10	1.0	6/17/03	21:31	D. Harris	8270C-SIM	8304
Dibenz(a,h)anthracene	ND	ug/L	0.10	1.0	6/17/03	21:31	D. Harris	8270C-SIM	8304
Fluoranthene	ND	ug/L	0.10	1.0	6/17/03	21:31	D. Harris	8270C-SIM	8304
Fluorene	ND	ug/L	0.10	1.0	6/17/03	21:31	D. Harris	8270C-SIM	8304
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.10	1.0	6/17/03	21:31	D. Harris	8270C-SIM	8304
2-Methylnaphthalene	ND	ug/L	0.10	1.0	6/17/03	21:31	D. Harris	8270C-SIM	8304
Naphthalene	ND	ug/L	0.10	1.0	6/17/03	21:31	D. Harris	8270C-SIM	8304
Phenanthrene	ND	ug/L	0.10	1.0	6/17/03	21:31	D. Harris	8270C-SIM	8304
Pyrene	0.12	ug/L	0.10	1.0	6/17/03	21:31	D. Harris	8270C-SIM	8304
1-Methylnaphthalene	ND	ug/L	0.10	1.0	6/17/03	21:31	D. Harris	8270C-SIM	8304

Sample report continued . . .

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ANALYTICAL REPORT

Laboratory Number: 03-A89396
Sample ID: CEF-9-2S
Project: 04-41001

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
MISCELLANEOUS CHEMISTRY									
Nitrate-N as N	2.94	mg/L	0.10	1.0	6/10/03	14:37	S. Overton	300	4730
Nitrite-N as N	ND	mg/L	0.10	1.0	6/10/03	14:37	S. Overton	300	4730
Ortho Phosphate as P	ND	mg/L	0.100	1.0	6/11/03	8:25	T. Beverly	365.2	4723

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Time	Analyst	Method
PAH-SIM	950. ml	1.0 ml	6/13/03		M. Cauthen	3510C
Fla Pro	1000 ml	2.0 ml	6/13/03		M. Cauthen	FDEP

Surrogate	% Recovery	Target Range
TPH Surr., O-Terphenyl	101.	82. - 142.
TPH Surr, C-35	98.	55. - 118.
BTEX/GRO Surr., a,a,a-TFT	101.	69. - 129.
BNA Surr-Nitrobenzene-d5	182. #	34. - 107.
BNA Surr-2-Fluorobiphenyl	93.	40. - 96.
BNA Surr-Terphenyl-d14	122. #	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.
BNA surrogates out of range due to sample matrix.

End of Sample Report.

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ANALYTICAL REPORT

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

Project: 04-41001
Project Name: BUILDING 9
Sampler: K.BAER/D.ROMERO

Lab Number: 03-A89397
Sample ID: CEF-9-3S
Sample Type: Water
Site ID:

Date Collected: 6/ 9/03
Time Collected: 12:00
Date Received: 6/10/03
Time Received: 8:00
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	6/11/03	10:15	I. Ahmed	8021B	4959
Ethylbenzene	ND	ug/L	1.0	1.0	6/11/03	10:15	I. Ahmed	8021B	4959
Toluene	ND	ug/L	1.0	1.0	6/11/03	10:15	I. Ahmed	8021B	4959
Xylenes (Total)	ND	ug/L	1.0	1.0	6/11/03	10:15	I. Ahmed	8021B	4959
Methyl-t-butylether	ND	ug/L	1.0	1.0	6/11/03	10:15	I. Ahmed	8021B	4959
TRPH	894.	ug/L	200.	1.0	6/16/03	10:26	M.Jarrett	FPRO	9365
EXTRACTABLE ORGANICS									
Acenaphthene	ND	ug/L	0.10	1.0	6/17/03	22:05	D. Harris	8270C-SIM	8304
Acenaphthylene	ND	ug/L	0.10	1.0	6/17/03	22:05	D. Harris	8270C-SIM	8304
Anthracene	ND	ug/L	0.10	1.0	6/17/03	22:05	D. Harris	8270C-SIM	8304
Benzo(a)anthracene	ND	ug/L	0.10	1.0	6/17/03	22:05	D. Harris	8270C-SIM	8304
Benzo(a)pyrene	ND	ug/L	0.10	1.0	6/17/03	22:05	D. Harris	8270C-SIM	8304
Benzo(b)fluoranthene	ND	ug/L	0.10	1.0	6/17/03	22:05	D. Harris	8270C-SIM	8304
Benzo(g,h,i)perylene	ND	ug/L	0.10	1.0	6/17/03	22:05	D. Harris	8270C-SIM	8304
Benzo(k)fluoranthene	ND	ug/L	0.10	1.0	6/17/03	22:05	D. Harris	8270C-SIM	8304
Chrysene	ND	ug/L	0.10	1.0	6/17/03	22:05	D. Harris	8270C-SIM	8304
Dibenz(a,h)anthracene	ND	ug/L	0.10	1.0	6/17/03	22:05	D. Harris	8270C-SIM	8304
Fluoranthene	ND	ug/L	0.10	1.0	6/17/03	22:05	D. Harris	8270C-SIM	8304
Fluorene	ND	ug/L	0.10	1.0	6/17/03	22:05	D. Harris	8270C-SIM	8304
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.10	1.0	6/17/03	22:05	D. Harris	8270C-SIM	8304
2-Methylnaphthalene	ND	ug/L	0.10	1.0	6/17/03	22:05	D. Harris	8270C-SIM	8304
Naphthalene	ND	ug/L	0.10	1.0	6/17/03	22:05	D. Harris	8270C-SIM	8304
Phenanthrene	ND	ug/L	0.10	1.0	6/17/03	22:05	D. Harris	8270C-SIM	8304
Pyrene	0.11	ug/L	0.10	1.0	6/17/03	22:05	D. Harris	8270C-SIM	8304
1-Methylnaphthalene	ND	ug/L	0.10	1.0	6/17/03	22:05	D. Harris	8270C-SIM	8304

Sample report continued . . .

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ANALYTICAL REPORT

Laboratory Number: 03-A89397
Sample ID: CEF-9-3S
Project: 04-41001

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
MISCELLANEOUS CHEMISTRY									
Nitrate-N as N	2.15	mg/L	0.10	1.0	6/10/03	14:37	S. Overton	300	4730
Nitrite-N as N	ND	mg/L	0.10	1.0	6/10/03	14:37	S. Overton	300	4730
Ortho Phosphate as P	ND	mg/L	0.100	1.0	6/11/03	8:25	T. Beverly	365.2	4723

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Time	Analyst	Method
PAH-SIM	990. ml	1.0 ml	6/13/03		M. Cauthen	3510C
Fla Pro	1000 ml	2.0 ml	6/13/03		M. Cauthen	FDEP

Surrogate	% Recovery	Target Range
TPH Surr., O-Terphenyl	96.	82. - 142.
TPH Surr, C-35	97.	55. - 118.
BTEX/GRO Surr., a,a,a-TFT	96.	69. - 129.
BNA Surr-Nitrobenzene-d5	123. #	34. - 107.
BNA Surr-2-Fluorobiphenyl	86.	40. - 96.
BNA Surr-Terphenyl-d14	117. #	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.
BNA surrogates out of range due to sample matrix.

End of Sample Report.

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ANALYTICAL REPORT

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

Project: 04-41001
Project Name: BUILDING 9
Sampler: K.BAER/D.ROMERO

Lab Number: 03-A89398
Sample ID: CEF-9-9S
Sample Type: Water
Site ID:

Date Collected: 6/ 9/03
Time Collected: 13:05
Date Received: 6/10/03
Time Received: 8:00
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	6/11/03	10:46	I. Ahmed	8021B	4959
Ethylbenzene	ND	ug/L	1.0	1.0	6/11/03	10:46	I. Ahmed	8021B	4959
Toluene	ND	ug/L	1.0	1.0	6/11/03	10:46	I. Ahmed	8021B	4959
Xylenes (Total)	ND	ug/L	1.0	1.0	6/11/03	10:46	I. Ahmed	8021B	4959
Methyl-t-butylether	ND	ug/L	1.0	1.0	6/11/03	10:46	I. Ahmed	8021B	4959
TRPH	500.	ug/L	200.	1.0	6/16/03	10:46	M.Jarrett	FPRO	9365
EXTRACTABLE ORGANICS									
Acenaphthene	ND	ug/L	0.10	1.0	6/17/03	22:39	D. Harris	8270C-SIM	8304
Acenaphthylene	ND	ug/L	0.10	1.0	6/17/03	22:39	D. Harris	8270C-SIM	8304
Anthracene	ND	ug/L	0.10	1.0	6/17/03	22:39	D. Harris	8270C-SIM	8304
Benzo(a)anthracene	ND	ug/L	0.10	1.0	6/17/03	22:39	D. Harris	8270C-SIM	8304
Benzo(a)pyrene	ND	ug/L	0.10	1.0	6/17/03	22:39	D. Harris	8270C-SIM	8304
Benzo(b)fluoranthene	ND	ug/L	0.10	1.0	6/17/03	22:39	D. Harris	8270C-SIM	8304
Benzo(g,h,i)perylene	ND	ug/L	0.10	1.0	6/17/03	22:39	D. Harris	8270C-SIM	8304
Benzo(k)fluoranthene	ND	ug/L	0.10	1.0	6/17/03	22:39	D. Harris	8270C-SIM	8304
Chrysene	ND	ug/L	0.10	1.0	6/17/03	22:39	D. Harris	8270C-SIM	8304
Dibenz(a,h)anthracene	ND	ug/L	0.10	1.0	6/17/03	22:39	D. Harris	8270C-SIM	8304
Fluoranthene	ND	ug/L	0.10	1.0	6/17/03	22:39	D. Harris	8270C-SIM	8304
Fluorene	ND	ug/L	0.10	1.0	6/17/03	22:39	D. Harris	8270C-SIM	8304
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.10	1.0	6/17/03	22:39	D. Harris	8270C-SIM	8304
2-Methylnaphthalene	4.43	ug/L	0.10	1.0	6/17/03	22:39	D. Harris	8270C-SIM	8304
Naphthalene	11.9	ug/L	0.20	2.0	6/18/03	11:03	D. Harris	8270C-SIM	8304
Phenanthrene	ND	ug/L	0.10	1.0	6/17/03	22:39	D. Harris	8270C-SIM	8304
Pyrene	0.11	ug/L	0.10	1.0	6/17/03	22:39	D. Harris	8270C-SIM	8304
1-Methylnaphthalene	3.63	ug/L	0.10	1.0	6/17/03	22:39	D. Harris	8270C-SIM	8304

Sample report continued . . .

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ANALYTICAL REPORT

Laboratory Number: 03-A89398
Sample ID: CEF-9-9S
Project: 04-41001

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
MISCELLANEOUS CHEMISTRY									
Nitrate-N as N	2.91	mg/L	0.10	1.0	6/10/03	14:37	S. Overton	300	4730
Nitrite-N as N	ND	mg/L	0.10	1.0	6/10/03	14:37	S. Overton	300	4730
Ortho Phosphate as P	ND	mg/L	0.100	1.0	6/11/03	8:25	T. Beverly	365.2	4723

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Time	Analyst	Method
PAH-SIM	1000 ml	1.0 ml	6/13/03		M. Cauthen	3510C
Fla Pro	1000 ml	2.0 ml	6/13/03		M. Cauthen	FDEP

Surrogate	% Recovery	Target Range
TPH Surr., O-Terphenyl	115.	82. - 142.
TPH Surr, C-35	87.	55. - 118.
BTEX/GRO Surr., a,a,a-TFT	96.	69. - 129.
BNA Surr-Nitrobenzene-d5	92.	34. - 107.
BNA Surr-2-Fluorobiphenyl	89.	40. - 96.
BNA Surr-Terphenyl-d14	116. #	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.
BNA PQL's elevated due to sample matrix.

End of Sample Report.

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ANALYTICAL REPORT

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

Project: 04-41001
Project Name: BUILDING 9
Sampler: K.BAER/D.ROMERO

Lab Number: 03-A89399
Sample ID: EB-BLDG9
Sample Type: Water
Site ID:

Date Collected: 6/ 9/03
Time Collected: 13:59
Date Received: 6/10/03
Time Received: 8:00
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	6/11/03	11:17	I. Ahmed	8021B	4959
Ethylbenzene	ND	ug/L	1.0	1.0	6/11/03	11:17	I. Ahmed	8021B	4959
Toluene	ND	ug/L	1.0	1.0	6/11/03	11:17	I. Ahmed	8021B	4959
Xylenes (Total)	ND	ug/L	1.0	1.0	6/11/03	11:17	I. Ahmed	8021B	4959
Methyl-t-butylether	ND	ug/L	1.0	1.0	6/11/03	11:17	I. Ahmed	8021B	4959
TRPH	ND	ug/L	200.	1.0	6/15/03	15:31	M.Jarrett	FPRO	9365
EXTRACTABLE ORGANICS									
Acenaphthene	ND	ug/L	0.10	1.0	6/17/03	23:12	D. Harris	8270C-SIM	8304
Acenaphthylene	ND	ug/L	0.10	1.0	6/17/03	23:12	D. Harris	8270C-SIM	8304
Anthracene	ND	ug/L	0.10	1.0	6/17/03	23:12	D. Harris	8270C-SIM	8304
Benzo(a)anthracene	ND	ug/L	0.10	1.0	6/17/03	23:12	D. Harris	8270C-SIM	8304
Benzo(a)pyrene	ND	ug/L	0.10	1.0	6/17/03	23:12	D. Harris	8270C-SIM	8304
Benzo(b)fluoranthene	ND	ug/L	0.10	1.0	6/17/03	23:12	D. Harris	8270C-SIM	8304
Benzo(g,h,i)perylene	ND	ug/L	0.10	1.0	6/17/03	23:12	D. Harris	8270C-SIM	8304
Benzo(k)fluoranthene	ND	ug/L	0.10	1.0	6/17/03	23:12	D. Harris	8270C-SIM	8304
Chrysene	ND	ug/L	0.10	1.0	6/17/03	23:12	D. Harris	8270C-SIM	8304
Dibenz(a,h)anthracene	ND	ug/L	0.10	1.0	6/17/03	23:12	D. Harris	8270C-SIM	8304
Fluoranthene	ND	ug/L	0.10	1.0	6/17/03	23:12	D. Harris	8270C-SIM	8304
Fluorene	ND	ug/L	0.10	1.0	6/17/03	23:12	D. Harris	8270C-SIM	8304
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.10	1.0	6/17/03	23:12	D. Harris	8270C-SIM	8304
2-Methylnaphthalene	ND	ug/L	0.10	1.0	6/17/03	23:12	D. Harris	8270C-SIM	8304
Naphthalene	ND	ug/L	0.10	1.0	6/17/03	23:12	D. Harris	8270C-SIM	8304
Phenanthrene	ND	ug/L	0.10	1.0	6/17/03	23:12	D. Harris	8270C-SIM	8304
Pyrene	0.11	ug/L	0.10	1.0	6/17/03	23:12	D. Harris	8270C-SIM	8304
1-Methylnaphthalene	ND	ug/L	0.10	1.0	6/17/03	23:12	D. Harris	8270C-SIM	8304

Sample report continued . . .

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ANALYTICAL REPORT

Laboratory Number: 03-A89399
Sample ID: EB-BLDG9
Project: 04-41001

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
MISCELLANEOUS CHEMISTRY									
Nitrate-N as N	ND	mg/L	0.10	1.0	6/10/03	14:37	S. Overton	300	4730
Nitrite-N as N	ND	mg/L	0.10	1.0	6/10/03	14:37	S. Overton	300	4730
Ortho Phosphate as P	ND	mg/L	0.100	1.0	6/11/03	8:25	T. Beverly	365.2	4723

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Time	Analyst	Method
PAH-SIM	995. ml	1.0 ml	6/13/03		M. Cauthen	3510C
Fla Pro	1000 ml	2.0 ml	6/13/03		M. Cauthen	FDEP

Surrogate	% Recovery	Target Range
TPH Surr., O-Terphenyl	115.	82. - 142.
TPH Surr, C-35	87.	55. - 118.
BTEX/GRO Surr., a,a,a-TFT	95.	69. - 129.
BNA Surr-Nitrobenzene-d5	93.	34. - 107.
BNA Surr-2-Fluorobiphenyl	99. #	40. - 96.
BNA Surr-Terphenyl-d14	143. #	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: 04-41001
Project Name: BUILDING 9
Sampler: K.BAER/D.ROMERO

Lab Number: 03-A89400
Sample ID: Trip Blank
Sample Type: Water
Site ID:

Date Collected:
Time Collected:
Date Received: 6/10/03
Time Received: 8:00
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	6/11/03	11:48	I. Ahmed	8021B	4959
Ethylbenzene	ND	ug/L	1.0	1.0	6/11/03	11:48	I. Ahmed	8021B	4959
Toluene	ND	ug/L	1.0	1.0	6/11/03	11:48	I. Ahmed	8021B	4959
Xylenes (Total)	ND	ug/L	1.0	1.0	6/11/03	11:48	I. Ahmed	8021B	4959
Methyl-t-butylether	ND	ug/L	1.0	1.0	6/11/03	11:48	I. Ahmed	8021B	4959

Surrogate	% Recovery	Target Range
BTEX/GRO Surr., a,a,a-TFT	95.	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: 04-41001
Project Name: BUILDING 9
Page: 1
Laboratory Receipt Date: 6/10/03

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/kg	< 0.0010	0.0400	0.0500	80	42. - 150.	6104	03-A90608
Toluene	mg/kg	< 0.0010	0.0371	0.0500	74	34. - 149.	6104	03-A90608
Ethylbenzene	mg/kg	< 0.0010	0.0348	0.0500	70	31. - 154.	6104	03-A90608
Xylenes, total	mg/kg	< 0.0010	0.0648	0.1000	65	55. - 142.	6104	03-A90608
2-Methylnapthalene	mg/kg	< 0.066	1.55	1.67	93	36. - 113.	8579	blank
Benzene	mg/l	< 0.00100	0.0362	0.0500	72	60. - 143.	4959	03-A89606
Toluene	mg/l	< 0.0010	0.0353	0.0500	71	62. - 139.	4959	03-A89606
Ethylbenzene	mg/l	< 0.0010	0.0350	0.0500	70	61. - 138.	4959	03-A89606
Xylenes (Total)	mg/l	< 0.0010	0.0693	0.100	69	59. - 137.	4959	03-A89606
Methyl-t-butylether	mg/l	< 0.0010	0.0351	0.0500	70	60. - 138.	4959	03-A89606
TRPH	mg/l	< 0.100	0.466	0.430	108#	44. - 101.	1440	BLANK
TRPH	mg/l	< 0.100	0.466	0.430	108#	44. - 101.	9365	BLANK
Naphthalene	mg/kg	< 0.066	1.78	1.67	107	34. - 111.	8579	blank
Acenaphthene	mg/kg	< 0.066	1.29	1.67	77	39. - 116.	8579	blank
Anthracene	mg/kg	< 0.066	1.32	1.67	79	41. - 118.	8579	blank
Fluoranthene	mg/kg	< 0.066	1.39	1.67	83	42. - 123.	8579	blank
Fluorene	mg/kg	< 0.066	1.39	1.67	83	40. - 120.	8579	blank
Pyrene	mg/kg	< 0.066	1.52	1.67	91	40. - 125.	8579	blank
Benzo(a)anthracene	mg/kg	< 0.066	1.52	1.67	91	42. - 123.	8579	blank
Benzo(a)pyrene	mg/kg	< 0.066	1.39	1.67	83	41. - 123.	8579	blank
Benzo(b)fluoranthene	mg/kg	< 0.066	1.45	1.67	87	40. - 123.	8579	blank
Benzo(k)fluoranthene	mg/kg	< 0.066	1.42	1.67	85	42. - 130.	8579	blank
Chrysene	mg/kg	< 0.066	1.52	1.67	91	40. - 123.	8579	blank
Dibenzo(a,h)anthracene	mg/kg	< 0.066	1.22	1.67	73	16. - 139.	8579	blank
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.066	1.16	1.67	69	12. - 138.	8579	blank
Acenaphthylene	mg/kg	< 0.066	1.29	1.67	77	39. - 116.	8579	blank
Benzo(g,h,i)perylene	mg/kg	< 0.066	1.06	1.67	63	9. - 144.	8579	blank
Phenanthrene	mg/kg	< 0.066	1.42	1.67	85	39. - 119.	8579	blank

Project QC continued . . .

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1-Methylnapthalene	mg/kg	< 0.066	0.290	1.67	17#	36. - 120.	8579	blank
BTEX/GRO Surr., a,a,a-TFT	% Recovery				96	69 - 129	4959	

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
EXTRACTABLE PARAMETERS								
Acenaphthene	mg/l	< 0.00010	0.00103	0.00100	103	28. - 106.	8304	Blank
Acenaphthylene	mg/l	< 0.00010	0.00097	0.00100	97	26. - 106.	8304	Blank
Anthracene	mg/l	< 0.00010	0.00113	0.00100	113	30. - 116.	8304	Blank
Benzo(a)anthracene	mg/l	< 0.00010	0.00140	0.00100	140#	38. - 128.	8304	Blank
Benzo(a)pyrene	mg/l	< 0.00010	0.00110	0.00100	110	34. - 117.	8304	Blank
Benzo(b)fluoranthene	mg/l	< 0.00010	0.00121	0.00100	121	37. - 132.	8304	Blank
Benzo(g,h,i)perylene	mg/l	< 0.00010	0.00131	0.00100	131#	25. - 125.	8304	Blank
Benzo(k)fluoranthene	mg/l	< 0.00010	0.00152	0.00100	152#	35. - 128.	8304	Blank
Chrysene	mg/l	< 0.00010	0.00140	0.00100	140#	42. - 126.	8304	Blank
Dibenz(a,h)anthracene	mg/l	< 0.00010	0.00118	0.00100	118	31. - 128.	8304	Blank
Fluoranthene	mg/l	< 0.00010	0.00140	0.00100	140#	35. - 125.	8304	Blank
Fluorene	mg/l	< 0.00010	0.00109	0.00100	109	30. - 112.	8304	Blank
Indeno(1,2,3-cd)pyrene	mg/l	< 0.00010	0.00124	0.00100	124	31. - 124.	8304	Blank
2-Methylnaphthalene	mg/l	< 0.00010	0.00087	0.00100	87	25. - 113.	8304	Blank
Naphthalene	mg/l	< 0.00010	0.00095	0.00100	95	9. - 120.	8304	Blank
Phenanthrene	mg/l	< 0.00010	0.00128	0.00100	128#	34. - 116.	8304	Blank
Pyrene	mg/l	< 0.00010	0.00152	0.00100	152#	35. - 118.	8304	Blank
1-Methylnaphthalene	mg/l	< 0.00010	0.00090	0.00100	90	31. - 112.	8304	Blank
BNA Surr-Nitrobenzene-d5	% Rec				92	34. - 107.	8304	
BNA Surr-2-Fluorobiphenyl	% Rec				101	40. - 96.	8304	
BNA Surr-Terphenyl-d14	% Rec				152	26. - 106.	8304	

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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
MISC PARAMETERS								
Nitrate-N as N	mg/l	0.13	3.27	3.00	105	80 - 120	4730	03-A89394
Nitrite-N as N	mg/l	< 0.10	3.10	3.00	103	80 - 120	4730	03-A89394
Ortho Phosphate as P	mg/l	< 0.100	1.08	1.00	108	80 - 120	4723	03-A89510

Matrix Spike Duplicate

Analyte	units	Orig. Val.	Duplicate	RPD	Limit	Q.C. Batch
UST PARAMETERS						
Benzene	mg/kg	0.0400	0.0402	0.50	30.	6104
Toluene	mg/kg	0.0371	0.0375	1.07	35.	6104
Ethylbenzene	mg/kg	0.0348	0.0353	1.43	37.	6104
Xylenes, total	mg/kg	0.0648	0.0651	0.46	47.	6104
MTBE	mg/kg	0.037	0.037	0.00	46.	6104
Naphthalene	mg/kg	1.78	1.48	18.40	38.	8579
Acenaphthene	mg/kg	1.29	1.16	10.61	40.	8579
Anthracene	mg/kg	1.32	1.22	7.87	34.	8579
Fluoranthene	mg/kg	1.39	1.29	7.46	42.	8579
Fluorene	mg/kg	1.39	1.25	10.61	40.	8579
Pyrene	mg/kg	1.52	1.42	6.80	37.	8579
Benzo(a)anthracene	mg/kg	1.52	1.42	6.80	35.	8579
Benzo(a)pyrene	mg/kg	1.39	1.25	10.61	36.	8579
Benzo(b)fluoranthene	mg/kg	1.45	1.32	9.39	40.	8579
Benzo(k)fluoranthene	mg/kg	1.42	1.32	7.30	36.	8579
Chrysene	mg/kg	1.52	1.42	6.80	34.	8579
Dibenzo(a,h)anthracene	mg/kg	1.22	1.02	17.86	37.	8579
Indeno(1,2,3-cd)pyrene	mg/kg	1.16	0.957	19.18	40.	8579

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Matrix Spike Duplicate

Analyte	units	Orig. Val.	Duplicate	RPD	Limit	Q.C. Batch
Acenaphthylene	mg/kg	1.29	1.16	10.61	42.	8579
Benzo(g,h,i)perylene	mg/kg	1.06	0.858	21.06	37.	8579
Phenanthrene	mg/kg	1.42	1.32	7.30	34.	8579
1-Methylnapthalene	mg/kg	0.290	0.264	9.39	43.	8579
2-Methylnapthalene	mg/kg	1.55	1.29	18.31	44.	8579
Benzene	mg/l	0.0362	0.0398	9.47	23.	4959
Toluene	mg/l	0.0353	0.0391	10.22	24.	4959
Ethylbenzene	mg/l	0.0350	0.0389	10.55	24.	4959
Xylenes (Total)	mg/l	0.0693	0.0770	10.53	25.	4959
Methyl-t-butylether	mg/l	0.0351	0.0394	11.54	24.	4959
TRPH	mg/l	0.466	0.420	10.38	41.	1440
TRPH	mg/l	0.466	0.420	10.38	41.	9365
BTEX/GRO Surr., a,a,a-TFT	% Recovery		96.			4959

Matrix Spike Duplicate

Analyte	units	Orig. Val.	Duplicate	RPD	Limit	Q.C. Batch
EXTRACTABLE PARAMETERS						
Acenaphthene	mg/l	0.00103	0.00083	21.51	33.	8304
Pyrene	mg/l	0.00152	0.00121	22.71	32.	8304
BNA Surr-Nitrobenzene-d5	% Rec		77.			8304
BNA Surr-2-Fluorobiphenyl	% Rec		82.			8304
BNA Surr-Terphenyl-d14	% Rec		122.			8304

Project QC continued . . .

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Matrix Spike Duplicate

Analyte	units	Orig. Val.	Duplicate	RPD	Limit	Q.C. Batch
MISC PARAMETERS						
Nitrate-N as N	mg/l	3.27	3.30	0.91	20	4730
Nitrite-N as N	mg/l	3.10	3.09	0.32	20	4730
Ortho Phosphate as P	mg/l	1.08	1.17	8.00	20	4723

Laboratory Control Data

Analyte	units	Known Val.	Analyzed Val	% Recovery	Target Range	Q.C. Batch
UST PARAMETERS						
Benzene	mg/kg	0.1000	0.0982	98	71 - 132	6104
Toluene	mg/kg	0.1000	0.0952	95	68 - 129	6104
Ethylbenzene	mg/kg	0.1000	0.0958	96	71 - 131	6104
Xylenes, total	mg/kg	0.2000	0.1877	94	66 - 131	6104
MTBE	mg/kg	0.100	0.097	97	56 - 140	6104
TRPH	mg/kg	17.0	19.0	112	63 - 153	8361
2-Methylnapthalene	mg/kg	1.67	1.19	71	39 - 113	8579
Benzene	mg/l	0.100	0.0951	95	74 - 120	4959
Toluene	mg/l	0.100	0.0940	94	73 - 118	4959
Ethylbenzene	mg/l	0.100	0.0936	94	72 - 118	4959
Xylenes (Total)	mg/l	0.200	0.187	94	72 - 116	4959
Methyl-t-butylether	mg/l	0.100	0.101	101	64 - 124	4959
TRPH	mg/l	0.430	0.544	127 #	55 - 118	1440
TRPH	mg/l	0.430	0.544	127 #	55 - 118	9365

Project QC continued . . .

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BTEX/GRO Surr., a,a,a-TFT	% Recovery	97	69 - 129	4959

Laboratory Control Data

Analyte	units	Known Val.	Analyzed Val	% Recovery	Target Range	Q.C. Batch
UST PARAMETERS						
Naphthalene	mg/kg	1.67	1.25	75	34 - 111	8579
Acenaphthene	mg/kg	1.67	1.19	71	39 - 116	8579
Anthracene	mg/kg	1.67	1.25	75	41 - 118	8579
Fluoranthene	mg/kg	1.67	1.32	79	42 - 123	8579
Fluorene	mg/kg	1.67	1.25	75	40 - 120	8579
Pyrene	mg/kg	1.67	1.48	89	40 - 125	8579
Benzo(a)anthracene	mg/kg	1.67	1.48	89	42 - 123	8579
Benzo(a)pyrene	mg/kg	1.67	1.29	77	41 - 123	8579
Benzo(b)fluoranthene	mg/kg	1.67	1.32	79	40 - 123	8579
Benzo(k)fluoranthene	mg/kg	1.67	1.35	81	42 - 130	8579
Chrysene	mg/kg	1.67	1.45	87	40 - 123	8579
Dibenzo(a,h)anthracene	mg/kg	1.67	1.16	69	16 - 139	8579
Indeno(1,2,3-cd)pyrene	mg/kg	1.67	1.09	65	12 - 138	8579
Acenaphthylene	mg/kg	1.67	1.19	71	39 - 116	8579
Benzo(g,h,i)perylene	mg/kg	1.67	1.02	61	9 - 144	8579
Phenanthrene	mg/kg	1.67	1.29	77	39 - 119	8579
1-Methylnapthalene	mg/kg	1.67	< 0.066	N/A	36 - 120	8579

Laboratory Control Data

Analyte	units	Known Val.	Analyzed Val	% Recovery	Target Range	Q.C. Batch
EXTRACTABLE PARAMETERS						
Acenaphthene	mg/l	0.00100	0.00088	88	28 - 106	8304
Acenaphthylene	mg/l	0.00100	0.00082	82	26 - 106	8304
Anthracene	mg/l	0.00100	0.00095	95	30 - 116	8304
Benzo(a)anthracene	mg/l	0.00100	0.00117	117	38 - 128	8304

Project QC continued . . .

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Laboratory Control Data

Analyte	units	Known Val.	Analyzed Val	% Recovery	Target Range	Q.C. Batch
Benzo(a)pyrene	mg/l	0.00100	0.00093	93	34 - 117	8304
Benzo(b)fluoranthene	mg/l	0.00100	0.00108	108	37 - 132	8304
Benzo(g,h,i)perylene	mg/l	0.00100	0.00112	112	28 - 122	8304
Benzo(k)fluoranthene	mg/l	0.00100	0.00136	136 #	35 - 128	8304
Chrysene	mg/l	0.00100	0.00123	123	42 - 126	8304
Dibenz(a,h)anthracene	mg/l	0.00100	0.00108	108	35 - 124	8304
Fluoranthene	mg/l	0.00100	0.00117	117	35 - 125	8304
Fluorene	mg/l	0.00100	0.00091	91	30 - 112	8304
Indeno(1,2,3-cd)pyrene	mg/l	0.00100	0.00108	108	34 - 121	8304
2-Methylnaphthalene	mg/l	0.00100	0.00074	74	31 - 108	8304
Naphthalene	mg/l	0.00100	0.00105	105	9 - 120	8304
Phenanthrene	mg/l	0.00100	0.00108	108	34 - 116	8304
Pyrene	mg/l	0.00100	0.00129	129 #	35 - 118	8304
1-Methylnaphthalene	mg/l	0.00100	0.00075	75	31 - 112	8304
BNA Surr-Nitrobenzene-d5	% Rec			82	34 - 107	8304
BNA Surr-2-Fluorobiphenyl	% Rec			88	40 - 96	8304
BNA Surr-Terphenyl-d14	% Rec			120	26 - 106	8304

Laboratory Control Data

Analyte	units	Known Val.	Analyzed Val	% Recovery	Target Range	Q.C. Batch
MISC PARAMETERS						
Nitrate-N as N	mg/l	3.00	2.96	99	90 - 110	4730
Nitrite-N as N	mg/l	3.00	2.90	97	90 - 110	4730
Ortho Phosphate as P	mg/l	1.00	1.00	100	90 - 110	4723

Project QC continued . . .

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Duplicates

Analyte	units	Orig. Val.	Duplicate	RPD	Limit	Q.C. Batch	Sample Dup'd
Nitrate-N as N	mg/l	< 0.10	< 0.10	N/A	15.	4730	03-A89510
Nitrite-N as N	mg/l	< 0.10	< 0.10	N/A	15.	4730	03-A89510

Blank Data

Analyte	Blank Value	Units	Q.C. Batch	Date Analyzed	Time Analyzed
UST PARAMETERS					
Benzene	< 0.0010	mg/kg	6104	6/12/03	17:40
Toluene	< 0.0010	mg/kg	6104	6/12/03	17:40
Ethylbenzene	< 0.0010	mg/kg	6104	6/12/03	17:40
Xylenes, total	< 0.0010	mg/kg	6104	6/12/03	17:40
MTBE	< 0.005	mg/kg	6104	6/12/03	17:40
TRPH	< 5.00	mg/kg	8361	6/16/03	15:31
Naphthalene	< 0.066	mg/kg	8579	6/14/03	11:03
Acenaphthene	< 0.066	mg/kg	8579	6/14/03	11:03
Anthracene	< 0.066	mg/kg	8579	6/14/03	11:03
Fluoranthene	< 0.066	mg/kg	8579	6/14/03	11:03
Fluorene	< 0.066	mg/kg	8579	6/14/03	11:03
Pyrene	< 0.066	mg/kg	8579	6/14/03	11:03
Benzo(a)anthracene	< 0.066	mg/kg	8579	6/14/03	11:03
Benzo(a)pyrene	< 0.066	mg/kg	8579	6/14/03	11:03
Benzo(b)fluoranthene	< 0.066	mg/kg	8579	6/14/03	11:03
Benzo(k)fluoranthene	< 0.066	mg/kg	8579	6/14/03	11:03
Chrysene	< 0.066	mg/kg	8579	6/14/03	11:03
Dibenzo(a,h)anthracene	< 0.066	mg/kg	8579	6/14/03	11:03
Indeno(1,2,3-cd)pyrene	< 0.066	mg/kg	8579	6/14/03	11:03
Acenaphthylene	< 0.066	mg/kg	8579	6/14/03	11:03
Benzo(g,h,i)perylene	< 0.066	mg/kg	8579	6/14/03	11:03
Phenanthrene	< 0.066	mg/kg	8579	6/14/03	11:03
1-Methylnapthalene	< 0.066	mg/kg	8579	6/14/03	11:03

Project QC continued . . .

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Blank Data

Analyte	Blank Value	Units	Q.C. Batch	Analysis Date	Analysis Time
2-Methylnapthalene	< 0.066	mg/kg	8579	6/14/03	11:03
Benzene	< 0.00060	mg/l	4959	6/11/03	2:01
Toluene	< 0.0006	mg/l	4959	6/11/03	2:01
Ethylbenzene	< 0.0006	mg/l	4959	6/11/03	2:01
Xylenes (Total)	< 0.0010	mg/l	4959	6/11/03	2:01
Methyl-t-butylether	< 0.0006	mg/l	4959	6/11/03	2:01
TRPH	< 0.100	mg/l	1440	6/15/03	7:13
TRPH	< 0.100	mg/l	9365	6/15/03	7:13

Blank Data

Analyte	Blank Value	Units	Q.C. Batch	Date Analyzed	Time Analyzed
UST PARAMETERS					
TPH Surr., O-Terphenyl	133.	% Recovery	1440	6/15/03	7:13
TPH Surr., O-Terphenyl	133.	% Recovery	9365	6/15/03	7:13
TPH Surr, C-35	121.	% Recovery	1440	6/15/03	7:13
TPH Surr, C-35	121.	% Recovery	9365	6/15/03	7:13
UST surr-Trifluorotoluene	88.	% Recovery	6104	6/12/03	17:40
BTEX/GRO Surr., a,a,a-TFT	99.	% Recovery	4959	6/11/03	2:01

Blank Data

Analyte	Blank Value	Units	Q.C. Batch	Date Analyzed	Time Analyzed
EXTRACTABLE PARAMETERS					
Acenaphthene	< 0.00010	mg/l	8304	6/17/03	17:33
Acenaphthylene	< 0.00010	mg/l	8304	6/17/03	17:33
Anthracene	< 0.00010	mg/l	8304	6/17/03	17:33

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Blank Data

Analyte	Blank Value	Units	Q.C. Batch	Analysis Date	Analysis Time
Benzo(a)anthracene	< 0.00010	mg/l	8304	6/17/03	17:33
Benzo(a)pyrene	< 0.00010	mg/l	8304	6/17/03	17:33
Benzo(b)fluoranthene	< 0.00010	mg/l	8304	6/17/03	17:33
Benzo(g,h,i)perylene	< 0.00010	mg/l	8304	6/17/03	17:33
Benzo(k)fluoranthene	< 0.00010	mg/l	8304	6/17/03	17:33
Chrysene	< 0.00010	mg/l	8304	6/17/03	17:33
Dibenz(a,h)anthracene	< 0.00010	mg/l	8304	6/17/03	17:33
Fluoranthene	< 0.00010	mg/l	8304	6/17/03	17:33
Fluorene	< 0.00010	mg/l	8304	6/17/03	17:33
Indeno(1,2,3-cd)pyrene	< 0.00010	mg/l	8304	6/17/03	17:33
2-Methylnaphthalene	< 0.00010	mg/l	8304	6/17/03	17:33
Naphthalene	< 0.00010	mg/l	8304	6/17/03	17:33
Phenanthrene	< 0.00010	mg/l	8304	6/17/03	17:33
Pyrene	< 0.00010	mg/l	8304	6/17/03	17:33
1-Methylnaphthalene	< 0.00010	mg/l	8304	6/17/03	17:33
BNA Surr-Nitrobenzene-d5	90.	% Rec	8304	6/17/03	17:33
BNA Surr-2-Fluorobiphenyl	94.	% Rec	8304	6/17/03	17:33
BNA Surr-Terphenyl-d14	133.	% Rec	8304	6/17/03	17:33

Blank Data

Analyte	Blank Value	Units	Q.C. Batch	Date Analyzed	Time Analyzed
MISC PARAMETERS					
Nitrate-N as N	< 0.10	mg/l	4730	6/10/03	14:37
Nitrite-N as N	< 0.10	mg/l	4730	6/10/03	14:37
Ortho Phosphate as P	< 0.100	mg/l	4723	6/11/03	8:25

Project QC continued . . .

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= Value outside Laboratory historical or method prescribed QC limits.

End of Report for Project 335051

APPENDIX C

2nd Quarter 2003 Groundwater Sampling Logs

GROUNDWATER SAMPLING LOG

TERRAINE, inc.
ENVIRONMENTAL SERVICES

Project Information

Project No: 04-41001/2	Project Name: Building 9 - Cecil Field LTM/RAO	
Technician 1: Karen Baer	Technician 2:	Weather: Sunny
Sampling ID: 04-41001/2:CEF-9-2S:6/9/03		
Notes: Heavy sediment in well		

Well Information

Well ID: **CEF-9-2S**	Sampling Date: **6/9/2003**	
Well Diam (in): 0.0	Total Well Depth (ft): 0.00	Well Screen Interval (ft):
TOC Elevation (ft msl): 78.74	Northing: 0	Easting: 0
Static Depth to Water (ft): 5.35	Well Capacity (gal): 0.00	

Purge Setup

Purge Method: Nomad Submersible	Tubing Material: PPE		Pump Set at (ft): 10.00
pH Meter:	Cond. Meter: Horiba U-22	DO Meter: Horiba U-22	Turb. Meter: Hach 2100P
Purge Start: 10:45	Purge End: 11:04	Total Volume Purged (gal): 0.00	

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
10:45	7.20	0.50	0.00	8.31	26.16	235.0	6.22	19.0	643.00	brown	slight HC
10:47	7.20	1.00	0.00	5.85	26.06	235.0	6.32	13.0	595.00		
10:50	7.15	1.50	0.00	5.45	26.15	233.0	6.37	0.0	579.00		
10:52	7.10	2.00	0.00	5.14	26.09	231.0	6.37	6.0	512.00		
10:54	7.10	2.50	0.00	4.99	26.13	230.0	6.40	4.0	499.00		
10:57	7.10	3.00	0.00	4.88	26.14	229.0	6.39	2.0	451.00		
10:59	7.00	3.50	0.00	4.75	26.15	228.0	6.42	-2.0	444.00		
11:01	7.20	4.00	0.00	4.71	26.06	230.0	6.43	-2.0	421.00		
11:04	7.30	5.00	0.50	4.63	26.19	230.0	6.47	-3.0	435.00		

Sampling Data

Sample Information		Final Purge Readings		Field Test Kit Readings (mg/L)			
Sample Date:	6/9/2003	DO (mg/L):	4.65	DO:	0.00	Sulfate:	0.00
Sample Start Time:	11:05	Temp (*C):	26.14	CO2:	181.00	Sulfide:	0.00
Sample End Time:	11:20	SEC (uS/cm):	230.00	Alkalinity:	25.00		
Field Filtered:	☐	pH:	6.46	Ferrous Iron:	0.00		
Duplicate:	☐	ORP (mV):	0.00	H2S:	0.00		
		Turb (NTU):	-5.00	Manganese:	0.00		

Lab Analyses/Methods:	Technician Initials

GROUNDWATER SAMPLING LOG

TERRAINE, inc.
ENVIRONMENTAL SERVICES

Project Information

Project No: 04-41001/2	Project Name: Building 9 - Cecil Field LTM/RAO	
Technician 1: Karen Baer	Technician 2:	Weather: Sunny
Sampling ID: 04-41001/2:CEF-9-3S:6/9/03		
Notes:		

Well Information

Well ID: **CEF-9-3S**	Sampling Date: **6/9/2003**	
Well Diam (in): 0.0	Total Well Depth (ft): 0.00	Well Screen Interval (ft):
TOC Elevation (ft msl): 78.81	Northing: 0	Easting: 0
Static Depth to Water (ft): 5.30	Well Capacity (gal): 0.00	

Purge Setup

Purge Method: Nomad Submersible	Tubing Material: PPE		Pump Set at (ft): 10.00
pH Meter:	Cond. Meter: Horiba U-22	DO Meter: Horiba U-22	Turb. Meter: Hach 2100P
Purge Start: 11:42	Purge End: 11:58	Total Volume Purged (gal): 0.00	

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
11:42	5.51	0.50	0.00	4.80	26.86	186.0	6.16	43.0	435.00	orange	strong HC
11:45	5.70	1.00	0.00	4.02	26.74	187.0	6.11	37.0	74.90		
11:48	5.60	1.50	0.00	3.35	26.90	187.0	6.09	33.0	72.20		
11:51	5.70	2.00	0.00	2.87	26.84	187.0	6.09	30.0	68.20		
11:56	5.70	2.50	0.00	2.53	26.78	186.0	6.07	24.0	68.20		
11:58	5.65	3.00	0.25	2.38	26.76	186.0	6.09	24.0	63.50		

Sampling Data

Sample Information		Final Purge Readings		Field Test Kit Readings (mg/L)			
Sample Date:	6/9/2003	DO (mg/L):	2.32	DO:	0.00	Sulfate:	0.00
Sample Start Time:	11:58	Temp (*C):	26.68	CO2:	124.00	Sulfide:	0.00
Sample End Time:	12:15	SEC (uS/cm):	187.00	Alkalinity:	10.00		
Field Filtered:	☐	pH:	6.07	Ferrous Iron:	0.00		
Duplicate:	☐	ORP (mV):	24.00	H2S:	0.00		
		Turb (NTU):	0.00	Manganese:	0.00		

Lab Analyses/Methods:	Technician Initials

GROUNDWATER SAMPLING LOG

TERRAINE, inc.
ENVIRONMENTAL SERVICES

Project Information

Project No: 04-41001/2	Project Name: Building 9 - Cecil Field LTM/RAO	
Technician 1: Karen Baer	Technician 2:	Weather: Cloudy
Sampling ID: 04-41001/2:CEF-9-5S:6/9/03		
Notes:		

Well Information

Well ID: **CEF-9-5S**	Sampling Date: **6/9/2003**	
Well Diam (in): 0.0	Total Well Depth (ft): 0.00	Well Screen Interval (ft):
TOC Elevation (ft msl): 78.93	Northing: 0	Easting: 0
Static Depth to Water (ft): 5.50	Well Capacity (gal): 0.00	

Purge Setup

Purge Method: Nomad Submersible	Tubing Material: PPE		Pump Set at (ft): 10.00
pH Meter:	Cond. Meter: Horiba U-22	DO Meter: Horiba U-22	Turb. Meter: Hach 2100P
Purge Start: 07:10	Purge End: 07:57	Total Volume Purged (gal): 0.00	

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
07:15	5.80	0.50	0.00	3.23	25.00	142.0	5.76	55.0	1,000.00	brown	none
07:17	5.85	1.00	0.00	2.28	24.98	139.0	5.82	45.0	1,000.00		
07:20	5.85	1.50	0.00	1.88	24.95	140.0	5.91	40.0	548.00		
07:22	5.94	1.50	0.00	1.58	24.91	141.0	6.06	29.0	327.00		
07:24	5.80	2.00	0.00	1.41	24.95	142.0	6.19	26.0	228.00		
07:27	5.90	3.00	0.00	1.21	24.90	141.0	6.34	20.0	186.00		
07:30	5.80	3.50	0.00	0.93	24.96	141.0	6.43	4.0	113.00		
07:34	5.80	4.00	0.00	0.79	25.02	140.0	6.47	0.0	102.00		
07:38	5.80	4.50	0.00	0.58	25.00	140.0	6.49	-8.0	68.50		
07:44	5.90	5.00	0.01	0.33	24.85	139.0	6.51	-11.0	40.10		
07:48	5.90	6.00	0.01	0.24	24.84	139.0	6.52	-14.0	33.40		
07:52	5.90	6.00	0.00	0.14	24.90	140.0	6.53	-17.0	29.10		
07:55	5.80	6.50	0.16	0.06	24.96	139.0	6.55	-19.0	26.80		
07:57	5.90	7.00	0.01	0.03	24.93	138.0	6.53	-19.0	25.00		

Sampling Data

Sample Information		Final Purge Readings		Field Test Kit Readings (mg/L)			
Sample Date:	6/9/2003	DO (mg/L):	0.01	DO:	0.00	Sulfate:	0.00
Sample Start Time:	07:57	Temp (*C):	24.91	CO2:	122.00	Sulfide:	0.00
Sample End Time:	08:09	SEC (uS/cm):	138.00	Alkalinity:	40.00		
Field Filtered:	☐	pH:	6.52	Ferrous Iron:	2.00		
Duplicate:	☐	ORP (mV):	-20.00	H2S:	0.00		
		Turb (NTU):	0.00	Manganese:	0.00		

Lab Analyses/Methods:	Technician Initials

GROUNDWATER SAMPLING LOG

TERRAINE, inc.
ENVIRONMENTAL SERVICES

Project Information

Project No: 04-41001/2	Project Name: Building 9 - Cecil Field LTM/RAO	
Technician 1: Karen Baer	Technician 2:	Weather: "Sunny, Cloudy"
Sampling ID: 04-41001/2:CEF-9-7D:6/9/03		
Notes:		

Well Information

Well ID: **CEF-9-7D**	Sampling Date: **6/9/2003**	
Well Diam (in): 0.0	Total Well Depth (ft): 0.00	Well Screen Interval (ft):
TOC Elevation (ft msl): 78.59	Northing: 0	Easting: 0
Static Depth to Water (ft): 4.90	Well Capacity (gal): 0.00	

Purge Setup

Purge Method: Nomad Submersible	Tubing Material: PPE		Pump Set at (ft): 25.00
pH Meter:	Cond. Meter: Horiba U-22	DO Meter: Horiba U-22	Turb. Meter: Hach 2100P
Purge Start: 08:45	Purge End: 09:05	Total Volume Purged (gal): 0.00	

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
08:52	5.16	1.00	0.00	2.54	24.62	41.0	5.10	34.0	4.01	clear	none
08:57	5.15	1.50	0.00	0.85	24.68	41.0	5.04	20.0	2.51		
09:01	5.15	2.00	0.00	0.26	24.72	41.0	5.05	9.0	1.36		
09:03	5.30	2.50	0.00	0.02	24.52	41.0	5.05	7.0	0.98		
09:05	5.30	3.00	0.25	0.00	24.44	41.0	5.05	5.0	1.36		

Sampling Data

Sample Information		Final Purge Readings		Field Test Kit Readings (mg/L)			
Sample Date:	6/9/2003	DO (mg/L):	0.00	DO:	0.00	Sulfate:	0.00
Sample Start Time:	09:05	Temp (*C):	24.43	CO2:	118.00	Sulfide:	0.00
Sample End Time:	09:20	SEC (uS/cm):	41.00	Alkalinity:	10.00		
Field Filtered:	☐	pH:	5.07	Ferrous Iron:	0.20		
Duplicate:	☐	ORP (mV):	5.00	H2S:	0.00		
		Turb (NTU):	0.00	Manganese:	0.00		

Lab Analyses/Methods:	Technician Initials

GROUNDWATER SAMPLING LOG

TERRAINE, inc.
ENVIRONMENTAL SERVICES

Project Information

Project No: 04-41001/2	Project Name: Building 9 - Cecil Field LTM/RAO	
Technician 1: Karen Baer	Technician 2:	Weather: Sunny
Sampling ID: 04-41001/2:CEF-9-9S:6/9/03		
Notes:		

Well Information

Well ID: **CEF-9-9S**	Sampling Date: **6/9/2003**	
Well Diam (in): 0.0	Total Well Depth (ft): 0.00	Well Screen Interval (ft):
TOC Elevation (ft msl): 78.89	Northing: 0	Easting: 0
Static Depth to Water (ft): 5.40	Well Capacity (gal): 0.00	

Purge Setup

Purge Method: Nomad Submersible	Tubing Material: PPE		Pump Set at (ft): 10.00
pH Meter:	Cond. Meter: Horiba U-22	DO Meter: Horiba U-22	Turb. Meter: Hach 2100P
Purge Start: 12:40	Purge End: 13:02	Total Volume Purged (gal): 0.00	

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
12:46	5.75	0.50	0.00	2.56	26.15	260.0	5.50	-26.0	20.30	clear	slight HC
12:47	5.75	1.00	0.00	1.60	26.02	271.0	5.11	-27.0	8.63		
12:49	5.75	1.50	0.00	1.05	26.06	268.0	5.04	-28.0	7.26		
12:51	5.65	2.00	0.00	0.54	26.15	265.0	4.98	-29.0	3.33		
12:56	5.70	2.50	0.00	0.15	26.02	266.0	4.94	-30.0	3.23		
12:58	5.80	3.00	0.00	0.01	25.96	265.0	4.89	-31.0	3.11		
13:01	5.81	3.50	0.25	0.00	25.86	260.0	4.88	-32.0	4.35		
13:02	5.85	3.50	0.00	0.00	25.81	261.0	4.87	-33.0	4.45		

Sampling Data

Sample Information		Final Purge Readings		Field Test Kit Readings (mg/L)			
Sample Date:	6/9/2003	DO (mg/L):	0.00	DO:	0.00	Sulfate:	0.00
Sample Start Time:	13:02	Temp (*C):	25.81	CO2:	242.00	Sulfide:	0.00
Sample End Time:	13:16	SEC (uS/cm):	259.00	Alkalinity:	5.00		
Field Filtered:	☐	pH:	4.88	Ferrous Iron:	0.00		
Duplicate:	☐	ORP (mV):	-33.00	H2S:	0.10		
		Turb (NTU):	0.00	Manganese:	0.00		

Lab Analyses/Methods:	Technician Initials

APPENDIX D

2nd Quarter 2003 Site Visit Reports

NAS CECIL FIELD

BUILDINGS 9 & 46

FROM : J. HUFF FAX NO. : 4108530739 Apr. 23 2003 11:07PM P1

To: Nels 904-580-0857
From: John Huff (phf)

OPERATIONS & MAINTENANCE MONTHLY CHECKLIST
CONTRACT NO. N62467-01-C-0352, CTO NO. 0001, TERRAINE PROJ. NO. 04-40001
BUILDINGS 9 & 45 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 (Huff)
General Conditions Encountered at Site: Enclosure OK. Main Power ON.
Date: 4-18-03
Time: 11:30 – 1530
Tech 1 & 2: Huff

2.0 Cylinders Replaced:
Type: 2 N_2O OK. No replacement required.
Quantity:
Comments:
Type:
Quantity:
Comments:

3.0 Compressor:
Filters Inspected: Yes (Yes) No
Filters Replaced: Yes No (No)
Comments: Compressor function OK
Leak Test Performed: Yes (Yes) No
Minor Leaks Detected: Yes No (No)
Minor Leaks Fixed: Yes No (No)
Comments: Leak check OK

4.0 Telemetry System:
Operating Correctly: Yes (Yes) No
Software Replaced: Yes No (No)
Hardware Replaced: Yes No (No)
Phone Line OK: Yes (Yes) No
Comments: All electrical OK.

5.0 Other Information/Comments:
All injection flows left as is.

BUILDING 45

6.0 Subcontractor on site: PHA
Subcontractor Employee(s): Priester Newman (Huff)
General Conditions Encountered at Site: HGE & HGW systems OK. Security OK.
Date: 4-18-03
Time: 10:30 – 15:05
Tech 1 & 2: Huff

7.0 Cylinders Replaced: HGE
Type: N_2O
Quantity: 3
Comments: 3 AG Jaxx returned & replaced. 4 in place
HGW
Type: N_2O
Quantity: 1
Comments: 1 AG Jaxx returned. 2 in place.

8.0 Compressor:
Filters Inspected: Yes (Yes) No
Filters Replaced: Yes No (No)
Comments: HGE - 2 operational, 1 down, 1 pulled for O/H
HGW - 1 operational
Leak Test Performed: Yes (Yes) No
Minor Leaks Detected: Yes No (No)
Minor Leaks Fixed: Yes No (No)
Comments: Both systems ops OK

9.0 Telemetry System:
Operating Correctly: Yes (Yes) No
Software Replaced: Yes No (No)
Hardware Replaced: Yes No (No)
Phone Line OK: Yes (Yes) No
Comments: All electric OK.

10.0 Other Information/Comments:
All injection flows left as is. Both systems ops OK.

Signature: 4-23-03 Signature:

pHA-ER OPERATION and MAINTENANCE LOG

Site Name: Cecil Field, Tank Site 9

Personnel on Site: JH

Date: 4/16/03

Arrival Time: 11:30 AM

Departure Time: 3:30 PM

Exterior Parameters	**Arrival**		**Departure**		**Comments**
Power Disconnect (On/Off)	On		On		
Power Hour Meter (hours)			19,507.0		
Pressure Hour Meter (hours)			18,784.0		
Max Temp (°F)			126		
Air Supply					
Leg 1 (PSIG)	33		33		
Nitrous Oxide					
Cylinder 1 (psig, primary/secondary)	650/45	AG	650/45		AG Jax
Cylinder 2 (psig, primary/secondary)	625/45	AG	625/45		AG Jax
Flow Meter (CFH)	0.1		0.1		
Adjunct Gas					
Cylinder 1 (psig, primary/secondary)	NA		NA		
Flow Meter					
TEP					
Gallons (US, Liq.)	0.0		0.0		None added.
Air Flow (CFM)					
Air Flow					
Inj. Well 1 (Valve % Open/CFM)	100	3	100	3	Flows set to concentrate flow to MW2S
Inj. Well 2 (Valve % Open/CFM)	15	2	15	2.0	
Inj. Well 3 (Valve % Open/CFM)	0	0.0	0	0	
Inj. Well 4 (Valve % Open/CFM)	0	0	0	0.0	

Maintenance Information	**Maintenance Performed**
Nitrous System Cylinders/Regulators	OK. Cylinders still have sufficient gas.
Nitrous Oxide Solenoid Valve	OK
TEP System	OK. IV 100% OV 100% BPV 50%. None added.
AC PC4 0010719278	OK Checked inlet filters.
AC PC4 0010719276	OK Checked 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
April, 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 April 16, 2003 Site Visit, Preventative and Corrective Maintenance

- System On and operating normally upon arrival.
- Both nitrous cylinders still with adequate pressure. Performed leak check. None detected.
- Checked TEP level – was OK. Flow left at 50%.
- Checked for system leaks – none detected.
- Continued system flows to allow greater flow to vicinity of MW2S.

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. When and as oxygen saturation is achieved, will consider pulsing injection on a twelve hour on – twelve hour off cycle.

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: 3-28-03
Time: 13:30
Tech 1 & 2:

2.0 Cylinders Replaced:
Type: N2O
Quantity: 2
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:
Time:
Tech 1 & 2:

7.0 Cylinders Replaced:
Type: N2O
Quantity: 4
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 _____

pHA-ER OPERATION and MAINTENANCE LOG		**Date:**	5/28/03
Site Name: Cecil Field, Tank Site 9		**Arrival Time:**	1:30 PM
Personnel on Site:	CP	**Departure Time:**	4:30 PM

Exterior Parameters	**Arrival**		**Departure**		**Comments**
Power Disconnect (On/Off)	On		On		
Power Hour Meter (hours)			20,515.0		
Pressure Hour Meter (hours)			18,858.0		
Max Temp (°F)			128		
Air Supply					
Leg 1 (PSIG)	33		33		
Nitrous Oxide					
Cylinder 1 (psig, primary/secondary)	0/45	AG	750/45		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.)	0.4		1.5		Added TEP
Air Flow (CFM)					
Air Flow					
Inj. Well 1 (Valve % Open/CFM)	100	2	100	2	Flows set to concentrate flow to MW2G
Inj. Well 2 (Valve % Open/CFM)	15	1	15	1.0	
Inj. Well 3 (Valve % Open/CFM)	0	0.0	0	0	
Inj. Well 4 (Valve % Open/CFM)	0	0	0	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	OK Checked inlet filters.
AC PC4 0010719276	Tripped breaker. Replace next visit. Checked 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
May 28, 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 May 28, 2003 Site Visit, Preventative and Corrective Maintenance by C. Priester

- System On and one compressor operating normally upon arrival. One compressor with tripped breaker. Removed compressor from service, will schedule replacement in June
- One nitrous oxide cylinder replaced, other still with adequate pressure. Performed leak check. None detected.
- Checked TEP level – was OK. Flow left at 50%.
- Checked for system leaks – none detected.
- Continued system flows to allow greater flow to vicinity of MW2S.

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. When and as oxygen saturation is achieved, will consider pulsing injection on a twelve hour on – twelve hour off cycle.

pHA-ER OPERATION and MAINTENANCE LOG

Site Name: Cecil Field, Tank Site 9

Personnel on Site: C Priester

Date:	6/6/03	6/26/03
Arrival Time:	12:35 PM	8:00 AM
Departure Time:	3:35 PM	10:00 AM

Exterior Parameters	**Arrival**		**Departure**		**Comments**
Power Disconnect (On/Off)	Off		On		
Power Hour Meter (hours)	20729	6/6/03	21,207.0	6/26/03	
Pressure Hour Meter (hours)	18858	6/6/03	19,337.0	6/26/03	
Max Temp (F)			128		
Air Supply					
Leg 1 (PSIG)	33		33		
Nitrous Oxide					
Cylinder 1 (psig, primary/secondary)	725/45	AG	0/45		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.)	0.6		1.5		Added TEP
Air Flow (CFM)					
Air Flow					
Inj. Well 1 (Valve % Open/CFM)	100	2	100	2	Flows set to concentrate flow to MW2S
Inj. Well 2 (Valve % Open/CFM)	15	1	15	1.0	
Inj. Well 3 (Valve % Open/CFM)	0	0.0	0	0	
Inj. Well 4 (Valve % Open/CFM)	0	0	0	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	Checked 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.	

214 hours
Compressor with
tripped breaker.

PhA-ER Monthly System O&M Progress Report
Tank Site 9
June 6, 2003 and June 26, 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 June 6 and June 26, 2003 Site Visit, Preventative and Corrective Maintenance by C. Priester

- System On and one compressor operating normally upon arrival. One compressor with tripped breaker. Replaced both compressors on June 6, 2003.
- Both compressors operating normally on June 26, 2003.
- One nitrous oxide cylinder still with adequate pressure June 26, 2003. Performed leak check. None detected.
- Checked TEP level – added TEP. Flow left at 50%.
- Checked for system leaks – none detected.
- Continued system flows to allow greater flow to vicinity of MW2S.

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.