

**TETRA TECH NUS, INC.**

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SAR
originals

August 11, 1998

TtNUS-0898-0104

Commanding Officer
Department of the Navy
SOUTHNAVFACENGCOM
ATTN: Mr. Bryan Kizer
P.O. Box 10068
2155 Eagle Drive
North Charleston, South Carolina 29406

ORIGINAL

Reference: Clean Contract No. N62467-94-D0888
Contract Task Order No. 0061

Subject: Former Fire Fighting Training Facility DPT Letter Report
Naval Air Station, Jacksonville, Florida

Dear Mr. Kizer:

Tetra Tech NUS, Inc. (TtNUS) is pleased to submit the subject Direct Push Technology (DPT) Assessment letter report for the referenced Contract Task Order (CTO). This DPT Assessment was prepared for the U.S. Navy Southern Division Naval Facilities Engineering Command under CTO-061, for the Comprehensive Long-term Environmental Action Navy (CLEAN) Contract Number N62467-94-D-0888. The objective of this DPT investigation was to determine the horizontal extent of petroleum hydrocarbons in subsurface soils and groundwater. This information was gathered to aid in locating permanent monitoring wells at the site and to determine the aquifer's characteristics.

This letter report documents the field activities completed between July 6, 1998 and July 8, 1998, and makes recommendations on the locations of permanent monitoring wells. Data collected during these investigations will be used to prepare a Site Assessment Report (SAR) in accordance with Chapter 62-770 of the Florida Administrative Code (FAC). Field methodologies utilized during this sampling event will be described in detail in the SAR.

Between July 6, 1998 and July 8, 1998, TtNUS personnel installed 26 soil borings. **Figure 1** depicts the area of investigation at the former Fire Fighting Training Facility at NAS Jacksonville. The soil boring locations are presented in **Figure 2**. Soils were continuously inspected from the borings for soil classification. Samples were collected from each split spoon of each boring and screened with an Organic Vapor Analyzer. The split spoon interval with the highest Organic Vapor Analyzer reading was then analyzed by the mobile laboratory for BTEX (benzene, toluene, ethylbenzene, and xylenes) and DRO (diesel range organics). The mobile laboratory results are presented on **Table 1**.

After each soil boring was completed, the boring was converted to a temporary well and a groundwater sample was collected from the well (SB-1 through SB-24) with a peristaltic pump. The groundwater sample was placed in a 40 milliliter vial and analyzed by the mobile laboratory for BTEX and DRO. The groundwater concentrations and temporary wells (piezometers) are

CTO-61

Mr. Bryan Kizer
SOUTHNAVFACENGCOM
August 11, 1998

depicted in **Figure 3**. The mobile laboratory analytical results from the soil and groundwater samples are presented in **Table 1** and **Table 2**, respectively. A copy of the mobile laboratory results is included as **Attachment 1** of this report.

In three of the existing soil borings, piezometers were installed to evaluate the groundwater flow direction. The groundwater appears to flow towards the north/northwest. During the investigation, the depth to water ranged from 6 to 8 feet below land surface. **Table 3** shows the calculated groundwater elevations for each piezometer.

Figure 2 and **Figure 3** depict the concentrations that were detected in each soil boring for the soil and groundwater, respectively. In the soil, there were no BTEX concentrations that exceeded FDEP Target Levels. The soil borings that exceed target levels for TPH-DRO were SB-4, SB-8, SB-11, SB-12, SB-13, SB-15, SB-16, SB-17, SB-18, SB-19. These borings are generally located west of existing monitoring well MW-14 and north to northwest of MW-13. During the DPT investigation, TtNUS personnel checked for the presence of free product in MW-13 and MW-14. TtNUS personnel measured approximately 1.5 feet of free product in MW-13.

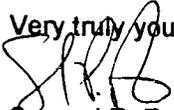
In the groundwater, it appears that the contaminant concentrations were greatest in the vicinity of monitoring well MW-13 and extended in a north to north westerly direction. The borings that exceeded the groundwater FDEP Target Levels for BTEX or TPH were SGW-1, SGW-3, SGW-4, SGW-6, SGW-7, SGW-8, SGW-11, SGWB-12, SGW-13, SGW-14, SGW-15, SGW-16, SGW-17, SGW-18, SGW-19, SGW-20, SGW-21, and SGW-22.

TtNUS proposes the installation of six monitoring wells. The proposed shallow monitoring wells (PMW-1 through PMW-5) are strategically placed up-gradient, down-gradient, and cross gradient of the observed concentrations. A deep monitoring well (PMW-6D) will be installed immediately north of MW-13 to delineate the vertical extent of groundwater in the center of the contaminant plume. The locations of the proposed monitoring wells are depicted on **Figure 3**.

In addition vadose zone soils will be collected from the zone of highest contamination, intermediate contamination, and low contamination in three of the DPT borings (SB-17, SB-15, and SB-14). These soil samples will be sent off to a fixed-based laboratory and analyzed for constituents of the Kerosene Analytical Group as defined in Chapter 62-770, FAC. Finally, one soil sample will be collected and analyzed for total organic carbon (TOC) to evaluate the site's potential for natural attenuation.

Subcontracts to initiate Phase II of the field activities are currently being prepared. These activities should be initiated by the end of August. If you have any questions regarding the enclosed material, or if I can be of assistance in any way, please contact me at (904) 281-0400.

Very truly yours,

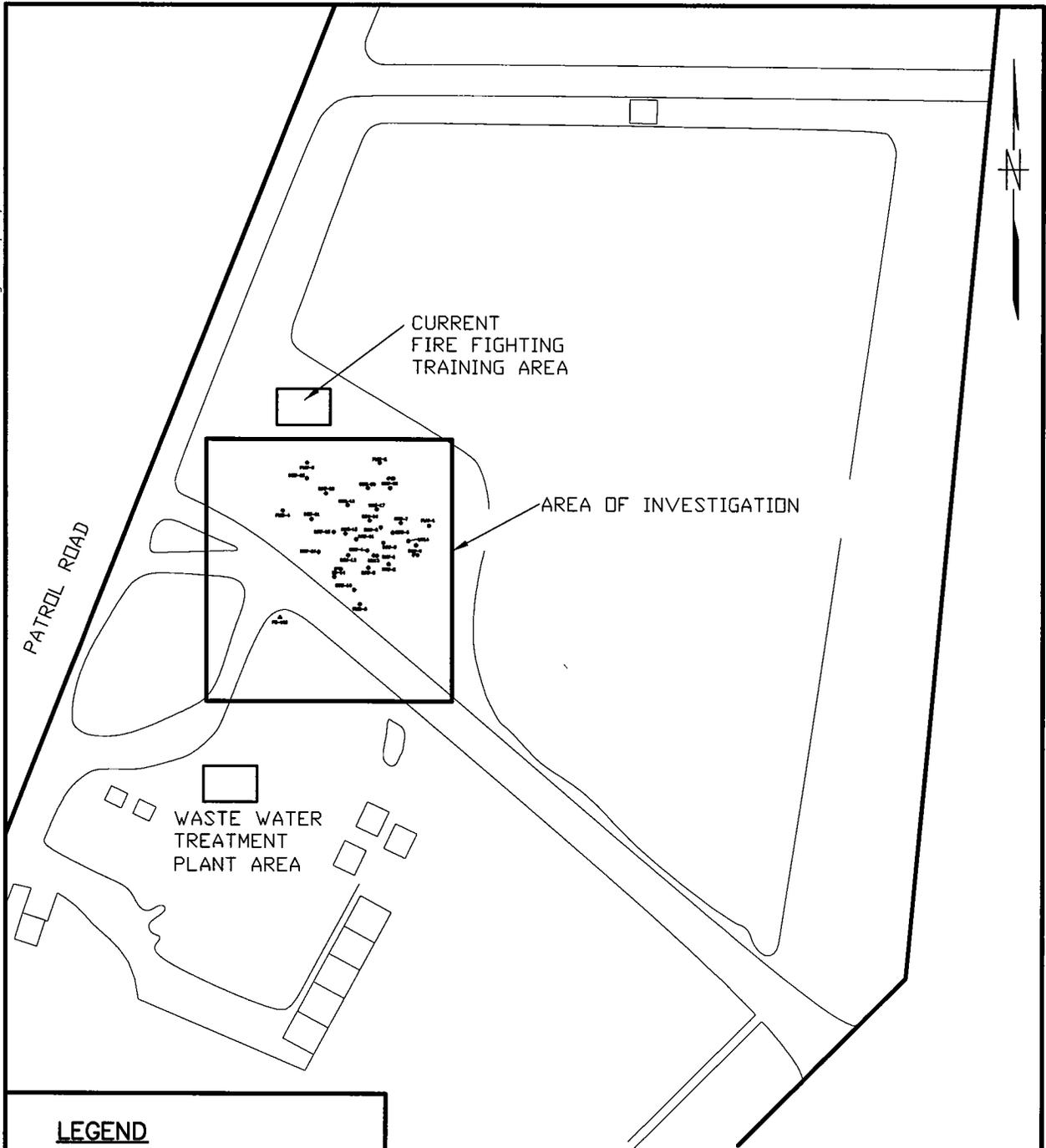

8/11/98
Samuel P. Pratt, P.G.
Task Order Manager

SP/sas

Enclosures

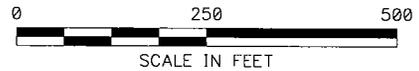
cc: Diane Lancaster
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LEGEND

NAS NAVAL AIR STATION
 ——— AREA OF INVESTIGATION



DRAWN BY	DATE
MF	8/7/98

CHECKED BY	DATE

COST/SCHED-AREA

SCALE
AS NOTED



SITE LOCATION
FORMER FIRE FIGHTING TRAINING FACILITY
SITE ASSESSMENT
OPERABLE UNIT 2
NAS JACKSONVILLE
JACKSONVILLE, FLORIDA

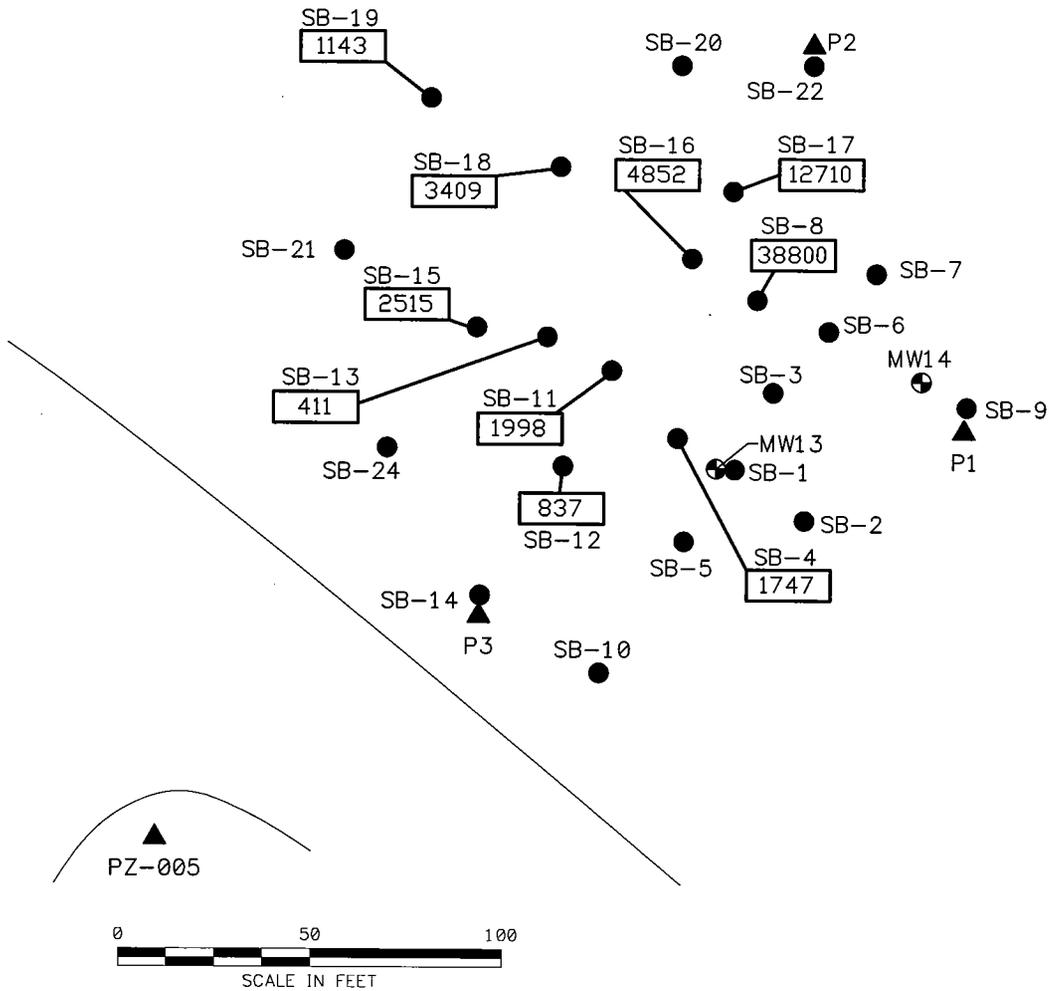
CONTRACT NO.
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APPROVED BY	DATE

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DRAWING NO.	REV.
FIGURE 1	0

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LEGEND

- | | | |
|------|-------------------|---------------------|
| NAS | NAVAL AIR STATION | SOIL CONCENTRATIONS |
| ● | SOIL BORING | 411 TPH-DRO (mg/kg) |
| ⊕ | MONITORING WELL | ▲ PIEZOMETER |
| MW13 | | PZ-005 |

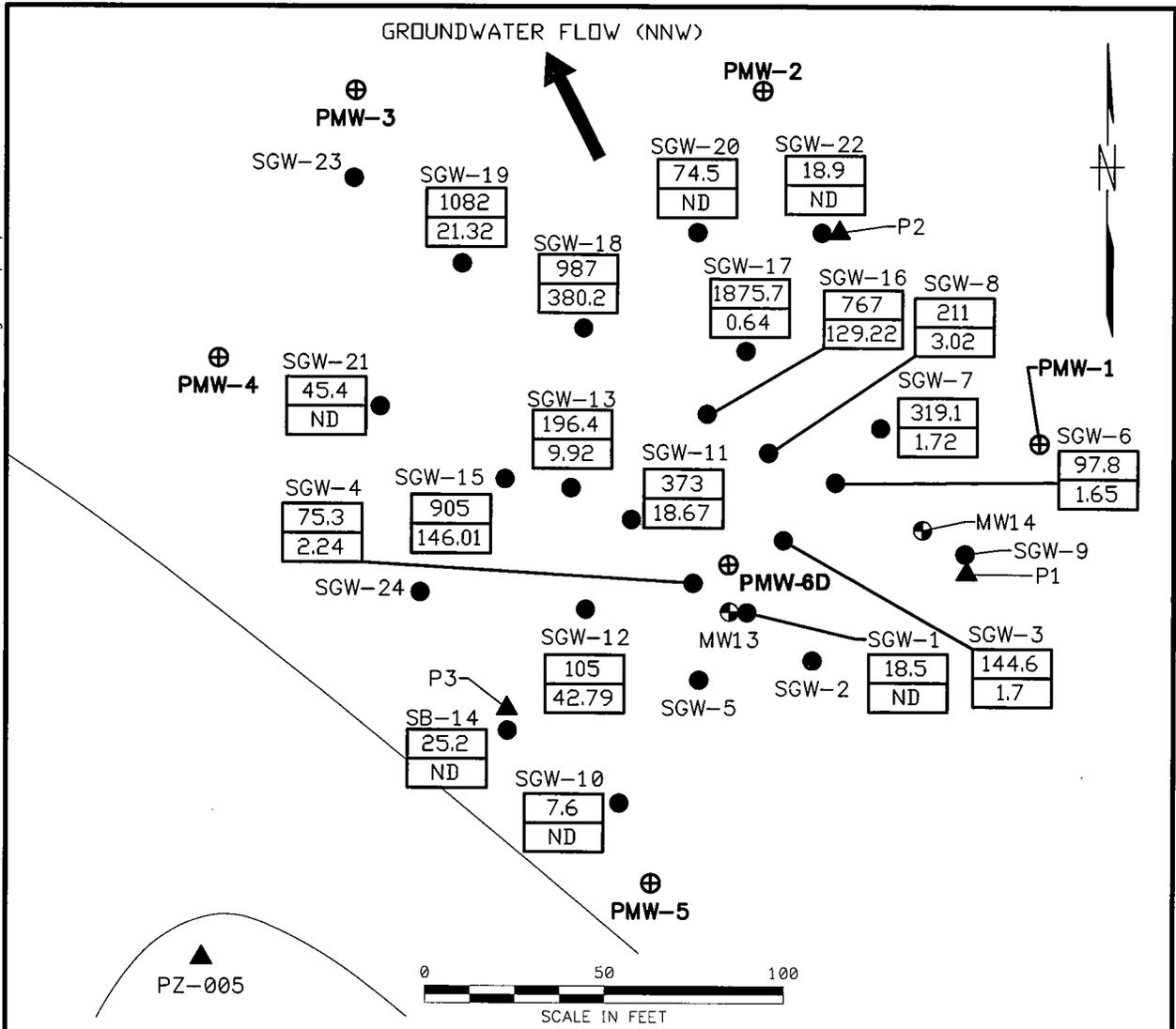
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MF	8/7/98
CHECKED BY	DATE
COST/SCHED-AREA	
SCALE	
AS NOTED	



**DPT SOIL CONCENTRATIONS
FORMER FIRE FIGHTING TRAINING FACILITY
SITE ASSESSMENT
OPERABLE UNIT 2
NAS JACKSONVILLE
JACKSONVILLE, FLORIDA**

CONTRACT NO. 7849	
APPROVED BY	DATE
APPROVED BY	DATE
DRAWING NO. FIGURE 2	REV. 0

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LEGEND

- NAS NAVAL AIR STATION
- SOIL BORING
- SB-1 MONITORING WELL
- MW13 PIEZOMETER
- PZ-005
- ⊕ PROPOSED MONITORING WELL
- PMW-1
- GROUNDWATER CONCENTRATIONS
- ND TOTAL BTEX (ug/L)
- ND TPH-DRO (mg/L)
- ND NON DETECT
- ➔ GROUNDWATER FLOW

DRAWN BY	DATE
MF	8/7/98
CHECKED BY	DATE
COST/SCHED-AREA	
SCALE	
AS NOTED	



DPT GW CONCENTRATIONS, GW FLOW & PROPOSED MONITORING WELL LOCATIONS
SITE ASSESSMENT
OPERABLE UNIT 2
NAS JACKSONVILLE
JACSONVILLE, FLORIDA

CONTRACT NO.	
7849	
APPROVED BY	DATE
APPROVED BY	DATE
DRAWING NO.	REV.
FIGURE 3	0

Table 1
Mobile Laboratory Soil Results

Boring No.	Sample ID	Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	TPH DRO (mg/kg)
S-1	SB-1	7/6/98	ND	ND	ND	ND	12
S-2	SB-2	7/6/98	ND	ND	ND	ND	ND
S-3	SB-3	7/6/98	ND	ND	ND	ND	ND
S-4	SB-4	7/6/98	0.05	0.03	0.07	0.3	1747
S-5	SB-5	7/6/98	ND	ND	ND	ND	ND
S-6	SB-6	7/6/98	ND	ND	ND	0.167	ND
S-7	SB-7	7/6/98	ND	0.038	ND	0.323	ND
S-8	SB-8	7/6/98	0.58	0.3	0.79	3.29	38800
S-9	SB-9	7/6/98	ND	ND	ND	ND	ND
S-10	SB-10	7/6/98	ND	ND	ND	ND	ND
S-11	SB-11	7/7/98	0.28	0.16	0.18	0.93	1998
S-12	SB-12	7/7/98	0.019	0.006	0.008	0.027	837
S-13	SB-13	7/7/98	0.12	0.108	0.122	0.374	411
S-14	SB-14	7/7/98	ND	0.012	ND	0.014	ND
S-15	SB-15	7/7/98	0.142	0.097	0.202	0.733	2515
S-16	SB-16	7/7/98	0.22	0.59	1.35	2.74	4852
S-17	SB-17	7/7/98	1	0.5	2.5	10.4	12710
S-18	SB-18	7/7/98	0.43	0.36	0.52	1.31	3409
S-19	SB-19	7/7/98	0.175	0.171	0.191	0.445	1143
S-20	SB-20	7/7/98	ND	ND	ND	ND	ND
S-21	SB-21	7/7/98	ND	ND	ND	ND	ND
S-22	SB-22	7/8/98	ND	ND	ND	ND	ND
S-23	SB-23	7/8/98	ND	ND	ND	ND	ND
S-24	SB-24	7/8/98	ND	ND	ND	ND	ND
*S-25	SB-25	7/8/98	0.051	0.016	0.042	0.141	3678
*S-26	SB-26	7/8/98	0.149	0.077	0.106	0.463	4958
FDEP TARGET LEVELS			1.1	300	240	290	350

Note * indicates: SB-25 is a duplicate of SB-4 and SB-26 is a duplicate of SB-11.

Table 2
Mobile Laboratory Groundwater Results

Boring No.	Sample ID	Date	Depth (ft)	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes (ug/l)	TPH-DRO (mg/l)
S-1	SGW-1	7/6/98	11'	5.2	ND	7.6	5.7	ND
S-2	SGW-2	7/6/98	11'	ND	2	ND	4.7	ND
S-3	SGW-3	7/6/98	10'	38.8	2.2	31.2	72.3	1.7
S-4	SGW-4	7/6/98	11'	20.5	ND	13.6	41.3	2.24
S-5	SGW-5	7/6/98	10'	ND	ND	ND	ND	ND
S-6	SGW-6	7/6/98	10'	29.1	2.3	22.1	44.3	1.65
S-7	SGW-7	7/6/98	10'	10.2	4.2	50.4	254.3	1.72
S-8	SGW-8	7/6/98	10'	28	ND	25	159	3.02
S-9	SGW-9	7/6/98	8'	ND	2.6	ND	ND	ND
S-10	SGW-10	7/6/98	10'	ND	3.6	ND	3.9	ND
S-11	SGW-11	7/7/98	10'	74	14	105	180	18.67
S-12	SGW-12	7/7/98	10'	12	16	12	66	42.79
S-13	SGW-13	7/7/98	8'	54.7	18.4	48.3	75	9.92
S-14	SGW-14	7/7/98	9'	4.5	7	3.1	10.6	ND
S-15	SGW-15	7/7/98	7'	64	72	126	643	146.01
S-16	SGW-16	7/7/98	8'	122	40	179	426	129.22
S-17	SGW-17	7/7/98	9'	22.1	8.5	89.9	1755.1	0.64
S-18	SGW-18	7/7/98	9'	89	135	174	588	380.2
S-19	SGW-19	7/7/98	8'	42	67	212	760	21.32
S-20	SGW-20	7/7/98	10'	18.1	6.5	10.9	38.9	ND
S-21	SGW-21	7/7/98	10'	ND	6	9	30.5	ND
S-22	SGW-22	7/8/98	10'	2.3	4.7	2.3	9.7	ND
S-23	SGW-23	7/8/98	9'	ND	2.8	ND	4	ND
S-24	SGW-24	7/8/98	8'	ND	3.4	ND	4.5	ND
FDEP TARGET LEVELS				1	40	30	20	5

Table 3 Groundwater Details

Location	Boring	Reading	TOC Elevation	DTW	Surface to TOC	Abs. DTW	GW Elev.
TP-1	P-1	4.05	20	6.96	0.87	6.09	13.04
TP-2	P-2	4.2	19.85	9.32	0.9	8.42	10.53
TP-3	P-3	3.85	20.2	9.39	0.75	8.64	10.81
<p>Note: the MSL elevation was taken from a topographic map and found to be 20 feet Therefore: P1 is assumed as the MSL elevation = $20 + 4.05 = 24.05$</p>							

ATTACHMENT 1

)

PRELIMINARY DATA REPORT

Tetra Tech NUS, Inc.
7018 A.C. Skinner Parkway, Suite 250
Jacksonville, Florida 32256

Fire Fighter Training Facility, Jacksonville NAS
CLIENT PROJECT # 7849

TEG PROJECT # 3-98249-G1

BTEX ANALYSIS OF SOIL (EPA METHOD 8020)

DATA REPORTED IN MILLIGRAMS PER KILOGRAM (PPM)

SAMPLE ID	DATE COLLECTED	DATE ANALYZED	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYLBENZ (mg/kg)	XYLENES (mg/kg)	TOT. BTEX (mg/kg)	Surrogate	Data	
								Recovery (%)	% Qualifiers	PQL
METHOD BLANK	----	7/6/98	ND	ND	ND	ND	ND	100.4		0.005
SB-1	7/6/98	7/6/98	ND	ND	ND	ND	ND	105.7		0.005
SB-2	7/6/98	7/6/98	ND	ND	ND	ND	ND	95.8		0.005
SB-3	7/6/98	7/6/98	ND	ND	ND	ND	ND	98.1		0.005
SB-4	7/6/98	7/6/98	0.05	0.03	0.07	0.30	0.45	83.2	D	0.01
SB-5	7/6/98	7/6/98	ND	ND	ND	ND	ND	98.6		0.005
SB-6	7/6/98	7/6/98	ND	ND	ND	0.167	0.167	95.0		0.005
SB-7	7/6/98	7/6/98	ND	0.038	ND	0.323	0.360	91.1		0.005
SB-8	7/6/98	7/6/98	0.58	0.30	0.79	3.29	4.95	96.7	D	0.05
SB-9	7/6/98	7/6/98	ND	ND	ND	ND	ND	95.1		0.005
SB-10	7/6/98	7/6/98	ND	ND	ND	ND	ND	94.5		0.005
METHOD BLANK	----	7/7/98	ND	ND	ND	ND	ND	97.1		0.005
SB-11	7/7/98	7/7/98	0.28	0.16	0.18	0.93	1.55	98.0	D	0.01
SB-12	7/7/98	7/7/98	0.019	0.006	0.008	0.027	0.060	85.0		0.005
SB-13	7/7/98	7/7/98	0.120	0.108	0.122	0.374	0.724	103.4		0.005
SB-14	7/7/98	7/7/98	ND	0.012	ND	0.014	0.026	80.9		0.005
SB-15	7/7/98	7/7/98	0.142	0.097	0.202	0.733	1.174	113.1		0.005
SB-16	7/7/98	7/7/98	0.22	0.59	1.35	2.74	4.90	87.0	D	0.01
SB-17	7/7/98	7/7/98	1.0	0.5	2.5	10.4	14.4	105.3	D	0.1
SB-18	7/7/98	7/7/98	0.43	0.36	0.52	1.31	2.61	110.9	D	0.01
SB-19	7/7/98	7/7/98	0.175	0.171	0.191	0.445	0.983	114.4		0.005

"ND" INDICATES ANALYTE NOT DETECTED AT OR ABOVE LISTED PRACTICAL QUANTITATION LIMITS (PQL'S)

ANALYSIS PERFORMED IN TEG'S CERTIFIED MOBILE LABORATORY

ANALYSIS PERFORMED BY: Theresa Sorrells

DATA REVIEWED BY:

DATA QUALIFIERS

MI = MATRIX INTERFERENCE

DO = SURROGATE SPIKE DILUTED OUT

D = ALL SAMPLE VALUES OBTAINED BY DILUTION, PQL IS ADJUSTED ACCORDINGLY

d = INDIVIDUAL VALUE OBTAINED BY DILUTION

E = ESTIMATED CONCENTRATION(S)

PRELIMINARY DATA REPORT

Tetra Tech NUS, Inc.
7018 A.C. Skinner Parkway, Suite 250
Jacksonville, Florida 32256

Fire Fighter Training Facility, Jacksonville NAS
CLIENT PROJECT # 7849

TEG PROJECT # 3-98249-G1

BTEX ANALYSIS OF SOIL (EPA METHOD 8020)

DATA REPORTED IN MILLIGRAMS PER KILOGRAM (PPM)

SAMPLE ID	DATE COLLECTED	DATE ANALYZED	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYLBENZ (mg/kg)	XYLENES (mg/kg)	TOT. BTEX (mg/kg)	Surrogate	Data
								Recovery (%)	Qualifiers PQL
SB-20	7/7/98	7/7/98	ND	ND	ND	ND	ND	88.7	0.005
SB-21	7/7/98	7/7/98	ND	ND	ND	ND	ND	92.0	0.005
METHOD BLANK	-----	7/8/98	ND	ND	ND	ND	ND	88.5	0.005
SB-22	7/8/98	7/8/98	ND	ND	ND	ND	ND	85.0	0.005
SB-23	7/8/98	7/8/98	ND	ND	ND	ND	ND	87.0	0.005
SB-24	7/8/98	7/8/98	ND	ND	ND	ND	ND	85.8	0.005
SB-25	7/8/98	7/8/98	0.051	0.016	0.042	0.141	0.250	102.3	0.005
SB-26	7/8/98	7/8/98	0.149	0.077	0.106	0.463	0.794	111.3	0.005

"ND" INDICATES ANALYTE NOT DETECTED AT OR ABOVE LISTED PRACTICAL QUANTITATION LIMITS (PQL'S)

ANALYSIS PERFORMED IN TEG'S CERTIFIED MOBILE LABORATORY

ANALYSIS PERFORMED BY: Theresa Sorrells

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Fire Fighter Training Facility, Jacksonville NAS
CLIENT PROJECT # 7849

TEG PROJECT # 3-98249-G1

TPH-DRO ANALYSIS OF SOIL (EPA METHOD 3550/8015 Mod.)

DATA REPORTED IN MILLIGRAMS PER KILOGRAM (PPM)

SAMPLE ID	DATE COLLECTED	DATE ANALYZED	TPH-DRO (mg/kg)	Surrogate Recovery (%)	Data Qualifiers	PQL
METHOD BLANK	----	7/6/98	ND	101.2		10
SB-1	7/6/98	7/6/98	12	112.8		10
SB-2	7/6/98	7/6/98	ND	100.1		10
SB-3	7/6/98	7/6/98	ND	97.4		10
SB-4	7/6/98	7/6/98	1747	110.0		10
SB-5	7/6/98	7/6/98	ND	94.4		10
SB-6	7/6/98	7/6/98	ND	105.8		10
SB-7	7/6/98	7/6/98	ND	107.9		10
SB-8	7/6/98	7/6/98	38800	DO	D	200
SB-9	7/6/98	7/6/98	ND	113.8		10
SB-10	7/6/98	7/6/98	ND	86.8		10
METHOD BLANK	----	7/7/98	ND	92.6		10
SB-11	7/7/98	7/7/98	1998	106.9		10
SB-12	7/7/98	7/7/98	837	100.6		10
SB-13	7/7/98	7/7/98	411	87.7		10
SB-14	7/7/98	7/7/98	ND	81.1		10
SB-15	7/7/98	7/7/98	2515	113.8		10
SB-16	7/7/98	7/7/98	4852	92.1		10
SB-17	7/7/98	7/7/98	12710	104.8	D	50
SB-18	7/7/98	7/7/98	3409	101.5		10
SB-19	7/7/98	7/7/98	1143	110.6		10
SB-2 Duplicate	7/6/98	7/6/98	ND	103.6		10

"ND" INDICATES ANALYTE NOT DETECTED AT OR ABOVE LISTED PRACTICAL QUANTITATION LIMITS (PQL'S)

ANALYSIS PERFORMED IN TEG'S CERTIFIED MOBILE LABORATORY

ANALYSIS PERFORMED BY: Theresa Sorrells

DATA REVIEWED BY:

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PRELIMINARY DATA REPORT

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7018 A.C. Skinner Parkway, Suite 250
Jacksonville, Florida 32256

Fire Fighter Training Facility, Jacksonville NAS
CLIENT PROJECT # 7849

TEG PROJECT # 3-98249-G1

TPH-DRO ANALYSIS OF SOIL (EPA METHOD 3550/8015 Mod.)

DATA REPORTED IN MILLIGRAMS PER KILOGRAM (PPM)

SAMPLE ID	DATE COLLECTED	DATE ANALYZED	TPH-DRO (mg/kg)	Surrogate Recovery (%)	Data Qualifiers	PQL
SB-20	7/7/98	7/7/98	ND	118.9		10
SB-21	7/7/98	7/7/98	ND	103.1		10
METHOD BLANK	-----	7/8/98	ND	106.9		10
SB-22	7/8/98	7/8/98	ND	119.2		10
SB-23	7/8/98	7/8/98	ND	115.6		10
SB-24	7/8/98	7/8/98	ND	100.6		10
SB-25	7/8/98	7/8/98	3678	94.2		10
SB-26	7/8/98	7/8/98	4958	108.3		10
SB-25 Duplicate	7/8/98	7/8/98	3917	75.3		10

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ANALYSIS PERFORMED IN TEG'S CERTIFIED MOBILE LABORATORY

ANALYSIS PERFORMED BY: Theresa Sorrells

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Tetra Tech NUS, Inc.
7018 A.C. Skinner Parkway, Suite 250
Jacksonville, Florida 32256

Fire Fighter Training Facility, Jacksonville NAS
CLIENT PROJECT #7849

TEG PROJECT # 3-98249-G1

BTEX ANALYSIS OF WATER (EPA METHOD 8020)

DATA REPORTED IN MICROGRAMS PER LITER (PPB)

SAMPLE ID	DATE COLLECTED	DATE ANALYZED	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYLBENZ (ug/L)	XYLENES (ug/L)	TOT. BTEX (ug/L)	Surrogate Recovery (%)	Data Qualifiers	PQL
METHOD BLANK	----	7/6/98	ND	ND	ND	ND	ND	100.4		2.0
SB-1	7/6/98	7/6/98	5.2	ND	7.6	5.7	18.5	97.5		2.0
SB-2	7/6/98	7/6/98	ND	2.0	ND	4.7	6.7	100.3		2.0
SB-3	7/6/98	7/6/98	38.8	2.2	31.2	72.3	144.6	95.4		2.0
SB-4	7/6/98	7/6/98	20.5	ND	13.6	41.3	75.3	100.0		2.0
SB-5	7/6/98	7/6/98	ND	ND	ND	ND	ND	96.4		2.0
SB-6	7/6/98	7/6/98	29.1	2.3	22.1	44.3	97.8	105.1		2.0
SB-7	7/6/98	7/6/98	10.2	4.2	50.4	254.3	319.1	101.2		2.0
SB-8	7/6/98	7/6/98	28	ND	25	159	211	97.5	D	10
SB-9	7/6/98	7/6/98	ND	2.6	ND	ND	2.6	100.5		2.0
SB-10	7/6/98	7/6/98	ND	3.6	ND	3.9	7.6	98.7		2.0
METHOD BLANK	----	7/7/98	ND	ND	ND	ND	ND	97.1		2.0
SB-11	7/7/98	7/7/98	74	14	105	180	373	82.6	D	10
SB-12	7/7/98	7/7/98	12	16	12	66	105	88.6	D	10
SB-13	7/7/98	7/7/98	54.7	18.4	48.3	75.0	196.4	86.5		2.0
SB-14	7/7/98	7/7/98	4.5	7.0	3.1	10.6	25.2	100.0		2.0
SB-15	7/7/98	7/7/98	64	72	126	643	905	81.5	D	10
SB-16	7/7/98	7/7/98	122	40	179	426	767	84.8	D	10
SB-17	7/7/98	7/7/98	22.1	8.5	89.9	1755.1	1875.7	102.5		2.0
SB-18	7/7/98	7/7/98	89	135	174	588	987	84.8	D	10
SB-19	7/7/98	7/7/98	42	67	212	760	1082	86.0	D	10
SB-13 Duplicate	7/7/98	7/8/98	35.6	12.4	53.2	73.0	174.2	98.7		2.0

"ND" INDICATES ANALYTE NOT DETECTED AT OR ABOVE LISTED PRACTICAL QUANTITATION LIMITS (PQL'S)

ANALYSIS PERFORMED IN TEG'S CERTIFIED MOBILE LABORATORY

ANALYSIS PERFORMED BY: Theresa Sorrells

DATA REVIEWED BY:

DATA QUALIFIERS

MI = MATRIX INTERFERENCE

DO = SURROGATE SPIKE DILUTED OUT

D = ALL SAMPLE VALUES OBTAINED BY DILUTION, PQL IS ADJUSTED ACCORDINGLY

d = INDIVIDUAL VALUE OBTAINED BY DILUTION

E = ESTIMATED CONCENTRATION(S)

PRELIMINARY DATA REPORT

Tetra Tech NUS, Inc.
7018 A.C. Skinner Parkway, Suite 250
Jacksonville, Florida 32256

Fire Fighter Training Facility, Jacksonville NAS
CLIENT PROJECT #7849

TEG PROJECT # 3-98249-G1

BTEX ANALYSIS OF WATER (EPA METHOD 8020)

DATA REPORTED IN MICROGRAMS PER LITER (PPB)

SAMPLE ID	DATE COLLECTED	DATE ANALYZED	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYLBENZ (ug/L)	XYLENES (ug/L)	TOT. BTEX (ug/L)	Surrogate	Data
								Recovery (%)	% Qualifiers PQL
SB-20	7/7/98	7/7/98	18.1	6.5	10.9	38.9	74.5	83.8	2.0
SB-21	7/7/98	7/7/98	ND	6.0	9.0	30.5	45.4	80.9	2.0
METHOD BLANK	-----	7/8/98	ND	ND	ND	ND	ND	88.5	2.0
SB-22	7/8/98	7/8/98	2.3	4.7	2.3	9.7	18.9	88.4	2.0
SB-23	7/8/98	7/8/98	ND	2.8	ND	4.0	6.7	88.7	2.0
SB-24	7/8/98	7/8/98	ND	3.4	ND	4.5	7.9	90.2	2.0

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ANALYSIS PERFORMED IN TEG'S CERTIFIED MOBILE LABORATORY

ANALYSIS PERFORMED BY: Theresa Sorrells

DATA REVIEWED BY:

DATA QUALIFIERS

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D = ALL SAMPLE VALUES OBTAINED BY DILUTION. PQL IS ADJUSTED ACCORDINGLY

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PRELIMINARY DATA REPORT

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Jacksonville, Florida 32256

Fire Fighter Training Facility, Jacksonville NAS
CLIENT PROJECT # 7849

TEG PROJECT # 3-98249-G1

TPH-DRO ANALYSIS OF WATER (EPA METHOD 3510/8015 Mod.)

DATA REPORTED IN MILLIGRAMS PER LITER (PPM)

SAMPLE ID	DATE COLLECTED	DATE ANALYZED	TPH-DRO (mg/L)	Surrogate Recovery (%)	Data Qualifiers	PQL
METHOD BLANK	----	7/6/98	ND	101.2		0.50
SB-1	7/6/98	7/6/98	ND	92.8		0.50
SB-2	7/6/98	7/6/98	ND	80.2		0.50
SB-3	7/6/98	7/6/98	1.70	84.3		0.50
SB-4	7/6/98	7/6/98	2.24	101.5		0.50
SB-5	7/6/98	7/6/98	ND	99.0		0.50
SB-6	7/6/98	7/6/98	1.65	69.4		0.50
SB-7	7/6/98	7/6/98	1.72	87.3		0.50
SB-8	7/6/98	7/6/98	3.02	73.6		0.50
SB-9	7/6/98	7/6/98	ND	77.7		0.50
SB-10	7/6/98	7/6/98	ND	90.4		0.50
METHOD BLANK	----	7/7/98	ND	85.6		0.50
SB-11	7/7/98	7/7/98	18.67	101.8		0.50
SB-12	7/7/98	7/7/98	42.79	108.7		0.50
SB-13	7/7/98	7/7/98	9.92	88.2		0.50
SB-14	7/7/98	7/7/98	ND	87.6		0.50
SB-15	7/7/98	7/7/98	146.01	97.2		0.50
SB-16	7/7/98	7/7/98	129.22	87.8		0.50
SB-17	7/7/98	7/7/98	0.64	89.9		0.50
SB-18	7/7/98	7/7/98	380.2	103.3	D	2.5
SB-19	7/7/98	7/7/98	21.32	89.7		0.50
SB-2 Duplicate	7/6/98	7/6/98	ND	83.4		0.50

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ANALYSIS PERFORMED IN TEG'S CERTIFIED MOBILE LABORATORY

ANALYSIS PERFORMED BY: Theresa Sorrells

DATA REVIEWED BY:

DATA QUALIFIERS

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PRELIMINARY DATA REPORT

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Jacksonville, Florida 32256

Fire Fighter Training Facility, Jacksonville NAS
CLIENT PROJECT # 7849

TEG PROJECT # 3-98249-G1

TPH-DRO ANALYSIS OF WATER (EPA METHOD 3510/8015 Mod.)

DATA REPORTED IN MILLIGRAMS PER LITER (PPM)

SAMPLE ID	DATE COLLECTED	DATE ANALYZED	TPH-DRO (mg/L)	Surrogate Recovery (%)	Data Qualifiers	PQL
SB-20	7/7/98	7/7/98	ND	93.1		0.50
SB-21	7/7/98	7/7/98	ND	90.7		0.50
METHOD BLANK	----	7/8/98	ND	95.8		0.50
SB-22	7/8/98	7/8/98	ND	90.9		0.50
SB-23	7/8/98	7/8/98	ND	80.8		0.50
SB-24	7/8/98	7/8/98	ND	79.2		0.50
SB-15 Duplicate	7/7/98	7/8/98	151.28	87.9		0.50

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ANALYSIS PERFORMED BY: Theresa Sorrells

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