



TETRA TECH NUS, INC.

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Document Tracking Number 02JAX0142

June 28, 2002

Project Number N2872

Commander, Southern Division
Naval Facilities Engineering Command
ATTN: Mr. Wayne Hansel (Code ES24)
2155 Eagle Drive
North Charleston, South Carolina 29406

Reference: CLEAN Contract Number N62467-94-D-0888
Contract Task Order Number 0192

Subject: Site Screening Letter Report
Petroleum Contaminated Area 22J
Naval Air Station Jacksonville, Jacksonville, Florida

Dear Mr. Hansel:

Tetra Tech NUS, Inc. (TtNUS) is pleased to submit this Site Screening Letter Report for Petroleum Contaminated Area (PCA) 22J. This Site Screening Letter Report was prepared for the U.S. Navy (Navy) Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOCM) under Contract Task Order (CTO) 0192, for the Comprehensive Long-term Environmental Action Navy (CLEAN) Contract Number N62467-94-D0888. The objective of the Site Screening Letter Report is to document results of the field screening activities for soil and groundwater contamination. The field screening activities were performed in accordance with the Work Plan for Site Screening at Various Petroleum Sites dated August 2001.

Background Information

PCA 22J is the former location of an underground storage tank (UST) at Officer's Quarters J located at Naval Air Station (NAS) Jacksonville (Figure 1). The former UST was located behind the garage at Quarters J (Figure 2). The UST was used to supply fuel oil to the home's furnace. On June 10, 1999, the tank was removed and a tank closure assessment was completed. The UST and surrounding area was excavated to a total depth of 6 feet (ft) below land surface (bls). Some visible signs of petroleum stained soil were present surrounding the tank. Organic vapor analyzer (OVA) readings performed during the tank closure indicated evidence of soil contamination outside the tank. One soil sample was collected from the side wall of the excavation for laboratory analysis for Volatile Organic Compounds (VOC) by United States Environmental Protection Agency (EPA) Methods 8021, Polynuclear Aromatic Hydrocarbons (PAH) by EPA Method 8310, and total recoverable petroleum hydrocarbons (TRPH) by Florida Petroleum Range Organics (FL-PRO). The analytical results indicated PAH and TRPH constituents above laboratory detection limits but not exceeding Florida Department of Environmental Protection (FDEP) Soil Cleanup Target Levels (SCTL). The soil excavated during tank removal was returned to the excavation along with additional clean backfill to bring the excavation to grade. Prior to back filling, a temporary well was installed 2 ft below the water table in the region of the highest OVA readings. The groundwater sample was collected and analyzed for VOCs by EPA Methods 8021, PAHs

by EPA Method 8310, and TRPH by FL-PRO. Dissolved petroleum constituents were not detected in the groundwater sample.

Field Screening Activities

On December 18, 2001, TtNUS mobilized to PCA 22J (Quarters J) for the field screening activities. The field screening activities consisted of soil and groundwater sample collection via direct-push technology (DPT). During field screening activities, one soil boring JAX-22J-SB-1 was installed at the PCA to a depth of 14 ft bls. The location of PCA 22J with surrounding features, former tank location, and the location of the soil boring is indicated on Figure 2.

Site Lithology

The site is underlain by a layer of fill sand from land surface to 6 ft bls. A gray clay with some sand was located from 6 to 8 ft bls. From 8 to 11 ft bls a gray clayey sand was encountered. From 11 to 13 ft bls a gray sand underlies the site.

Soil Vapor Analysis

The potential for petroleum impacted soil in the vadose zone was assessed through soil headspace analysis. Using a flame ionization detector (FID). The soil vapor analysis was performed according to the head space method prescribed in Chapter 62-770.200 (2), Florida Administrative Code (FAC). Soil samples were collected at 2-foot intervals to the water table, which was encountered at 9ft bls. The results of the soil vapor screening are presented in Table 1. No soil vapor readings were reported to contain petroleum vapors. All readings were below instrument detection limits.

Soil Sampling Results

One soil sample [JAX-22J-SB-1 (5)] was collected at 5 ft bls. The soil sample was placed on ice, shipped to Accutest Laboratories in Orlando, Florida, and analyzed for VOCs EPA Method 8021B, PAHs by USEPA Method 8310, and TRPH by FL-PRO. Results of the laboratory analysis did not indicate the presence of petroleum compounds. One constituent analyzed, 1,1-Dichloroethene, was detected but the concentration did not exceed SCTLs (Chapter 62-770, FAC). A summary of detected constituents is presented in Table 2. The complete set of analytical results is presented in Attachment A.

Groundwater Sampling Results

For groundwater sample collection, soil-boring JAX-22J-SB-1 was converted to a temporary monitoring well. For the installation of the temporary monitoring well, the soil boring was advanced to 14 ft bls by DPT, and a ¾ inch polyvinyl chloride (PVC) 0.01 inch slot well screen was installed. The screen intersected the water column from 9 to 14 ft bls. For groundwater recovery, Teflon[®] tubing was inserted into the well, and the tubing was connected to a peristaltic pump for low-flow purging and sampling. Several screen volumes were then pumped from the well in order to reduce the turbidity level and ensure a representative sample. One groundwater sample [JAX-22J-GW (9-14)] was collected from 9 to 14 ft bls. The groundwater sample was placed on ice, shipped to Accutest Laboratories in Orlando, Florida, and analyzed for VOCs using EPA Method 8021B, PAHs using EPA Method 8310, TRPH using FL-PRO, and ethylene dibromide (EDB) using EPA Method 504.1. The groundwater analytical results, presented in Attachment A, indicate no constituents were detected.

Mr. Wayne Hansel
Naval Facilities Engineering Command
June 28, 2002 – Page 3

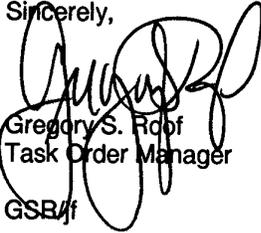
Conclusions and Recommendations

Data obtained during the field screening at PCA 22J indicated no headspace readings greater than 50 parts-per-million (ppm) and no "excessively contaminated" soil as defined by Chapter 62-770, FAC. Analytical results from the soil and groundwater sample collected at the site indicate petroleum constituents are not above FDEP SCTLs and GCTLs.

TiNUS has had some preliminary fact-finding discussions with the FDEP regarding this site. Jorge Caspary of FDEP has agreed to consider the historical information with this site screening. Upon receipt he will evaluate this information and consider the site for no further action without completing the formal corrective action process.

Based on the results of the PCA 22J site screening and the previous tank closure assessment activities, TiNUS recommends that the results of assessment be evaluated by the Florida Department of Environmental Protection (FDEP) and that "No Further Action" be granted for the site.

Sincerely,



Gregory S. Roof
Task Order Manager
GSB/f

Enclosures (3)

cc: Jorge Caspary, FDEP (hard copy, CD)
Frank Sigona, NAS Jacksonville (hard copy, CD)
D. Wroblewski (letter only)
M. Perry (unbound copy, CD)
File – CTO 192

TABLES

**TABLE 1
SOIL VAPOR MEASUREMENTS**

**PCA 22J
NAVAL AIR STATION JACKSONVILLE
JACKSONVILLE, FLORIDA**

Soil Boring Number	Date of Measurement	Sample Depth (ft bls)	Headspace Readings (ppm)		
			Total Organic Reading	Carbon Filtered Reading	Net Reading
JAX-22J-SB1	12/18/2001	1	0	0	0
		3	0	0	0
		5	0	0	0
		7	0	0	0
		9	0	0	0

Notes:

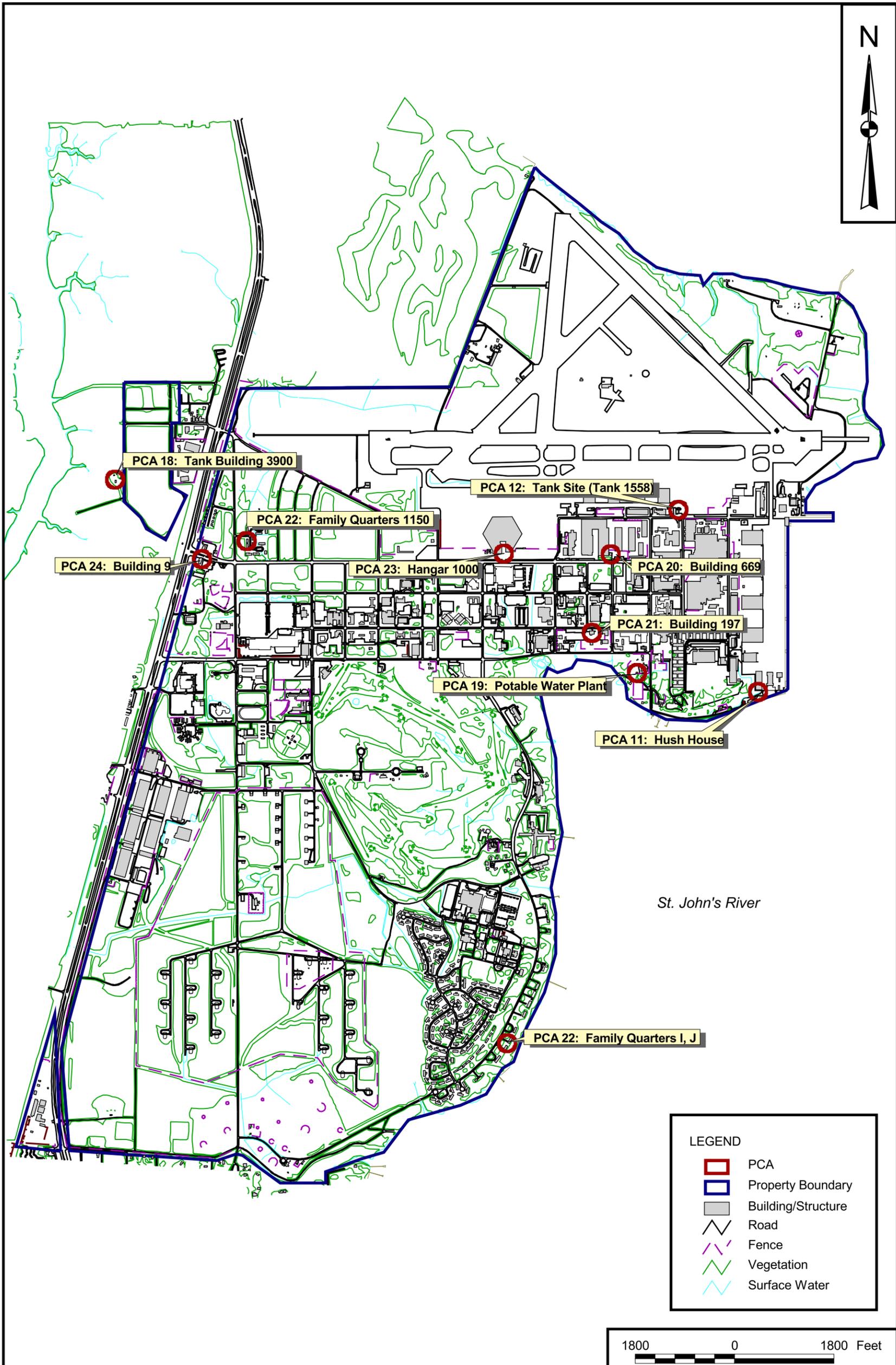
Wet Soils encountered at depths ranging at approximately 9 ft bls.

**TABLE 2
CONFIRMATORY SOIL SAMPLING ANALYTICAL RESULTS**

**PCA 22J
NAVAL AIR STATION JACKSONVILLE
JACKSONVILLE, FLORIDA**

Compound	Direct Exposure Residential ¹	Leachability Based on Groundwater Criteria ¹	PCA 22J
			JAX-22J-SB-1(5)
			12/18/2001
Sample Depth			5 feet bls
<u>Volatile Organic Compounds (USEPA Method 8021B(µg/kg))</u>			
1,1-Dichloroethene	90	60	11.6
Notes: ¹ Chapter 62-770, FAC (April 30, 1999) U = below detection limit Bold values are above target levels. µg/kg = micrograms per kilogram			

FIGURES



LEGEND

-  PCA
-  Property Boundary
-  Building/Structure
-  Road
-  Fence
-  Vegetation
-  Surface Water

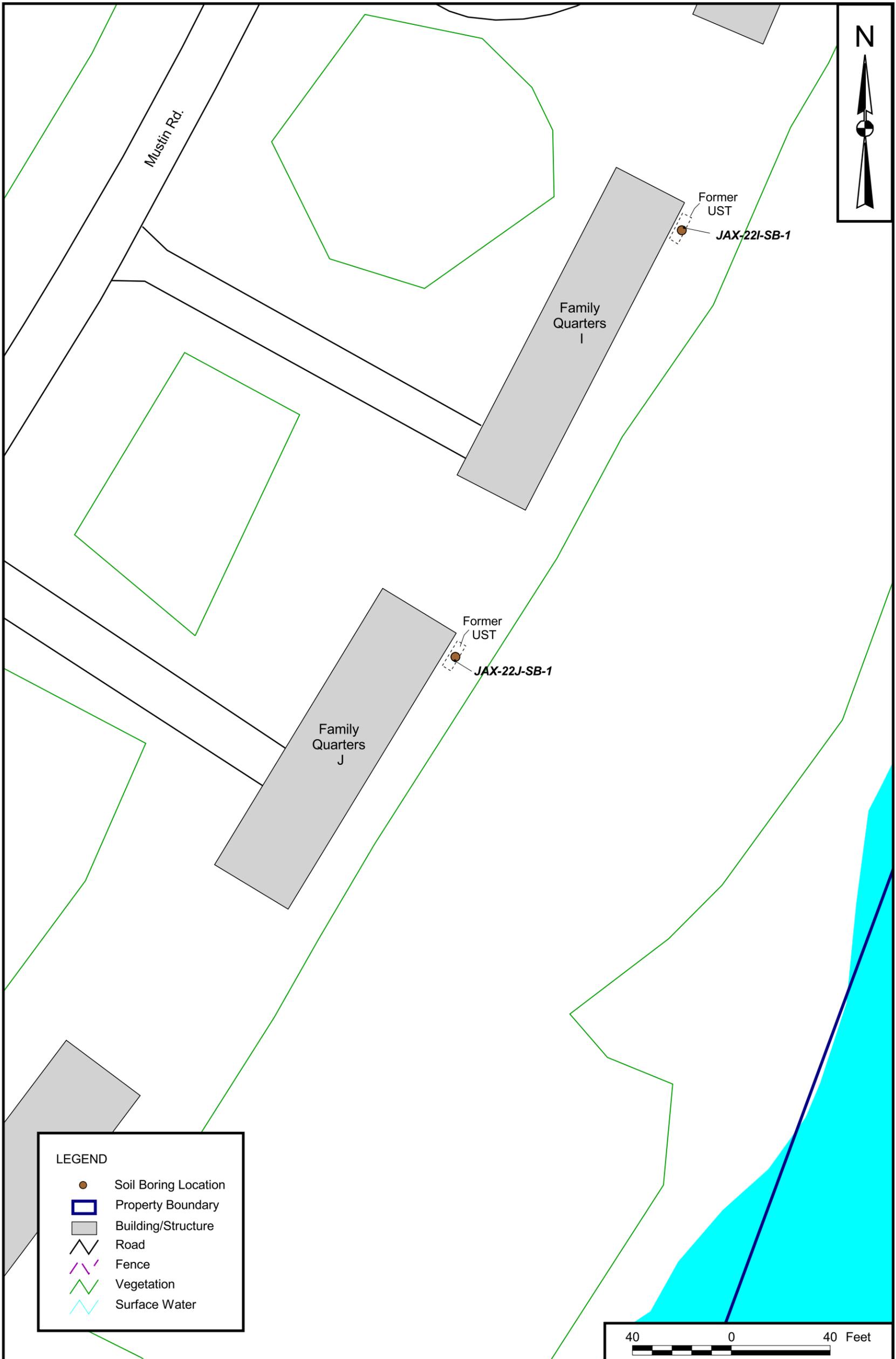


DRAWN BY J. LAMEY	DATE 5/14/02
CHECKED BY	DATE
COST/SCHEDULE-AREA	
SCALE AS NOTED	



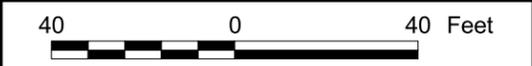
SITE LOCATION MAP
 PETROLEUM CONTAMINATION ASSESSMENT
 NAVAL AIR STATION
 JACKSONVILLE, FLORIDA

CONTRACT NUMBER	
APPROVED BY	DATE
APPROVED BY	DATE
DRAWING NO. FIGURE 1	REV 0



LEGEND

- Soil Boring Location
- Property Boundary
- Building/Structure
- Road
- Fence
- Vegetation
- Surface Water



DRAWN BY J. LAMEY	DATE 5/14/02
CHECKED BY	DATE
COST/SCHEDULE-AREA	
SCALE AS NOTED	



SOIL BORING LOCATIONS
 PCA 22 - FAMILY QUARTERS J
 PETROLEUM CONTAMINATION ASSESSMENT
 NAVAL AIR STATION
 JACKSONVILLE, FLORIDA

CONTRACT NUMBER 2872	
APPROVED BY	DATE
APPROVED BY	DATE
DRAWING NO. FIGURE 2	REV 0

**ATTACHMENT A
ANALYTICAL RESULTS**

CTO192-NAS JACKSONVILLE

SOIL DATA

Accutest, NJ

SDG: F11846

SAMPLE NUMBER:

JAX-22AC-SB1(3)

JAX-22I-SB1(5)

JAX-22J-SB1(5)

SAMPLE DATE:

12/18/01

12/18/01

12/18/01

//

LABORATORY ID:

F11846-5

F11846-3

F11846-4

QC_TYPE:

NORMAL

NORMAL

NORMAL

% SOLIDS:

83.4 %

80.2 %

73.9 %

100.0 %

UNITS:

UG/KG

UG/KG

UG/KG

FIELD DUPLICATE OF:

	RESULT	QUAL	CODE									
VOLATILES												
1,1,1-TRICHLOROETHANE	6.3	U		6	U		7.1	U				
1,1,2,2-TETRACHLOROETHANE	6.3	U		6	U		7.1	U				
1,1,2-TRICHLOROETHANE	6.3	U		6	U		7.1	U				
1,1-DICHLOROETHANE	6.3	U		6	U		7.1	U				
1,1-DICHLOROETHENE	10.1			6			11.6					
1,2-DICHLOROBENZENE	6.3	U		6	U		7.1	U				
1,2-DICHLOROETHANE	6.3	U		6	U		7.1	U				
1,2-DICHLOROPROPANE	6.3	U		6	U		7.1	U				
1,3-DICHLOROBENZENE	6.3	U		6	U		7.1	U				
1,4-DICHLOROBENZENE	6.3	U		6	U		7.1	U				
2-CHLOROETHYL VINYL ETHER	13	U		12	U		14	U				
BENZENE	6.3	U		6	U		7.1	U				
BROMODICHLOROMETHANE	6.3	U		6	U		7.1	U				
BROMOFORM	6.3	U		6	U		7.1	U				
BROMOMETHANE	6.3	U		6	U		7.1	U				
CARBON TETRACHLORIDE	6.3	U		6	U		7.1	U				
CHLOROBENZENE	6.3	U		6	U		7.1	U				
CHLORODIBROMOMETHANE	6.3	U		6	U		7.1	U				
CHLOROETHANE	6.3	U		6	U		7.1	U				
CHLOROFORM	6.3	U		6	U		7.1	U				
CHLOROMETHANE	6.3	U		6	U		7.1	U				
CIS-1,2-DICHLOROETHENE	6.3	U		6	U		7.1	U				
CIS-1,3-DICHLOROPROPENE	6.3	U		6	U		7.1	U				
DICHLORODIFLUOROMETHANE	6.3	U		6	U		7.1	U				
ETHYLBENZENE	6.3	U		6	U		7.1	U				
METHYL TERT-BUTYL ETHER	6.3	U		6	U		7.1	U				
METHYLENE CHLORIDE	13	U		12	U		14	U				
TETRACHLOROETHENE	6.3	U		6	U		7.1	U				
TOLUENE	6.3	U		6	U		7.1	U				
TOTAL XYLENES	19	U		18	U		21	U				
TRANS-1,2-DICHLOROETHENE	6.3	U		6	U		7.1	U				
TRANS-1,3-DICHLOROPROPENE	6.3	U		6	U		7.1	U				

CTO192-NAS JACKSONVILLE

SOIL DATA

Accutest, NJ

SDG: F11846

SAMPLE NUMBER:	JAX-22AC-SB1(3)	JAX-22I-SB1(5)	JAX-22J-SB1(5)	
SAMPLE DATE:	12/18/01	12/18/01	12/18/01	//
LABORATORY ID:	F11846-5	F11846-3	F11846-4	
QC_TYPE:	NORMAL	NORMAL	NORMAL	
% SOLIDS:	83.4 %	80.2 %	73.9 %	100.0 %
UNITS:	UG/KG	UG/KG	UG/KG	
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE									
VOLATILES												
TRICHLOROETHENE	6.3	U		6	U		7.1	U				
TRICHLOROFLUOROMETHANE	6.3	U		6	U		7.1	U				
VINYL CHLORIDE	6.3	U		6	U		7.1	U				

CTO192-NAS JACKSONVILLE

SOIL DATA

Accutest, NJ

SDG: F11846

SAMPLE NUMBER:	JAX-22AC-SB1(3)	JAX-22I-SB1(5)	JAX-22J-SB1(5)	
SAMPLE DATE:	12/18/01	12/18/01	12/18/01	//
LABORATORY ID:	F11846-5	F11846-3	F11846-4	
QC_TYPE:	NORMAL	NORMAL	NORMAL	
% SOLIDS:	83.4 %	80.2 %	73.9 %	100.0 %
UNITS:	UG/KG	UG/KG	UG/KG	
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE									
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	400	U		410	U		450	U				
2-METHYLNAPHTHALENE	400	U		410	U		450	U				
ACENAPHTHENE	790	U		830	U		900	U				
ACENAPHTHYLENE	790	U		830	U		900	U				
ANTHRACENE	400	U		410	U		450	U				
BENZO(A)ANTHRACENE	400	U		410	U		450	U				
BENZO(A)PYRENE	79	U		83	U		90	U				
BENZO(B)FLUORANTHENE	79	U		83	U		90	U				
BENZO(G,H,I)PERYLENE	79	U		83	U		90	U				
BENZO(K)FLUORANTHENE	79	U		83	U		90	U				
CHRYSENE	400	U		410	U		450	U				
DIBENZO(A,H)ANTHRACENE	79	U		83	U		90	U				
FLUORANTHENE	400	U		410	U		450	U				
FLUORENE	400	U		410	U		450	U				
INDENO(1,2,3-CD)PYRENE	79	U		83	U		90	U				
NAPHTHALENE	400	U		410	U		450	U				
PHENANTHRENE	400	U		410	U		450	U				
PYRENE	400	U		410	U		450	U				

CTO192-NAS JACKSONVILLE

SOIL DATA

Accutest, NJ

SDG: F11846

SAMPLE NUMBER:	JAX-22AC-SB1(3)	JAX-22I-SB1(5)	JAX-22J-SB1(5)	
SAMPLE DATE:	12/18/01	12/18/01	12/18/01	//
LABORATORY ID:	F11846-5	F11846-3	F11846-4	
QC_TYPE:	NORMAL	NORMAL	NORMAL	
% SOLIDS:	83.4 %	80.2 %	73.9 %	100.0 %
UNITS:	MG/KG	MG/KG	MG/KG	
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE									
PETROLEUM HYDROCARBONS												
TOTAL PETROLEUM HYDROCARBONS	16.3			10	U		11	U				

CTO192-NAS JACKSONVILLE

WATER DATA

Accutest, NJ

SDG: F11846

SAMPLE NUMBER:

JAX-22AC-GW(4-6)

JAX-22J-GW(9-14)

SAMPLE DATE:

12/18/01

12/18/01

LABORATORY ID:

F11846-2

F11846-1

QC_TYPE:

NORMAL

NORMAL

% SOLIDS:

0.0 %

0.0 %

UNITS:

UG/L

UG/L

FIELD DUPLICATE OF:

100.0 %

100.0 %

	RESULT	QUAL	CODE									
VOLATILES												
1,1,1-TRICHLOROETHANE	1	U		1	U							
1,1,2,2-TETRACHLOROETHANE	1	U		1	U							
1,1,2-TRICHLOROETHANE	1	U		1	U							
1,1-DICHLOROETHANE	1	U		1	U							
1,1-DICHLOROETHENE	1	U		1	U							
1,2-DIBROMOETHANE	0.02	U		0.02	U							
1,2-DICHLOROBENZENE	1	U		1	U							
1,2-DICHLOROETHANE	1	U		1	U							
1,2-DICHLOROPROPANE	1	U		1	U							
1,3-DICHLOROBENZENE	1	U		1	U							
1,4-DICHLOROBENZENE	1	U		1	U							
2-CHLOROETHYL VINYL ETHER	1	U		1	U							
BENZENE	1	U		1	U							
BROMODICHLOROMETHANE	1	U		1	U							
BROMOFORM	1	U		1	U							
BROMOMETHANE	1	U		1	U							
CARBON TETRACHLORIDE	1	U		1	U							
CHLOROBENZENE	1	U		1	U							
CHLORODIBROMOMETHANE	1	U		1	U							
CHLOROETHANE	1	U		1	U							
CHLOROFORM	1	U		1	U							
CHLOROMETHANE	1	U		1	U							
CIS-1,2-DICHLOROETHENE	1	U		1	U							
CIS-1,3-DICHLOROPROPENE	1	U		1	U							
DICHLORODIFLUOROMETHANE	1	U		1	U							
ETHYLBENZENE	1	U		1	U							
METHYL TERT-BUTYL ETHER	1	U		1	U							
METHYLENE CHLORIDE	5	U		5	U							
TETRACHLOROETHENE	1	U		1	U							
TOLUENE	1	U		1	U							
TOTAL XYLENES	3	U		3	U							
TRANS-1,2-DICHLOROETHENE	1	U		1	U							

CTO192-NAS JACKSONVILLE
WATER DATA
Accutest, NJ
SDG: F11846

SAMPLE NUMBER:	JAX-22AC-GW(4-6)	JAX-22J-GW(9-14)		
SAMPLE DATE:	12/18/01	12/18/01	//	//
LABORATORY ID:	F11846-2	F11846-1		
QC_TYPE:	NORMAL	NORMAL		
% SOLIDS:	0.0 %	0.0 %	100.0 %	100.0 %
UNITS:	UG/L	UG/L		
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE									
VOLATILES												
TRANS-1,3-DICHLOROPROPENE	1	U		1	U							
TRICHLOROETHENE	1	U		1	U							
TRICHLOROFUOROMETHANE	1	U		1	U							
VINYL CHLORIDE	1	U		1	U							

CTO192-NAS JACKSONVILLE

WATER DATA

Accutest, NJ

SDG: F11846

SAMPLE NUMBER:

JAX-22AC-GW(4-6)

JAX-22J-GW(9-14)

SAMPLE DATE:

12/18/01

12/18/01

LABORATORY ID:

F11846-2

F11846-1

QC_TYPE:

NORMAL

NORMAL

% SOLIDS:

0.0 %

0.0 %

UNITS:

UG/L

UG/L

FIELD DUPLICATE OF:

100.0 %

100.0 %

	RESULT	QUAL	CODE									
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	2	U		2	U							
2-METHYLNAPHTHALENE	2	U		2	U							
ACENAPHTHENE	4	U		4	U							
ACENAPHTHYLENE	4	U		4	U							
ANTHRACENE	2	U		2	U							
BENZO(A)ANTHRACENE	0.2	U		0.2	U							
BENZO(A)PYRENE	0.2	U		0.2	U							
BENZO(B)FLUORANTHENE	0.2	U		0.2	U							
BENZO(G,H,I)PERYLENE	0.2	U		0.2	U							
BENZO(K)FLUORANTHENE	0.2	U		0.2	U							
CHRYSENE	2	U		2	U							
DIBENZO(A,H)ANTHRACENE	0.2	U		0.2	U							
FLUORANTHENE	2	U		2	U							
FLUORENE	2	U		2	U							
INDENO(1,2,3-CD)PYRENE	0.2	U		0.2	U							
NAPHTHALENE	2	U		2	U							
PHENANTHRENE	2	U		2	U							
PYRENE	2	U		2	U							

CTO192-NAS JACKSONVILLE

WATER DATA

Accutest, NJ

SDG: F11846

SAMPLE NUMBER:

JAX-22AC-GW(4-6)

JAX-22J-GW(9-14)

SAMPLE DATE:

12/18/01

12/18/01

LABORATORY ID:

F11846-2

F11846-1

QC_TYPE:

NORMAL

NORMAL

% SOLIDS:

0.0 %

0.0 %

100.0 %

100.0 %

UNITS:

MG/L

MG/L

FIELD DUPLICATE OF:

	RESULT	QUAL	CODE									
TOTAL PETROLEUM HYDROCARBONS	0.25	U		0.28	U							

Report of Analysis

Client Sample ID: JAX-22J-SB1(5)	Date Sampled: 12/18/01
Lab Sample ID: F11846-4	Date Received: 12/19/01
Matrix: SO - Soil	Percent Solids: 73.9
Method: SW846 8260B	
Project: NAS JAX- N2872 KJ0050115	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H014876.D	1	12/28/01	KW	n/a	n/a	VH477
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	7.1	ug/kg	
75-27-4	Bromodichloromethane	ND	7.1	ug/kg	
75-25-2	Bromoform	ND	7.1	ug/kg	
108-90-7	Chlorobenzene	ND	7.1	ug/kg	
75-00-3	Chloroethane	ND	7.1	ug/kg	
67-66-3	Chloroform	ND	7.1	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	14	ug/kg	
56-23-5	Carbon tetrachloride	ND	7.1	ug/kg	
75-34-3	1,1-Dichloroethane	ND	7.1	ug/kg	
75-35-4	1,1-Dichloroethylene	11.6	7.1	ug/kg	
107-06-2	1,2-Dichloroethane	ND	7.1	ug/kg	
78-87-5	1,2-Dichloropropane	ND	7.1	ug/kg	
124-48-1	Dibromochloromethane	ND	7.1	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	7.1	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	7.1	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	7.1	ug/kg	
541-73-1	m-Dichlorobenzene	ND	7.1	ug/kg	
95-50-1	o-Dichlorobenzene	ND	7.1	ug/kg	
106-46-7	p-Dichlorobenzene	ND	7.1	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	7.1	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	7.1	ug/kg	
100-41-4	Ethylbenzene	ND	7.1	ug/kg	
74-83-9	Methyl bromide	ND	7.1	ug/kg	
74-87-3	Methyl chloride	ND	7.1	ug/kg	
75-09-2	Methylene chloride	ND	14	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	7.1	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	7.1	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	7.1	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	7.1	ug/kg	
127-18-4	Tetrachloroethylene	ND	7.1	ug/kg	
108-88-3	Toluene	ND	7.1	ug/kg	
79-01-6	Trichloroethylene	ND	7.1	ug/kg	
75-69-4	Trichlorofluoromethane	ND	7.1	ug/kg	
75-01-4	Vinyl chloride	ND	7.1	ug/kg	
1330-20-7	Xylene (total)	ND	21	ug/kg	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JAX-22J-SB1(5)	Date Sampled:	12/18/01
Lab Sample ID:	F11846-4	Date Received:	12/19/01
Matrix:	SO - Soil	Percent Solids:	73.9
Method:	SW846 8260B		
Project:	NAS JAX- N2872 KJ0050115		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		75-125%
2037-26-5	Toluene-D8	102%		75-125%
460-00-4	4-Bromofluorobenzene	105%		72-137%
17060-07-0	1,2-Dichloroethane-D4	103%		68-125%

ND = Not detected
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J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JAX-22J-SB1(5)	Date Sampled:	12/18/01
Lab Sample ID:	F11846-4	Date Received:	12/19/01
Matrix:	SO - Soil	Percent Solids:	73.9
Method:	EPA 8310 SW846 3550B		
Project:	NAS JAX- N2872 KJ0050115		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EE006894.D	1	01/02/02	MRE	12/28/01	OP4455	GEE313
Run #2							

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	900	ug/kg	
208-96-8	Acenaphthylene	ND	900	ug/kg	
120-12-7	Anthracene	ND	450	ug/kg	
56-55-3	Benzo(a)anthracene	ND	450	ug/kg	
50-32-8	Benzo(a)pyrene	ND	90	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	90	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	90	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	90	ug/kg	
218-01-9	Chrysene	ND	450	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	90	ug/kg	
206-44-0	Fluoranthene	ND	450	ug/kg	
86-73-7	Fluorene	ND	450	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	90	ug/kg	
91-20-3	Naphthalene	ND	450	ug/kg	
90-12-0	1-Methylnaphthalene	ND	450	ug/kg	
91-57-6	2-Methylnaphthalene	ND	450	ug/kg	
85-01-8	Phenanthrene	ND	450	ug/kg	
129-00-0	Pyrene	ND	450	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	85%		37-158%
92-94-4	p-Terphenyl	96%		59-149%

ND = Not detected
 RL = Reporting Limit
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J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JAX-22J-SB1(5)	Date Sampled:	12/18/01
Lab Sample ID:	F11846-4	Date Received:	12/19/01
Matrix:	SO - Soil	Percent Solids:	73.9
Method:	FLORIDA-PRO SW846 3550B		
Project:	NAS JAX- N2872 KJ0050115		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP19100.D	1	12/31/01	ME	12/31/01	OP4463	GOP711
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	ND	11	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	100%		66-130%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JAX-22J-GW(9-14)	Date Sampled:	12/18/01
Lab Sample ID:	F11846-1	Date Received:	12/19/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 504.1 EPA 504		
Project:	NAS JAX- N2872 KJ0050115		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DD04360.D	1	12/21/01	SKW	12/21/01	OP4425	GDD161
Run #2							

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

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JAX-22J-GW(9-14)	Date Sampled:	12/18/01
Lab Sample ID:	F11846-1	Date Received:	12/19/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS JAX- N2872 KJ0050115		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR008016.D	1	12/28/01	RA	n/a	n/a	GQR342
Run #2							

VOA 8021 List

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

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JAX-22J-GW(9-14)	Date Sampled:	12/18/01
Lab Sample ID:	F11846-1	Date Received:	12/19/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS JAX- N2872 KJ0050115		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
75-29-6	2-Chloropropane	91%		56-125%
352-33-0	1-Chloro-4-fluorobenzene	99%		80-120%
352-33-0	1-Chloro-4-fluorobenzene	97%		80-120%
98-08-8	aaa-Trifluorotoluene	100%		70-127%

ND = Not detected
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J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JAX-22J-GW(9-14)	Date Sampled:	12/18/01
Lab Sample ID:	F11846-1	Date Received:	12/19/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 8310 SW846 3510C		
Project:	NAS JAX- N2872 KJ0050115		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA009822.D	1	12/26/01	MRE	12/22/01	OP4432	GAA436
Run #2							

Polynuclear Aromatic Hydrocarbons

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	53%		33-141%
92-94-4	p-Terphenyl	83%		31-122%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JAX-22J-GW(9-14)	Date Sampled:	12/18/01
Lab Sample ID:	F11846-1	Date Received:	12/19/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	FLORIDA-PRO SW846 3510C		
Project:	NAS JAX- N2872 KJ0050115		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP18995.D	1	12/26/01	ME	12/22/01	OP4433	GOP708
Run #2							

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	83%		55-130%

ND = Not detected
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 E = Indicates value exceeds calibration range

J = Indicates an estimated value
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TETRA TECH NUS, INC.

CHAIN OF CUSTODY

NUMBER

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PAGE

1 OF 1

511840

PROJECT NO: N-207-2105050115
SAMPLERS (SIGNATURE)
Rosh
Gavin Haggard

SITE NAME: VARIOUS PCAs

PROJECT MANAGER AND PHONE NUMBER
GREG ROOF 904-291-0400

FIELD OPERATIONS LEADER AND PHONE NUMBER
JOE Ferranti

LABORATORY NAME AND CONTACT:
ACCTEST

ADDRESS
4408 Umiand Rd C-15
CITY, STATE
Orlando, FL

CARRIERWAYBILL NUMBER
FedEx 8311 6072 7119

CONTAINER TYPE
PLASTIC (P) or GLASS (G)
PRESERVATIVE USED
HCL

NO. OF CONTAINERS
MATRIX

DATE YEAR MONTH DAY
12/18 1420
1615
1040
1350
1540

SAMPLE ID
JAX-22J-GW(4-14)
JAX-22AC-GW(4-6)
JAX-22I-SBI(5)
JAX-22J-SBI(5)
JAX-22AC-SBI(3)

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

TYPE OF ANALYSIS
EDB
VOCs (G021 B)
TRPA (FLPKO)
TRPA (PAH)
TRPA (PAH)

COMMENTS

LABORATORY NAME AND CONTACT:
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FORM NO. TNUUS-001

PINK (FILE COPY)

YELLOW (FIELD COPY)

WHITE (ACCOMPANIES SAMPLE)

3.2