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NAS JACKSONVILLE
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SAMPLING EVENT REPORT POTENTIAL SOURCE OF CONTAMINATION 51 (PSC51)
SOUTH ANTENNA FIELD FIREFIGHTING TRAINING AREA NAS JACKSONVILLE FL
4/1/1999
HARDING LAWSON ASSOCIATES

SAMPLING EVENT REPORT

POTENTIAL SOURCE OF CONTAMINATION 51 SOUTH ANTENNA FIELD FIREFIGHTING TRAINING AREA

NAVAL AIR STATION JACKSONVILLE JACKSONVILLE, FLORIDA

UNIT IDENTIFICATION CODE: N00207
CONTRACT NO.: N62467-89-D-0317/040

APRIL 1999

SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORTH CHARLESTON, SOUTH CAROLINA
29419-9010

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SAMPLING EVENT REPORT

POTENTIAL SOURCE OF CONTAMINATION 51
SOUTH ANTENNA FIELD FIREFIGHTING TRAINING AREA

NAVAL AIR STATION JACKSONVILLE
JACKSONVILLE, FLORIDA

Unit Identification Code: N00207

Contract No: N62467-89-D-0317/040

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April 1999

CERTIFICATION OF TECHNICAL
DATA CONFORMITY (MAY 1987)

The Contractor, Harding Lawson Associates, hereby certifies that, to the best of its knowledge and belief, the technical data delivered herewith under Contract No. N62467-89-D-0317/040 are complete and accurate and comply with all requirements of this contract.

DATE: March 23, 1999

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(DFAR 252.227-7036)

Jx-PSC51 SER
PMW 03 99

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Naval Air Station Jacksonville
Jacksonville, Florida

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GLOSSARY

ABB-ES	ABB Environmental Services, Inc.
bls	below land surface
B&R	Brown and Root Environmental
CompuChem	CompuChem Environmental Corporation
DPT	direct-push technology
EDS	Environmental Data Services
FDEP	Florida Department of Environmental Protection
FFTA	firefighting training area
FRE	focused risk evaluations
GGC	groundwater guidance concentration
IAS	initial assessment study
MCL	maximum contaminant level
μg/kg	micrograms per kilogram
μg/ℓ	micrograms per liter
NAS	Naval Air Station
NFESC	Naval Facilities Engineering Service Center
PARCC	precision, accuracy, representativeness, completeness, and comparability
PCB	polychlorinated biphenyl
PSC	potential source of contamination
QA/QC	quality assurance and quality control
RBC	risk-based concentration
RRDS	Remedial Response Decision System
SCG	soil cleanup goal
SDG	sample delivery group
SER	sampling event report
SSW	Site Screening Workplan
SVOCs	semivolatile organic compounds
TAL	target analyte list
TCE	trichloroethene
TCL	target compound list
TWSV	tap water screening value
USEPA	U.S. Environmental Protection Agency
VOCs	volatile organic compounds

1.0 INTRODUCTION

Harding Lawson Associates, under contract to the Department of Navy (Contract No. N62467-89-D-0317, Task Order No. 040) is submitting this Sampling Event Report (SER) for Potential Source of Contamination (PSC) 51, South Antenna Field Firefighting Training Area (FFTA) at Naval Air Station (NAS) Jacksonville, Jacksonville, Florida. PSC 51 is located west of Allegheny Road, immediately north of the southern boundary of the station (Figures 1-1 and 1-2).

During the initial assessment study (IAS) (Fred C. Hart Associates, Inc., 1983), an FFTA was described and tentatively located approximately 1,000 to 1,500 feet west of the present PSC 51. This area is identified as PSC 28. Based on a site visit with Mr. Roy Durham, a former Public Works Department employee at NAS Jacksonville, Geraghty & Miller, Inc., later determined that the PSC location was misidentified during the IAS. Geraghty & Miller, Inc., relocated PSC 28 further west to the western boundary of the station as shown in the Remedial Response Decision System (RRDS) report (Appendix D; ABB Environmental Services, Inc. [ABB-ES], 1995). PSC 28 was investigated as part of a verification study (Geraghty & Miller, Inc., 1985) and characterization study (Geraghty & Miller, Inc., 1986). No further action was recommended from these studies.

Although soil sampling identified the presence of polychlorinated biphenyls (PCBs) at PSC 28 (Geraghty & Miller, Inc., 1991), historical photographs suggest that this area was never an FFTA as stated by Mr. Durham. A 1946 photograph of the Defense Reutilization and Marketing Office facility, west of U.S. Highway 17, shows no tree clearing, which would be indicative of a burning area, in the area of PSC 28. In addition, Captain Stewart, an 18-year employee of the station's fire department, said that he had no knowledge of firefighter training conducted in the area of PSC 28 (Stewart, 1994).

A 1951 aerial photograph of NAS Jacksonville, obtained from the Florida Department of Transportation, was taken during the reported active period of the former FFTA. The photograph showed no evidence of tree clearing at PSC 28 that would be indicative of a burning area.

What is now believed to be the actual FFTA was identified during activities related to the RRDS investigation (ABB-ES, 1995). In February 1996, Brown and Root Environmental, Inc. (B&R) collected two surface soil samples from this area (PSC 51) for target compound list (TCL) and target analyte list (TAL) analyses (B&R, 1996). One sample was collected from an unvegetated circular area containing melted glass and metal fragments and one sample was collected from an unvegetated circular area with visible oily tar-like material. The descriptions by Mr. Durham (now deceased) that PSC 28 was a major oil dump site from 1946 to 1952 and was also used as an FFTA are compatible with these observations.

The analytical results of the two B&R soil samples indicate that five metals were detected above their Florida Department of Environmental Protection (FDEP) Soil Cleanup Goals (SCGs). Concentrations of styrene, tetrachloroethane, toluene, trichloroethene (TCE), and xylene ranging from 4 to 6 micrograms per kilogram (μg/kg) were detected in the oil disposal area. These samples were collected from the upper 6 inches of soil and material.

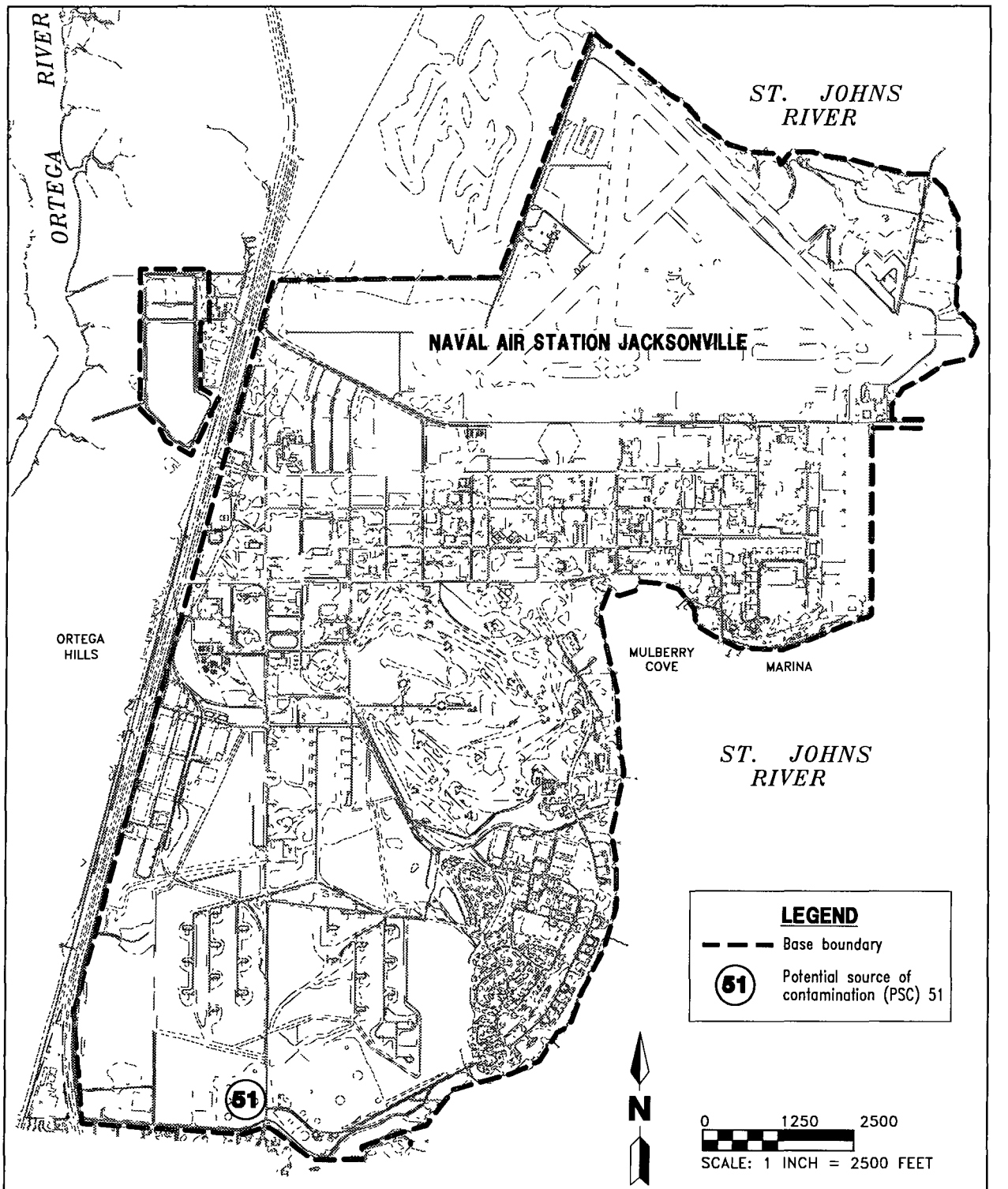

FIGURE 1-1
LOCATION OF PSC 51 AT
NAVAL AIR STATION JACKSONVILLE

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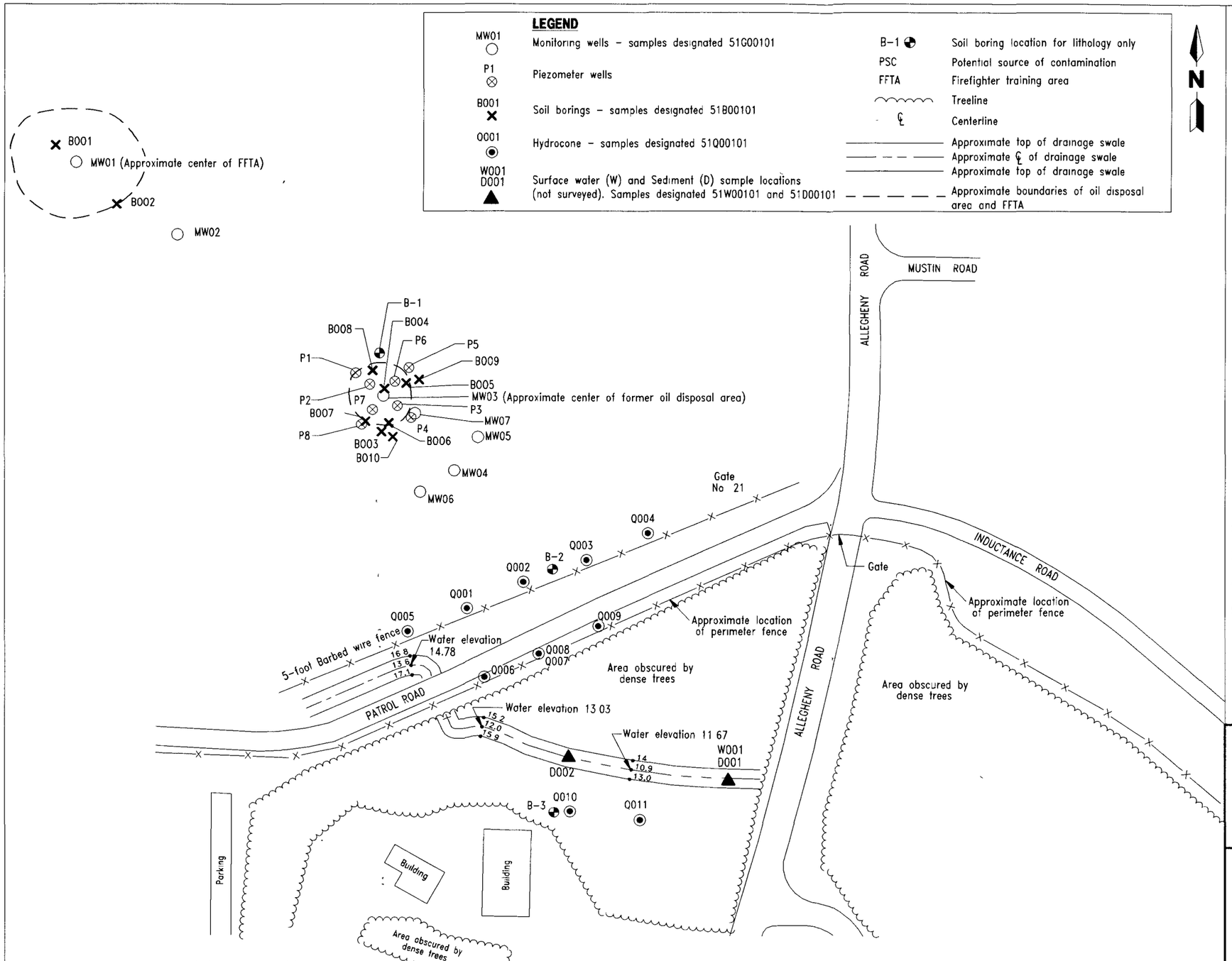
SAMPLING EVENT REPORT
PSC 51

NAVAL AIR STATION JACKSONVILLE
JACKSONVILLE, FLORIDA



TABLE

Description	Northing	Easting	Top of casing elevation	Ground elevation
MW01	2132206 77	435280 52	20.92	21 2
MW02	2132152 68	435355 51	20 76	21 0
MW03	2132032 87	435507.52	18.73	19 0
MW04	2131977 31	435559 83	18 32	18 5
MW05	2132002 01	435577.45	18 41	18 5
MW06	2131961 35	435534 73	18 14	18 4
MW07	2132018 39	435529 70	18 72	19 0
P1	2132049 61	435487.05	21.30	19 2
P2	2132041 21	435497 36	21 28	19 0
P3	2132025 39	435517 82	21.25	19 0
P4	2132016 55	435528 08	21 05	19 0
P5	2132053.66	435526.41	21.39	19 1
P6	2132043 38	435515 95	21.43	19 1
P7	2132022 73	435499 28	21 22	19 0
P8	2132011 46	435491 38	21.22	18 8
B001	2132219 14	435265 22		21 3
B002	2132175 27	435309 92		20 7
B003	2132006 03	435505 92		18 8
B004	2132038 20	435508.29		19 0
B005	2132041 73	435524 09		19 0
B006	2132012 08	435511 34		18 9
B007	2132012 30	435492.87		18 9
B008	2132051 56	435499 53		19 1
B009	2132045 08	435534 18		19 1
B010	2132002 48	435514 36		18 9
Q001	2131874 33	435569 30		17 7
Q002	2131894 05	435610 91		17 7
Q003	2131910 49	435657 24		17 1
Q004	2131930 54	435702 60		17 3
Q005	2131857 33	435525 90		17 5
Q006	2131823 41	435581 94		18 6
Q007&8	2131840 77	435621 97		18 3
Q009	2131861 24	435666.12		17 9
Q010	2131723 64	435644.67		17 9
Q011	2131716 91	435696 55		17 0

NOTES:

1 Elevations shown hereon refer to National Geodetic Vertical Datum of 1929 and are based on United States Geologic Survey station Mulberry Camera, elevation 23.599.

2 Monitoring wells – elevations taken top of 3/4-inch polyvinyl chloride pipe (north side).

3. Piezometer – elevations taken top of 2-inch polyvinyl chloride pipe (north side)

4. Coordinates refer to the Florida East Zone, North American Datum 83.

5 Land Surveyor: L D. Bradley, licensed business number 6697. Survey performed by Arnold J. Johns, Florida registered land surveyor No. 4422 5274 Ramona Boulevard, Jacksonville, Florida 32205 (Tel. 904-786-6400). Not valid without the signature and the original raised seal of a Florida licensed surveyor and mapper

0 40 80

SCALE: 1 INCH = 80 FEET

FIGURE 1-2
SAMPLE LOCATIONS AT PSC 51
SOUTH ANTENNA FIELD
FIREFIGHTING TRAINING AREA

SAMPLING EVENT REPORT
PSC 51

NAVAL AIR STATION JACKSONVILLE
JACKSONVILLE, FLORIDA

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This SER summarizes the methods and the results of the field investigation and transmits the field and analytical data.

1.1 PURPOSE AND SCOPE. The purpose of the sampling event at PSC 51 was to gather sufficient information to support the next phase of the RRDS process. The scope of the sampling event, detailed in the Site Screening Workplan (SSW) (ABB-ES, 1997), at PSC 51 included the following:

- Collection of up to 20 soil samples (surface and subsurface) at two to three locations from each of the two areas. Samples will be collected continuously, in 1-foot intervals, to the water table and will be labeled with a "B" designation (i.e., boring).

- Installation of four "micro" monitoring wells to collect groundwater samples near the center of each area and downgradient of each area.

- Laboratory analysis of the soil and groundwater for U.S. Environmental Protection Agency (USEPA) TCL volatile organic compounds (VOCs), TCL semivolatile organic compounds (SVOCs), TCL pesticides and PCBs, and TAL inorganics.

Fieldwork for this sampling event was completed between March 31, 1997 and October 1, 1997. Logs of the well installations are presented in Appendix A. A sample tracking log, which includes sample and sample delivery group (SDG) identifiers, relevant dates, laboratory identifiers, sample depths, parameters analyzed. and validation status, is included in Appendix B. The laboratory analytical results are included in Appendix C. A summary of the detections in the soil and groundwater analytical results is presented in Appendix D.

1.2 SITE DESCRIPTION. PSC 51 consists of two nearly circular unvegetated areas within the western portion of the south antenna field. The northwestern area is approximately 60 or more feet in diameter. MW01 is located at the approximate center of this area. The surface is littered with metal fragments and shards of glass. The glass and aluminum material clearly indicates burning (i.e., melted appearance). This area is considered the former FFTA identified as PSC 28 during the IAS.

The area southeast of the FFTA is slightly less than 50 feet in diameter. The surface is heavily stained with an oily tar-like material. The visible oily stain at the surface is circular and appears to represent a partially buried pit. A petroleum odor can often be detected when the surface is scraped or dug into. This area is considered the former oil disposal area described by Mr. Durham. MW03 is located at the approximate center of this area (Figure 1-2).

The topography around the two circular areas that make up PSC 51 is flat with a slight slope toward the south and east. The average slope across the site is less than 1 percent.

2.0 SAMPLING APPROACH AND FIELD CHANGES

The work described herein was performed as presented in the SSW (ABB-ES, 1997) with the following changes. Figure 1-2 presents the site layout and all sample locations.

Four shallow "micro" monitoring wells were installed between 11.5 and 12 feet below land surface (bls) as proposed. The wells, MW01 to MW04, were each installed with a 9-foot-long screen using direct-push technology (DPT). Groundwater samples were collected April 8 and 21, 1997 from three of the four wells. A groundwater sample was not collected from MW03 because floating petroleum product was encountered.

Fifteen of the 20 proposed soil samples were collected on April 16, 1997, and analyzed for TCL VOCs, SVOCs, pesticides and PCBs, and TAL inorganics. Based on the visual evidence of free product and detections of solvents and hydrocarbons in the soil and groundwater samples at and downgradient of the former oil disposal area, three additional micro monitoring wells were installed south of the oil disposal area and sampled on August 6, 1997. Two of these wells, MW05 and MW06, are shallow wells (i.e., screened 2.5 to 11.5 feet bls) and were installed northeast and southwest of MW04, respectively. The third well (MW07) was installed below a shallow 4-foot-thick clayey strata (approximately 1 to 5 feet bls) with the screened portion between 15.5 and 18.5 feet bls. One deep soil sample (51B00701) was collected from the MW07 borehole, at 15.5 feet bls. These three groundwater samples and one soil sample were analyzed for TCL VOCs.

Based on the analytical results from monitoring wells MW04, MW05, MW06, and MW07, additional groundwater sampling was conducted. Hydrocone sampling, using DPT, was utilized to investigate the extent that solvents and hydrocarbons may have migrated beyond the former oil disposal area and the associated monitoring wells. The groundwater samples obtained from the hydrocone were designated with a "Q" (i.e., 51Q00101). A total of 29 groundwater samples was collected from eleven locations in three events between September 3, 1997 and October 1, 1997 (Figure 1-2). Groundwater, collected from two or three depth intervals at each of the locations, was analyzed for TCL VOCs. The off-site sample tracking log (Appendix B) presents the sample numbers and corresponding sample depths. Six samples from two locations (Q010 and Q011) were located south of the NAS Jacksonville property line (Figure 1-2).

Because the groundwater flow pattern appears to intersect the local surface water drainage system, one surface water sample and two sediment samples were added to the original sampling program (Figure 1-2). These samples were collected from a small stream located adjacent to and south of the station's southern property line. The samples were collected on September 29, 1997, and submitted for laboratory analysis of TCL VOCs.

Because the soils at the oil pit area appear to be a continuing source of contamination to the groundwater, an interim remedial action, soil removal, was proposed. In order to define the area of contamination for potential removal, 13 additional soil samples were collected on October 28, 1997, from in and around the visible staining at the oil pit area. These samples were analyzed for TCL VOCs. A total of 28 soil samples, from all sampling events, was collected and

analyzed at PSC 51. The soil samples consisted of 20 surface samples and 8 subsurface samples (see Appendix B and Figure 1-2).

The surface soil, subsurface soil, and microwell groundwater samples were sent by overnight carrier to the subcontract laboratory CompuChem Environmental Corporation (CompuChem), Cary, North Carolina. Fifteen of the soil samples and three of the groundwater samples were analyzed for TCL VOCs, SVOCs, pesticides and PCBs, and TAL inorganic compounds. The 13 additional soil samples and 3 additional microwell groundwater samples were analyzed for only TCL VOCs.

In addition, the 29 hydrocone groundwater samples, 2 sediment samples, and 1 surface water sample were analyzed for TCL VOCs at either Savannah Laboratories, Savannah, Georgia or Environmental Conservation Laboratories, Jacksonville, Florida. The Sample Tracking Log (Appendix B) identifies the specific laboratory and includes validation status, analytical parameters, and laboratory identifiers for each sample. The complete laboratory analytical results are included in Appendix C and summarized in Appendix D.

3.0 QUALITY ASSURANCE AND QUALITY CONTROL

Field samples and associated quality assurance and quality control (QA/QC) samples were collected and analyzed according to USEPA Contract Laboratory Program requirements. Appendix B provides a listing of the samples taken and the laboratory performing the analysis. Samples analyzed by CompuChem (Cary, North Carolina), submitted by SDGs, were independently validated by a subcontract data validation company, Environmental Data Services (EDS), (Concord, New Hampshire), in accordance with validation requirements contained in Naval Facilities Engineering Service Center (NFESC) document *Navy Installation Restoration Laboratory Quality Assurance Guide*, February 1996 (NFESC, 1996). Other documents utilized in the data validation and review include the USEPA *Contract Laboratory Program National Functional Guidelines for Organic Data Review*, February 1994 (USEPA, 1994a) and the USEPA *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, February 1994 (USEPA, 1994b).

A detailed QA/QC evaluation can be found in the EDS report (EDS, 1997), which summarizes the results of the data quality assessment according to the precision, accuracy, representativeness, completeness and comparability (PARCC) parameters for the entire site screening activity. The EDS report was issued as Appendix B of the SSW. The generated analytical data were found to be acceptable according to the PARCC criteria, with less than 5 percent of the data requiring qualification (primarily estimated "J" qualifier).

The VOC samples analyzed by Savannah Laboratories (Savannah, Georgia) and Environmental Conservation Laboratories (Jacksonville, Florida), submitted by SDGs, were not subjected to full independent data validation. An in-house review by a senior chemist was performed on these analytical results. The generated analytical data were found to be acceptable.

4.0 ANALYTICAL RESULTS

4.1 ANALYTICAL RESULTS FOR SURFACE SOIL SAMPLES. Twenty surface soil samples (four from the suspected former FFTA and sixteen from the suspected former oil disposal area) were collected from PSC 51. The four samples collected from the former FFTA and four of the sixteen samples collected from the former oil disposal area were analyzed for TCL VOCs, SVOCs, pesticide and PCBs, and TAL inorganics. The remaining twelve samples from the former oil disposal area were only analyzed for TCL VOCs. Appendix C presents the complete analytical data. A summary of the detected parameters in surface soil samples are presented in Appendix D.

4.1.1 Volatile Organic Compounds No site-related VOCs were detected in the four surface soil samples (51B00101, 51B00102, 51B00201, and 51B00202) collected from the former FFTA. Eleven VOCs were detected in the surface samples collected from the former oil disposal area. Carbon tetrachloride and chloroform were detected at 1,800 μg/kg and 2,400 μg/kg, respectively, at the location of borehole 4.

4.1.2 Semivolatile Organic Compounds No site-related SVOCs were detected in the four surface soil samples analyzed from the former FFTA. Fifteen SVOCs were detected from the four surface samples collected from the former oil disposal area. Benzo(a)anthracene, benzo(a)pyrene, and benzo(b)fluoranthene were detected at low to moderate levels.

4.1.3 Pesticides and Polychlorinated Biphenyls Six pesticide compounds were identified in surface soil samples analyzed from the former FFTA and 12 were detected from the four surface soil samples from the former oil disposal area. All were detected at levels consistent with stationwide background activities.

4.1.4 Inorganic Parameters Twenty inorganic parameters were identified in surface soil samples analyzed. Thirteen of the parameters detected in the four surface soils collected from the former FFTA were above the stationwide background levels. Nine of the parameters detected in the four surface soils collected from the former oil disposal area were above the stationwide background levels.

4.2 ANALYTICAL RESULTS FOR SUBSURFACE SOIL SAMPLES. Seven subsurface soil samples (four from the former FFTA and three from the former oil disposal area) were collected and analyzed from PSC 51. The seven samples were analyzed for TCL VOCs, SVOCs, pesticide and PCBs, and TAL inorganics. In addition, one subsurface sample (51B00701) collected on August 6, 1997, during the installation of MW07 from 15.3 to 17.3 feet bls was analyzed for TCL VOCs. The complete validated analytical data are included in Appendix C. Appendix D presents a summary of the parameters detected in the three subsurface soil samples.

4.2.1 Volatile Organic Compounds No site-related VOCs were detected in the four samples (51B00103, 51B00104, 51B00203, and 51B00204) collected from the former FFTA. Six VOCs were detected in the three samples (51B00303, 51B00304, and 51B00403) collected from the former oil disposal area. The concentrations detected in sample 51B00403 (from borehole 4) were significantly higher than in the other two subsurface samples from this area. Carbon tetrachloride (89,000 μg/kg) and chloroform (14,000 μg/kg) were detected at significantly higher levels than in the surface soil.

No VOCs were detected from the subsurface sample collected at MW07.

4.2.2 Semivolatile Organic Compounds Bis(2-ethylhexyl)phthalate was detected at 48 and 57 μg/kg in two of the four subsurface samples analyzed from the former FFTA. Twenty SVOCs were detected from the three subsurface samples collected from the former oil disposal area. Nineteen compounds were detected in sample 51B00403, four compounds were detected in sample 51B00304, and one compound was detected in sample 51B00303. Appendix D contains a summary of the detected parameters in subsurface soil samples.

4.2.3 Pesticides and Polychlorinated Biphenyls Five pesticide compounds were detected in the 4 subsurface soil samples analyzed from the former FFTA and 13 pesticide compounds were detected in the 3 subsurface samples from the former oil disposal area. All were detected at levels consistent with stationwide background activities.

4.2.4 Inorganic Parameters Eighteen inorganic parameters were identified in subsurface soil samples analyzed. Sixteen of the parameters were detected in the 4 subsurface soil samples collected from the former FFTA and 18 were detected in the 3 surface soil samples collected from the former oil disposal area.

4.3 ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES. A total of 35 groundwater samples was collected and analyzed from PSC 51. Six groundwater samples, designated with a "G" (i.e., 51G00101), were obtained from microwells and 29 groundwater samples, designated with a "Q" (i.e., 51Q00101), were collected by means of a DPT hydrocone sampler. Groundwater samples 51G00101, 51G00201, and 51G00401 were analyzed for TCL VOCs, SVOCs, pesticides and PCBs, and TAL inorganics. The remaining 32 groundwater samples were only analyzed for TCL VOCs. The complete analytical data are included in Appendix C Appendix D presents a summary of the detected compounds in groundwater samples collected at PSC 51.

4.3.1 Volatile Organic Compounds Two of the 10 VOCs detected in the groundwater at PSC 51, acetone and carbon disulfide, are generally not considered site-related compounds. The remaining 8 VOCs were detected in 16 of the 35 groundwater samples. The most commonly detected VOCs were benzene, ranging from 2 micrograms per liter (μg/ℓ) to 240 μg/ℓ, detected in 16 samples; vinyl chloride, ranging from 1.8 μg/ℓ to 18 μg/ℓ, detected in 10 samples; and TCE, ranging from 1 μg/ℓ to 23 μg/ℓ, detected in 9 samples.

4.3.2 Semivolatile Organic Compounds Four SVOCs, phenol and 2,4-dimethylphenol at 2 μg/ℓ, 2-methylnaphthalene at 17 μg/ℓ, and naphthalene at 26 μg/ℓ, were detected in one of the three samples (51G00401) analyzed.

4.3.3 Pesticides and Polychlorinated Biphenyl Two pesticides, endosulfan I and gamma-benzene hexachloride (Lindane), were detected at low levels in sample 51G00401.

4.3.4 Inorganic Parameters Eighteen inorganic parameters were detected in the three groundwater samples analyzed. The slightly elevated levels of aluminum, iron, and manganese may be related to the suspended solids naturally present in groundwater samples.

4.4 ANALYTICAL RESULTS FOR SURFACE WATER SAMPLES. One surface water sample was collected from the unnamed drainage that flow easterly along the southern boundary of NAS Jacksonville (Figure 1-2). The surface water sample was analyzed for TCL VOCs and none were detected. The complete analytical data are included in Appendix C.

4.5 ANALYTICAL RESULTS FOR SURFACE SEDIMENT SAMPLES. Two sediment samples were collected along the unnamed drainage ditch (Figure 1-2). The sediment samples were analyzed for TCL VOCs and none were detected. The complete analytical data are included in Appendix C.

5.0 RISK EVALUATION

The purpose of performing focused risk evaluations (FREs) as part of the site screening evaluation is to assist in determining whether or not the existing risk at a PSC (1) supports a no further action decision, (2) indicates the need for an interim remedial action, or (3) requires additional investigation to make a decision. The documentation of the decision for PSC 51 may be found in the RRDS document for PSC 51 (ABB-ES, 1995). An FRE is not intended to characterize baseline risk at a PSC but rather is to be used as a decision making tool.

It was not necessary to conduct an FRE on all analytical data at PSC 51. Rather, significant exceedences of regulatory and guidance values were observed. These are documented below.

5.1 SURFACE SOIL. As shown below in Table 5-1, the maximum detected concentrations of carbon tetrachloride, chloroform, and benzo(a)pyrene each exceed their respective residential FDEP SCGs (FDEP, 1995) by at least a factor of 3 and up to an order of magnitude for benzo(a)pyrene. These compounds also exceed the FDEP industrial SCGs by at least a factor of 2.

Table 5-1
Comparison of Selected Analytes to Screening Values
Surface Soil

Potential Source of Contamination 51
South Antenna Field Firefighting Training Area
Naval Air Station Jacksonville
Jacksonville, Florida

Analyte	Maximum Detected Concentration	FDEP Residential SCG	FDEP Industrial SCG	Region 3 Residential RBC	Region 3 Industrial RBC
Volatile Organic Compounds (μg/kg)					
Carbon tetrachloride	1,800	600	800	4,900	44,000
Chloroform	2,400	600	800	100,000	940,000
Semivolatile Organic Compounds (μg/kg)					
Benzo(a)pyrene	1,100	100	500	87	780

Notes: FDEP = Florida Department of Environmental Protection.
SCG = soil cleanup goal.
RBC = risk-based concentration.
μg/kg = micrograms per kilogram.

The USEPA Region 3 risk-based concentrations (RBCs) for carbon tetrachloride and chloroform are significantly higher than the SCGs (USEPA, 1998). Therefore, the maximum detected carbon tetrachloride and chloroform levels in surface soil did not exceed their respective RBCs. Benzo(a)pyrene at 1,100 μg/kg, however, exceeded both the residential (87 μg/kg) and industrial (780 μg/kg) RBCs.

5.2 SUBSURFACE SOIL. As shown in Table 5-2, the maximum detected concentrations of contaminants in subsurface soil significantly exceed their screening concentrations. Carbon tetrachloride and benzo(a)pyrene each exceed both the

industrial SCG and RBC. Chloroform exceeds the industrial SCG but not the industrial RBC.

Table 5-2
Comparison of Selected Analytes to Screening Values
Subsurface Soil

Potential Source of Contamination 51
South Antenna Field Firefighting Training Area
Naval Air Station Jacksonville
Jacksonville, Florida

Analyte	Maximum Detected Concentration	FDEP Industrial SCG	Region 3 Industrial RBC
Volatile Organic Compounds (μg/kg)			
Carbon tetrachloride	89,000	800	44,000
Chloroform	14,000	800	940,000
Semivolatile Organic Compounds (μg/kg)			
Benzo(a)pyrene	1,200	500	780

Notes: FDEP = Florida Department of Environmental Protection
SCG = soil cleanup goal
RBC = risk-based concentration
μg/kg = micrograms per kilogram

The high levels of carbon tetrachloride and chloroform detected in subsurface soil provide a potential source for future contamination of groundwater and a potential direct source of exposure to maintenance or construction workers performing excavations at the South Antenna Field.

5.3 GROUNDWATER. In groundwater, the maximum detected concentration of three VOCs significantly exceeded their screening values (Table 5-3). Benzene was detected at 240 μg/ℓ compared to an FDEP groundwater guidance concentration (GGC) of 1 μg/ℓ, a Federal maximum contaminant limit (MCL) of 5 μg/ℓ; and a Region 3 tap water screening value (TWSV) of 0.36 μg/ℓ. TCE was detected at 23 μg/ℓ compared to an FDEP GGC of 3 μg/ℓ, an MCL of 5 μg/ℓ, and a TWSV of 1.6 μg/ℓ. Vinyl chloride was detected at 18 μg/ℓ compared an FDEP GGC of 1 μg/ℓ, an MCL of 2 μg/ℓ, and a TWSV of 0.019 μg/ℓ.

Groundwater is a potentially significant exposure pathway at PSC 51. PSC 51 is located along the perimeter of NAS Jacksonville. Groundwater generally flows in the direction of the fence line. Some of the houses adjacent to the fence line and near PSC 51 obtain their drinking water from private wells. The depths of these wells have not been determined in relationship to the contamination. However, the detected contamination warrants further investigation of this potential exposure route.

Table 5-3
Comparison of Selected Analytes to Screening Values
Groundwater

Potential Source of Contamination 51
South Antenna Field Firefighting Training Area
Naval Air Station Jacksonville
Jacksonville, Florida

Analyte	Maximum Detected Concentration	FDEP Groundwater Guidance Concentration	Federal Maximum Contaminant Limit	Region 3 Tap Water Screening Value
Volatile Organic Compounds (μg/ℓ)				
Benzene	240	1	5	0.36
Trichloroethene	23	3	5	1 6
Vinyl chloride	18	1	2	0.019

Notes· FDEP = Florida Department of Environmental Protection.
μg/ℓ = micrograms per liter.

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APPENDIX A

MONITORING WELL INSTALLATION AND SOIL BORING LOGS

PROJECT: Site Screening, NAS JAX		**SITE:** PSC 51	**LOG of WELL:** Soil Boring B-1
CLIENT: SOUTHNAVFACENGCOM	**PROJECT NO:** 8587.22	**DATE STARTED:** 8-5-97	**COMPLETED:** 8-5-97
DRILLING SUBCONTRACTOR: ABB-ES			
METHOD: TerraProbe	**WELL CASE DIAM.:** 2 inch	**SCREEN INT.:** N/A FT.	**SCREEN SLOT SIZE:** N/A
TOC ELEVATION: NA		**NORTHING:** NA	**EASTING:** NA
WELL DEVELOP. DATE: NA	**TOTAL DEPTH:** 30 FT. BLS	**DEPTH TO ∇** NA	**LOGGED BY:** Jayne McIntosh

DEPTH FT	SAMPLE ID	SAMPLE INTERVAL	RECOVERY	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
				Grass		SM		
				Brown slightly silty fine sand		CL		
				Orange and tan mottled sandy clay Intermitten light blue-green clayey sand				
5				Blue green clayey sand, exhibits hydrocarbon odor (25 ppm in the boring, 0 ppm above boring, 3500 head space sample collected)				
	S-1			Tan slightly silty fine sand		SM		
	S-2			Gray fine to very fine sand		SP		
10	S-3			SAME, very uniform, clean, fine to very fine sand				
	S-4							
15	S-5							
	S-6			Gray silty sand, softer to push, no percussion		SM		
	S-7			Gray fine sand and gray silty clay, no percussion. Screened with FID, 0 ppm.				
20	S-8			Gray fine sand				
	S-9			Last 4-6 inches, dark gray sandy clay Gray fine sand (very slightly clayey with few clay stringers 1/16" wide				
25	S-10			Gray slightly silty fine sand				
	S-11			Gray fine sand		SP		
	S-12			Light gray/tan weathered dolomite				
30				Boring terminated at 30 feet bls				
35								

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PROJECT: Site Screening, NAS JAX		**SITE:** PSC 51	**LOG of WELL:** Soil Boring B-2
CLIENT: SOUTHNAVFACENGCOM	**PROJECT NO:** 8587.22	**DATE STARTED:** 9-2-97	**COMPLETED:** 9-3-97
DRILLING SUBCONTRACTOR: ABB-ES			
METHOD: TerraProbe	**WELL CASE DIAM.:** 2 inch	**SCREEN INT.:** NA FT.	**SCREEN SLOT SIZE:** NA
TOC ELEVATION: NA		**NORTHING:** NA	**EASTING:** NA
WELL DEVELOP. DATE: NA	**TOTAL DEPTH:** 33.5 FT. BLS	**DEPTH TO ∇** NA	**LOGGED BY:** Jayne McIntosh

DEPTH FT	SAMPLE ID	SAMPLE INTERVAL	RECOVERY	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
				Mottled sandy clay		SC		
				Mottled sandy clay, becoming more sandy at bottom				
				Mottled sandy clay, becoming grayish mottled sandy clay to clayey sand				
5								
	S-1			Gray sand, becoming brownish fine sand at approx. 7 feet bls		SP		
				Brown fine sand to grayish fine sand				
	S-2							
10				Same, gray fine sand				
	S-3							
				Gray fine to medium sand				
	S-4							
				Gray fine to medium sand, soft at bottom (1/2 recovery)				
15	S-5							
				Gray silty sand				
	S-6							
				Soft, dark gray clayey sand to sandy clay Good soft clay with wood fragments (veg)		CL		
	S-7					SP		
20				Gray slightly silty sand, dense				
	S-8			No recovery				
				Gray brown silty fine sand				
	S-9							
				Uniform gray, slightly silty, fine to medium sand				
25	S-10			Medium to dense				
				Uniform gray fine to medium sand, only slightly silty				
	S-11							
				Gray fine to medium sand				
	S-12							
30				Very coarse quartz sand over gray sandy clay to clayey sand		CL		
				Tan to white weathered dolomite including silty clay, very sticky at bottom				
				Refusal at 33 5 feet bls.				
35								

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PROJECT: Site Screening, NAS JAX		**SITE:** PSC 51	**LOG of WELL:** Soil Boring B-3
CLIENT: SOUTHNAVFACENGCOM	**PROJECT NO:** 8587.22	**DATE STARTED:** 9-11-97	**COMPLETED:** 9-11-97
DRILLING SUBCONTRACTOR: ABB-ES			
METHOD: TerraProbe	**WELL CASE DIAM.:** 2 inch	**SCREEN INT.:** NA FT.	**SCREEN SLOT SIZE:** NA
TOC ELEVATION: NA		**NORTHING:** NA	**EASTING:** NA
WELL DEVELOP. DATE: NA	**TOTAL DEPTH:** 34 FT. BLS	**DEPTH TO ∇** NA	**LOGGED BY:** Tom Fish

DEPTH FT	SAMPLE ID	SAMPLE INTERVAL	RECOVERY	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
				Limerock fill				
	S-1			Brown silty fine sand		SM		
				over		CL		
				Gray sandy clay				
5	S-2			Gray sandy clay with reddish brown mottles				
				Gray slightly silty fine sand		SM		
10	S-3							
	S-4			Gray slightly silty fine sand				
15	S-5			Gray slightly silty fine sand				
	S-6			Gray clay with some fine sand		CL		
	S-7			Light gray to white fine sand		SP		
20	S-8			Light gray to white fine sand				
	S-9			Dark gray clay with some fine sand		CL		
25	S-10			Light gray slightly silty fine sand		SM		
	S-11			Light to medium gray slightly silty fine sand				
	S-12			Medium gray sand with some silty (sand is slightly coarser)				
30	S-13			Medium gray sand with little or no silt				
	S-14			White, poorly consolidated, weathered dolomite				
35				Boring terminated at 34 feet bls				

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PROJECT: Site Screening, NAS JAX		**SITE:** PSC 51	**LOG of WELL:** MW01
CLIENT: SOUTHNAVFACENGCOM	**PROJECT NO:** 2508.05	**DATE STARTED:** 3-31-97	**COMPLETED:** 3-31-97
DRILLING SUBCONTRACTOR: ABB-ES			
METHOD: TerraProbe	**WELL CASE DIAM.:** 0.5 inch	**SCREEN INT.:** 3-12 ft. FT.	**SCREEN SLOT SIZE:** NA
TOC ELEVATION: 20.92 FT. NGVD		**NORTHING:** 435280.52	**EASTING:** 2132206.77
WELL DEVELOP. DATE: 4-8-97	**TOTAL DEPTH:** 12 FT. BLS	**DEPTH TO ∇** 3.42 FT. BLS	**LOGGED BY:** Tom Fish

DEPTH FT	SAMPLE ID	SAMPLE INTERVAL	RECOVERY	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
				Black/gray sand with metal fragments		SW		
				Yellow/tan clayey sand		SC		
				Yellow/tan/red sandy clay		CL		
				Gray clayey sand		SC		
				Yellow/tan/red clayey sand				
5				Yellow/tan sandy clay		CL		
				Gray clayey sand		SC		
				Hand augured to 7 feet bls Sample collected from 7-10' using geoprobe. Yellow silty sand		SM		
	S-1							
10				Well installed with geoprobe below 10 feet bls, therefore no lithologic information below that depth.				
				Well set at 12' bls				
15								

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT: Site Screening, NAS JAX		**SITE:** PSC 51	**LOG of WELL:** MW02
CLIENT: SOUTHNAVFACENGCOM	**PROJECT NO:** 2508.05	**DATE STARTED:** 3-31-97	**COMPLETED:** 3-31-97
DRILLING SUBCONTRACTOR: ABB-ES			
METHOD: TerraProbe	**WELL CASE DIAM.:** 0.5 inch	**SCREEN INT.:** 2.5-11.5 ft FT.	**SCREEN SLOT SIZE:** NA
TOC ELEVATION: 20.76 FT. NGVD		**NORTHING:** 435355.51	**EASTING:** 2132152.68
WELL DEVELOP. DATE: 4-8-97	**TOTAL DEPTH:** 11.5 FT. BLS	**DEPTH TO ∇** 3.5 FT. BLS	**LOGGED BY:** Tom Fish

DEPTH FT	SAMPLE ID	SAMPLE INTERVAL	RECOVERY	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
				Red/brown silty sand (hard pan)		SM		
				Orange/yellow sand		SP		
				Yellow/orange sandy clay		CL		
				Gray/tan/red sandy clay				
5				Hand augured to 5 feet bls. Well installed with geoprobe below 5 feet, therefore no lithologic information below that depth.				
				Hole remained open to 8 feet bls. Below that depth, native material caved around well screen				
10								
				Well set at 11.5' bls.				
15								

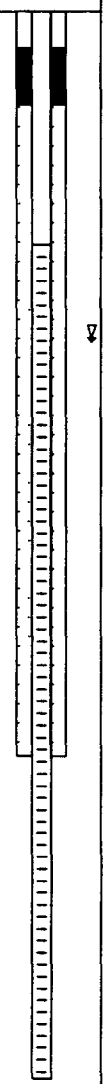


 ABB ENVIRONMENTAL SERVICES, INC.

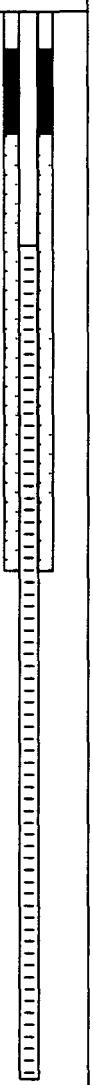
PROJECT: Site Screening, NAS JAX		**SITE:** PSC 51	**LOG of WELL:** MW03
CLIENT: SOUTHNAVFACENGCOM	**PROJECT NO:** 2508.05	**DATE STARTED:** 3-31-97	**COMPLETED:** 3-31-97
DRILLING SUBCONTRACTOR: ABB-ES			
METHOD: TerraProbe	**WELL CASE DIAM.:** 0.5 inch	**SCREEN INT.:** 2.5-11.5 ft FT.	**SCREEN SLOT SIZE:** NA
TOC ELEVATION: 18.73 FT. NGVD		**NORTHING:** 435507.52	**EASTING:** 2132032.87
WELL DEVELOP. DATE: NA	**TOTAL DEPTH:** 11.5 FT. BLS	**DEPTH TO ∇** NA	**LOGGED BY:** Tom Fish

DEPTH FT	SAMPLE ID	SAMPLE INTERVAL	RECOVERY	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
				Gray sand		SP		
				Orange/yellow sandy clay		CL		
				Gray sandy clay				
				Gray sandy clay, heavy odor				
				Gray sandy clay stained brown/black; moist, with odor				
				Black-stained soil, heavy odor				
				Gray sandy clay marbled with black stains				
				Hand augured to 4 feet bls. Well installed with geoprobe below 4 feet, therefore no lithologic information below that depth.				
5								
				Hole remained open to 6 feet bls Below that depth, native material caved around well screen				
10								
				Well set at 11.5' bls.				
15								

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT: Site Screening, NAS JAX		**SITE:** PSC 51	**LOG of WELL:** MW04
CLIENT: SOUTHNAVFACENGCOM	**PROJECT NO:** 2508.05	**DATE STARTED:** 3-31-97	**COMPLETED:** 3-31-97
DRILLING SUBCONTRACTOR: ABB-ES			
METHOD: TerraProbe	**WELL CASE DIAM.:** 0.5 inch	**SCREEN INT.:** 2.5-11.5 ft FT.	**SCREEN SLOT SIZE:** NA
TOC ELEVATION: 18.32 FT. NGVD		**NORTHING:** 435559.83	**EASTING:** 2131977.31
WELL DEVELOP. DATE: 4-21-97	**TOTAL DEPTH:** 11.5 FT. BLS	**DEPTH TO ∇** NA	**LOGGED BY:** Tom Fish

DEPTH FT	SAMPLE ID	SAMPLE INTERVAL	RECOVERY	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
				Topsoil; vegetation				
				Yellow sand		SP		
				Tan sandy clay		CL		
				Greenish-tan silty clay				
				Darker green/gray sandy clay				
5				Hand augured to 5 feet bls. Well installed with geoprobe below 5 feet, therefore no lithologic information below that depth.				
				Hole remained open to 6 feet bls Below that depth, native material caved around well screen.				
10								
				Well set at 11.5' bls.				
15								



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PROJECT: Site Screening, NAS JAX		**SITE:** PSC 51	**LOG of WELL:** MW05
CLIENT: SOUTHNAVFACENGCOM	**PROJECT NO:** 2508.05	**DATE STARTED:** 8-6-97	**COMPLETED:** 8-6-97
DRILLING SUBCONTRACTOR: ABB-ES			
METHOD: TerraProbe	**WELL CASE DIAM.:** 0.5 inch	**SCREEN INT.:** 1-10 ft FT.	**SCREEN SLOT SIZE:** NA
TOC ELEVATION: 18.41 FT. NGVD		**NORTHING:** 435537.45	**EASTING:** 2132002.01
WELL DEVELOP. DATE: 8-6-97	**TOTAL DEPTH:** 10 FT. BLS	**DEPTH TO ∇** NA	**LOGGED BY:** Tom Fish

DEPTH FT	SAMPLE ID	SAMPLE INTERVAL	RECOVERY	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
				Grass, roots Light gray slightly silty fine sand		SM		
				Gray and tan mottled clayey fine sand		SC		
				Greenish gray sandy clay		CL		
5				Hand augured to 5 feet bls. Well installed with geoprobe below 5 feet, therefore no lithologic information was recorded below that depth.				
10				Well set at 10' bls.				

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT: Site Screening, NAS JAX		**SITE:** PSC 51	**LOG of WELL:** MW06
CLIENT: SOUTHNAVFACENGCOM	**PROJECT NO:** 2508.05	**DATE STARTED:** 8-6-97	**COMPLETED:** 8-6-97
DRILLING SUBCONTRACTOR: ABB-ES			
METHOD: TerraProbe	**WELL CASE DIAM.:** 0.5 inch	**SCREEN INT.:** 1-10 ft FT	**SCREEN SLOT SIZE:** NA
TOC ELEVATION: 18.14 FT. NGVD		**NORTHING:** 435534.73	**EASTING:** 2131961.35
WELL DEVELOP. DATE: 8-6-97	**TOTAL DEPTH:** 10 FT. BLS	**DEPTH TO ∇** 1.6 FT. BLS	**LOGGED BY:** Tom Fish

DEPTH FT	SAMPLE ID	SAMPLE INTERVAL	RECOVERY	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
				Grass, roots		SM		
				Brown slightly silty fine sand				
				Gray and orange mottled clayey fine sand		SC		
				Hand augured to 4 feet bls. Well installed with geoprobe below 4 feet, therefore no lithologic information below that depth.				
5								
10				Well set at 10' bls				

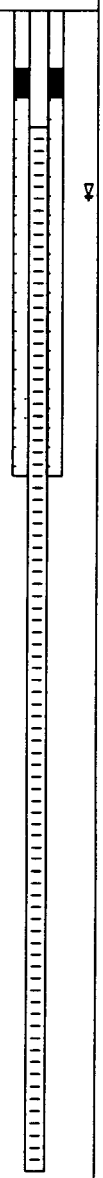

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT: Site Screening, NAS JAX		**SITE:** PSC 51	**LOG of WELL:** MW07
CLIENT: SOUTHNAVFACENGCOM	**PROJECT NO:** 2508.05	**DATE STARTED:** 8-6-97	**COMPLETED:** 8-6-97
DRILLING SUBCONTRACTOR: ABB-ES			
METHOD: TerraProbe	**WELL CASE DIAM.:** 0.5 inch	**SCREEN INT.:** 15.5-18.5 FT.	**SCREEN SLOT SIZE:** NA
TOC ELEVATION: 18.72 FT. NGVD		**NORTHING:** 435529.70	**EASTING:** 2132018.39
WELL DEVELOP. DATE: 8-6-97	**TOTAL DEPTH:** 19 FT BLS	**DEPTH TO ∇** NA	**LOGGED BY:** Tom Fish

DEPTH FT	SAMPLE ID	SAMPLE INTERVAL	RECOVERY	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
				Well installation pushed with geoprobe from 0-15 feet, therefore no lithologic information was recorded in that range.				
5								
10								
15	51B00101			Light gray fine to very fine sand		SP		
				Dark gray slightly clayey to slightly silty fine sand		SC/SM		
				Dark gray clay with fine sand stringers approx 1/4" wide		CL		
				Well set at 19' bls				
20								

ABB ENVIRONMENTAL SERVICES, INC.

APPENDIX B

OFF-SITE SAMPLE TRACKING LOG

Appendix B

PSC 51
OFFSITE SAMPLE TRACKING LOG
SITE SCREENING, NAS JACKSONVILLE

ABB SDG	LAB	SAMPLE ID	SAMP DATE	UDEPTH (ft bls)	LDEPTH (ft bls)	MATRIX	TAL_MET	TCL VOC	TCL SVOC	TCL PPCB	DRFL	TAT	DSTV	DRFV
00004	COMPU	51B00101	4/16/97	0	1	soil	X	X	X	X	5/22/97	36	6/20/97	7/9/97
00004	COMPU	51B00102	4/16/97	1	2	soil	X	X	X	X	5/22/97	36	6/20/97	7/9/97
00004	COMPU	51B00103	4/16/97	2	3	soil	X	X	X	X	5/22/97	36	6/20/97	7/9/97
00004	COMPU	51B00104	4/16/97	3	4	soil	X	X	X	X	5/22/97	36	6/20/97	7/9/97
00004	COMPU	51B00201	4/16/97	0	1	soil	X	X	X	X	5/22/97	36	6/20/97	7/9/97
00004	COMPU	51B00202	4/16/97	1	2	soil	X	X	X	X	5/22/97	36	6/20/97	7/9/97
00004	COMPU	51B00203	4/16/97	2	3	soil	X	X	X	X	5/22/97	36	6/20/97	7/9/97
00004	COMPU	51B00204	4/16/97	3	4	soil	X	X	X	X	5/22/97	36	6/20/97	7/9/97
00004	COMPU	51B00301	4/16/97	0	1	soil	X	X	X	X	5/22/97	36	6/20/97	7/9/97
00004	COMPU	51B00302	4/16/97	1	2	soil	X	X	X	X	5/22/97	36	6/20/97	7/9/97
00004	COMPU	51B00303	4/16/97	2	3	soil	X	X	X	X	5/22/97	36	6/20/97	7/9/97
00005	COMPU	51B00304	4/16/97	3	4	soil	X	X	X	X	5/27/97	39	6/20/97	8/14/97
00005	COMPU	51B00401	4/16/97	0	1	soil	X	X	X	X	5/27/97	39	6/20/97	8/14/97
00005	COMPU	51B00402	4/16/97	1	2	soil	X	X	X	X	5/27/97	39	6/20/97	8/14/97
00005	COMPU	51B00403	4/16/97	2	3	soil	X	X	X	X	5/27/97	39	6/20/97	8/14/97
0027S	COMPU	51B00501	10/28/97	0	1	soil		X			11/19/97	22	11/19/97	12/19/97
0027S	COMPU	51B00502	10/28/97	1	2	soil		X			11/19/97	22	11/19/97	12/19/97
0027S	COMPU	51B00601	10/28/97	0	1	soil		X			11/19/97	22	11/19/97	12/19/97
0027S	COMPU	51B00602	10/28/97	1	2	soil		X			11/19/97	22	11/19/97	12/19/97
0017S	COMPU	**51B0701 (*)**	8/6/97	15 3	17 3	soil		X			8/27/97	21	8/27/97	8/9/97
0027S	COMPU	**51BQ0701 (*)**	10/28/97	0	1	soil		X			11/19/97	22	11/19/97	12/19/97
0027S	COMPU	51B00702	10/28/97	1	2	soil		X			11/19/97	22	11/19/97	12/19/97
0027S	COMPU	51B00702D	10/28/97	1	2	soil		X			11/19/97	22	11/19/97	12/19/97
0027S	COMPU	51B00801	10/28/97	0	1	soil		X			11/19/97	22	11/19/97	12/19/97
0027S	COMPU	51B00801MS	10/28/97	0	1	soil		X			11/19/97	22	11/19/97	12/19/97
0027S	COMPU	51B00801MSD	10/28/97	0	1	soil		X			11/19/97	22	11/19/97	12/19/97
0027S	COMPU	51B00802	10/28/97	1	2	soil		X			11/19/97	22	11/19/97	12/19/97
0027S	COMPU	51B00901	10/28/97	0	1	soil		X			11/19/97	22	11/19/97	12/19/97
0027S	COMPU	51B00902	10/28/97	1	2	soil		X			11/19/97	22	11/19/97	12/19/97
0027S	COMPU	51B01001	10/28/97	0	1	soil		X			11/19/97	22	11/19/97	12/19/97

Appendix B

PSC 51
OFFSITE SAMPLE TRACKING LOG
SITE SCREENING, NAS JACKSONVILLE

ABB SDG	LAB	SAMPLE ID	SAMP DATE	UDEPTH (ft bls)	LDEPTH (ft bls)	MATRIX	TAL_MET	TCL VOC	TCL SVOC	TCL PPCB	DRFL	TAT	DSTV	DRFV
0027S	COMPU	51B01002	10/28/97	1	2	soil		X			11/19/97	22	11/19/97	12/19/97
ABJX01	SL	51D00101	9/29/97			sediment		X			10/2/97	3	Not validated	
ABJX01	SL	51D00201	9/29/97			sediment		X			10/2/97	3	Not validated	
00001	COMPU	51G00101	4/8/97	2 5	11 5	groundwater	X	X	X	X	5/8/97	30	6/20/97	7/7/97
00001	COMPU	51G00201	4/8/97	2 5	11 5	groundwater	X	X	X	X	5/8/97	30	6/20/97	7/7/97
00007	COMPU	51G00401	4/21/97	2 5	11 5	groundwater	X	X	X	X	6/2/97	31	6/20/97	7/18/97
0017W	COMPU	51G00501	8/6/97	6	10	groundwater		X			8/28/97	22	8/28/97	8/9/97
0017W	COMPU	51G00601	8/6/97	6	10	groundwater		X			8/28/97	22	8/28/97	8/9/97
0017W	COMPU	51G00701	8/6/97	15 5	18 5	groundwater		X			8/28/97	22	8/28/97	8/9/97
JR7106	ENCO	51Q00101	9/3/97	6	10	groundwater		X			9/12/97	9	Not validated	
JR7106	ENCO	51Q00102	9/3/97	15 5	17 5	groundwater		X			9/12/97	9	Not validated	
JR7106	ENCO	51Q00103	9/3/97	27 5	29 5	groundwater		X			9/12/97	9	Not validated	
JR7106	ENCO	51Q00201	9/4/97	6	10	groundwater		X			9/12/97	8	Not validated	
JR7106	ENCO	51Q00202	9/4/97	15 5	17 5	groundwater		X			9/12/97	8	Not validated	
JR7106	ENCO	51Q00203	9/4/97	27 5	29 5	groundwater		X			9/12/97	8	Not validated	
JR7106	ENCO	51Q00301	9/4/97	6	10	groundwater		X			9/12/97	8	Not validated	
JR7106	ENCO	51Q00302	9/4/97	15 5	17 5	groundwater		X			9/12/97	8	Not validated	
JR7106	ENCO	51Q00303	9/4/97	27 5	29 5	groundwater		X			9/12/97	8	Not validated	
JR7106	ENCO	51Q00401	9/4/97	6	10	groundwater		X			9/12/97	8	Not validated	
JR7106	ENCO	51Q00402	9/4/97	15 5	17 5	groundwater		X			9/12/97	8	Not validated	
JR7131	ENCO	51Q00403	9/4/97	27 5	29 5	groundwater		X			9/12/97	8	Not validated	
JR7131	ENCO	51Q00501	9/5/97	6	10	groundwater		X			9/12/97	8	Not validated	
JR7131	ENCO	51Q00502	9/5/97	15 5	17 5	groundwater		X			9/12/97	9	Not validated	
JR7131	ENCO	51Q00503	9/5/97	27 5	29 5	groundwater		X			9/12/97	9	Not validated	
JR7162	ENCO	51Q00601	9/9/97	6	10	groundwater		X			9/12/97	3	Not validated	
JR7162	ENCO	51Q00602	9/9/97	20	24	groundwater		X			9/12/97	3	Not validated	
JR7162	ENCO	51Q00701	9/9/97	6	10	groundwater		X			9/12/97	3	Not validated	
JR7162	ENCO	51Q00702	9/9/97	20	24	groundwater		X			9/12/97	3	Not validated	
JR7208	ENCO	51Q00801	9/12/97	20	24	groundwater		X			9/18/97	7	Not validated	
ABJX01	SL	51Q00901	9/29/97	6	10	groundwater		X			10/2/97	3	Not validated	

Appendix B

PSC 51
OFFSITE SAMPLE TRACKING LOG
SITE SCREENING, NAS JACKSONVILLE

ABB SDG	LAB	SAMPLE ID	SAMP DATE	UDEPTH (ft bls)	LDEPTH (ft bls)	MATRIX	TAL_MET	TCL VOC	TCL SVOC	TCL PPCB	DRFL	TAT	DSTV	DRFV
ABJX01	SL	51Q00902	9/29/97	20	24	groundwater		X			10/2/97	3	Not validated	
ABJX01	SL	51Q00903	9/29/97	28	32	groundwater		X			10/2/97	3	Not validated	
ABJX01	SL	51Q01001	9/30/97	8	12	groundwater		X			10/2/97	4	Not validated	
ABJX01	SL	51Q01002	9/30/97	17	21	groundwater		X			10/2/97	3	Not validated	
ABJX01	SL	51Q01003	9/30/97	28	32	groundwater		X			10/2/97	3	Not validated	
ABJX02	SL	51Q01101	10/1/97	8	12	groundwater		X			10/6/97	5	Not validated	
ABJX02	SL	51Q01102	10/1/97	17	21	groundwater		X			10/6/97	5	Not validated	
ABJX02	SL	51Q01103	10/1/97	28	32	groundwater		X			10/6/97	5	Not validated	
ABJX01	SL	51W00101	9/29/97	NA	NA	surface water		X			10/2/97	3	Not validated	

NOTES:

SDG	Sample Delivery Group (defined group of 20 samples or less collected not more than 14 days of each other
LAB	Laboratory performing the analysis COMPU (Compuchem Environmental Laboratories), ENCO (Environcmnetal Conservation Laboratories and SL (Savannah Laboratories)
SAMPLE ID	Sample Identifier
SAMP DATE	Date of Sample Collection
UDEPTH, LDEPTH	Depths, upper (UDEPTH) and lower (LDEPTH), feet below land surface
MATRIX	Media Sampled
TAL_MET	Target Analyte List Metals
TCL VOC	Target Compound List Volatile Organics
TCL SVOC	Target Compound List Semivolatile Organics
TCL PPCB	Target Compound List Pesticides and Polychlorinated Biphenyls
DRFL	Date Package Received from Laboratory
TAT	Turnaround Time (days)
DSTV	Date Package Sent to Validators
DRFV	Date Package Received from Validators

NA = Not applicable

(*) These two IDs originally have a common sample identifier The first sample (51B00701) taken on 8/6/97 is the subsurface soil collected from the MW07 borehole at 15 5 feet bls The second soil sample with the conflicting identifier taken on 10/28/97 represents the sample collected at location Q07 The latter sample is renumbered as 51BQ0701 in the analytical database

APPENDIX C

LABORATORY ANALYTICAL DATA

Appendix C-1

Validated Laboratory Analytical Data
Surface Soil - TAL Metals and TCL Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

Sample ID	51B00101		51B00102		51B00201		51B00202		51B00301		51B00302		51B00401		51B00402	
Sampling Date	4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97	
Volatiles, ug/kg																
1,1,1-Trichloroethane	11	U	13	U	12	U	12	U	11	U	12	U	12	U	120	U
1,1,2,2-Tetrachloroethane	11	U	13	U	12	U	12	U	11	U	12	U	12	U	120	U
1,1,2-Trichloroethane	11	U	13	U	12	U	12	U	11	U	12	U	12	U	120	U
1,1-Dichloroethane	11	U	13	U	12	U	12	U	11	U	12	U	12	U	120	U
1,1-Dichloroethene	11	U	13	U	12	U	12	U	11	U	12	U	12	U	120	U
1,2-Dichloroethane	11	U	13	U	12	U	12	U	11	U	12	U	12	U	120	U
1,2-Dichloroethene (total)	11	U	13	U	12	U	12	U	11	U	12	U	12	U	120	U
1,2-Dichloropropane	11	U	13	U	12	U	12	U	11	U	12	U	12	U	120	U
2-Butanone	11	UJ	13	UJ	12	UJ	12	UJ	11	UJ	12	UJ	12	UJ	120	UJ
2-Hexanone	11	UJ	13	UJ	12	UJ	12	UJ	11	UJ	12	UJ	12	UJ	120	UR
4-Methyl-2-pentanone	11	U	13	U	12	U	12	U	11	U	12	U	12	U	120	UJ
Acetone	16	UJ	22	UJ	31	UJ	33	UJ	34	U	92	U	13	UJ	390	J
Benzene	11	U	13	U	12	U	12	U	11	U	1	J	12	U	120	U
Bromodichloromethane	11	U	13	U	12	U	12	U	11	U	12	U	12	U	120	U
Bromoform	11	U	13	U	12	U	12	U	11	U	12	U	12	U	120	U
Bromomethane	11	U	13	U	12	U	12	U	11	U	12	U	12	U	120	U
Carbon disulfide	11	U	13	U	12	U	12	U	11	U	12	U	12	U	120	U
Carbon tetrachloride	11	U	13	U	12	U	12	U	11	U	12	U	7	J	1800	
Chlorobenzene	11	U	13	U	12	U	12	U	11	U	12	U	12	U	120	U
Chloroethane	11	U	13	U	12	U	12	U	11	U	12	U	12	U	120	U
Chloroform	11	U	13	U	12	U	12	U	11	U	12	U	26		2400	
Chloromethane	11	U	13	U	12	U	12	U	11	U	12	U	12	U	120	U
cis-1,3-Dichloropropene	11	U	13	U	12	U	12	U	11	U	12	U	12	U	120	U
Dibromochloromethane	11	U	13	U	12	U	12	U	11	U	12	U	12	U	120	U
Ethylbenzene	11	U	13	U	12	U	12	U	11	U	38		12	U	65	J
Methylene chloride	11	U	13	U	12	U	12	U	11	U	12	U	12	U	55	J
Styrene	11	U	13	U	12	U	12	U	11	U	12	U	12	U	120	U
Tetrachloroethene	11	U	13	U	12	U	12	U	11	U	12	U	12	U	120	U
Toluene	11	U	13	U	12	U	12	U	11	U	2	J	12	U	470	J
trans-1,3-Dichloropropene	11	U	13	U	12	U	12	U	11	U	12	U	12	U	120	U
Trichloroethene	11	U	13	U	12	U	12	U	11	U	5	J	12	U	120	U
Vinyl chloride	11	U	13	U	12	U	12	U	11	U	12	U	12	U	120	U
Xylene (total)	11	U	13	U	12	U	12	U	11	U	200		12	U	380	
Semivolatiles, ug/kg																

Appendix C-1

Validated Laboratory Analytical Data
Surface Soil - TAL Metals and TCL Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

Sample ID	51B00101		51B00102		51B00201		51B00202		51B00301		51B00302		51B00401		51B00402	
Sampling Date	4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97	
1,2,4-Trichlorobenzene	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
1,2-Dichlorobenzene	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
1,3-Dichlorobenzene	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
1,4-Dichlorobenzene	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
2,2'-oxybis(1-Chloropropane)	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
2,4,5-Trichlorophenol	930	UJ	1000	UJ	960	U	1000	UJ	950	U	1000	U	1000	U	15000	U
2,4,6-Trichlorophenol	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
2,4-Dichlorophenol	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
2,4-Dimethylphenol	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
2,4-Dinitrophenol	930	UJ	1000	UJ	960	U	1000	UJ	950	U	1000	U	1000	U	15000	U
2,4-Dinitrotoluene	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
2,6-Dinitrotoluene	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
2-Chloronaphthalene	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
2-Chlorophenol	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
2-Methylnaphthalene	370	UJ	410	UJ	380	U	400	UJ	370	J	1800		410	U	3600	J
2-Methylphenol	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
2-Nitroaniline	930	UJ	1000	UJ	960	U	1000	UJ	950	U	1000	U	1000	U	15000	U
2-Nitrophenol	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
3,3'-Dichlorobenzidine	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
3-Nitroaniline	930	UJ	1000	UJ	960	U	1000	UJ	950	U	1000	U	1000	U	15000	U
4,6-Dinitro-2-methylphenol	930	UJ	1000	UJ	960	U	1000	UJ	950	U	1000	U	1000	U	15000	U
4-Bromophenyl-phenylether	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
4-Chloro-3-methylphenol	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
4-Chloroaniline	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
4-Chlorophenyl-phenylether	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
4-Methylphenol	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	2400	J
4-Nitroaniline	930	UJ	1000	UJ	960	U	1000	UJ	950	U	1000	U	1000	U	15000	U
4-Nitrophenol	930	UJ	1000	UJ	960	U	1000	UJ	950	U	1000	U	1000	U	15000	U
Acenaphthene	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
Acenaphthylene	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
Anthracene	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
Benzo(a)anthracene	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	1800	J
Benzo(a)pyrene	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	1100	J
Benzo(b)fluoranthene	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	1400	J
Benzo(g,h,i)perylene	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	650	J

Appendix C-1

Validated Laboratory Analytical Data
Surface Soil - TAL Metals and TCL Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

Sample ID	51B00101		51B00102		51B00201		51B00202		51B00301		51B00302		51B00401		51B00402	
Sampling Date	4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97	
Benzo(k)fluoranthene	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	1300	J
bis(2-Chloroethoxy)methane	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
bis(2-Chloroethyl)ether	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
bis(2-Ethylhexyl)phthalate	370	UJ	410	UJ	380	U	400	UJ	50	J	70	J	72	J	6000	U
Butylbenzylphthalate	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
Carbazole	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
Chrysene	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	3100	J
Di-n-butylphthalate	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
Di-n-octylphthalate	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
Dibenz(a,h)anthracene	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
Dibenzofuran	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
Diethylphthalate	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
Dimethylphthalate	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
Fluoranthene	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	1100	J
Fluorene	370	UJ	410	UJ	380	U	400	UJ	380	U	59	J	410	U	660	J
Hexachlorobenzene	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
Hexachlorobutadiene	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
Hexachlorocyclopentadiene	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
Hexachloroethane	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
Indeno(1,2,3-cd)pyrene	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
Isophorone	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
N-Nitroso-di-n-propylamine	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
N-Nitrosodiphenylamine (1)	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
Naphthalene	370	UJ	410	UJ	380	U	400	UJ	130	J	400	J	410	U	6000	U
Nitrobenzene	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	6000	U
Pentachlorophenol	930	UJ	1000	UJ	960	U	1000	UJ	950	U	1000	U	1000	U	15000	U
Phenanthrene	370	UJ	410	UJ	380	U	400	UJ	380	U	130	J	410	U	7700	
Phenol	370	UJ	410	UJ	380	U	400	UJ	380	U	410	U	410	U	800	J
Pyrene	370	UJ	410	UJ	380	U	400	UJ	380	U	92	J	410	U	14000	
Pesticides/PCB, ug/kg																
4,4'-DDD	3 7	U	4 2	U	99	J	4	U	7 6		10	J	12	J	20	U
4,4'-DDE	1 4	J	4 2	U	1 3	J	4	U	2 2	J	0 66	J	18		130	J
4,4'-DDT	3 7	U	5 2	U	1200		4	U	14		16		180		530	J
Aldrin	1 9	U	2 1	U	20	U	2 1	U	1 9	U	0 19	J	6 3	U	10	U
alpha-BHC	1 9	U	2 1	U	20	U	2 1	U	1 9	U	2 1	U	6 3	U	200	

Appendix C-1

Validated Laboratory Analytical Data
Surface Soil - TAL Metals and TCL Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

Sample ID	51B00101		51B00102		51B00201		51B00202		51B00301		51B00302		51B00401		51B00402	
Sampling Date	4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97	
alpha-Chlordane	0 2	J	2 1	U	1 9	J	2 1	U	0 42	J	0 23	J	6 3	U	10	U
Aroclor-1016	37	U	42	U	380	U	40	U	38	U	41	U	120	U	200	U
Aroclor-1221	75	U	84	U	780	U	82	U	76	U	83	U	250	U	410	U
Aroclor-1232	37	U	42	U	380	U	40	U	38	U	41	U	120	U	200	U
Aroclor-1242	37	U	42	U	380	U	40	U	38	U	41	U	120	U	200	U
Aroclor-1248	37	U	42	U	380	U	40	U	38	U	41	U	120	U	200	U
Aroclor-1254	37	U	42	U	380	U	40	U	38	U	41	U	120	U	200	U
Aroclor-1260	37	U	42	U	380	U	40	U	38	U	41	U	120	U	200	U
beta-BHC	1 9	U	2 1	U	20	U	2 1	U	1 9	U	2 1	U	6 3	U	10	U
delta-BHC	1 9	U	2 1	U	20	U	2 1	U	1 9	U	2 1	U	6 3	U	10	U
Dieldrin	3 7	U	4 2	U	38	U	4	U	3 8	U	0 46	J	12	U	56	J
Endosulfan I	1 9	U	2 1	U	20	U	2 1	U	1 9	U	2 1	U	6 3	U	77	
Endosulfan II	3 7	U	4 2	U	38	U	4	U	3 8	U	4 1	U	12	U	20	U
Endosulfan sulfate	3 7	U	4 2	U	38	U	4	U	3 8	U	4 1	U	12	U	20	U
Endrin	3 7	U	4 2	U	38	U	4	U	1	J	0 65	J	12	U	20	U
Endrin aldehyde	3 7	U	4 2	U	38	U	4	U	0 56	J	4 1	U	12	U	20	U
Endrin ketone	3 7	U	4 2	U	38	U	4	U	3 8	U	0 24	J	12	U	20	U
gamma-BHC (Lindane)	1 9	U	2 1	U	20	U	2 1	U	1 9	U	2 1	U	6 3	U	10	U
gamma-Chlordane	1 9	U	2 1	U	1 7	J	2 1	U	0 26	J	0 33	J	6 3	U	10	J
Heptachlor	0 15	J	2 1	U	20	U	2 1	U	1 9	U	2 1	U	6 3	U	10	U
Heptachlor epoxide	1 9	U	2 1	U	20	U	2 1	U	1 9	U	2 1	U	6 3	U	10	U
Methoxychlor	19	U	21	U	200	U	21	U	19	U	21	U	63	U	100	U
Toxaphene	190	U	210	U	2000	U	210	U	190	U	210	U	630	U	1000	U
Inorganics, mg/kg																
Aluminum	44900	J	6340	J	53600	J	8500	J	3920	J	6910	J	3110		3340	
Antimony	24 5		1 6	U	32 3		1 4	U	1 3	U	1 5	U	0 6	U	0 95	J
Arsenic	1 2	J	2 6		1 6	J	1 1	J	1 1	J	4 2		0 69	U	0 68	U
Barium	79 8		19 5	J	201		25 3	J	15 8	J	54 7		9 1	J	76 1	
Beryllium	0 26	J	0 14	J	0 4	J	0 13	J	0 12	J	0 4	J	0 1	U	0 06	U
Cadmium	7 7	J	0 25	U	16 7	J	0 25	U	2 5	J	0 61	J	1 1	J	16 8	
Calcium	2490		181	J	3790		266	J	142	J	304	J	156	J	127	J
Chromium	365		12 2		573		17		6 2		11 1		6 4		86 6	
Cobalt	3 4	J	0 58	U	4 7	J	0 34	J	0 39	J	0 87	J	0 22	U	0 83	J
Copper	4680	J	10 1	J	5210	J	22 1	J	2 9	J	2 3	J	11 4		38 5	
Iron	16300	J	11100	J	17700	J	8120	J	4750	J	12700	J	4830	J	2810	J

Appendix C-1

Validated Laboratory Analytical Data
Surface Soil - TAL Metals and TCL Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

Sample ID	51B00101		51B00102		51B00201		51B00202		51B00301		51B00302		51B00401		51B00402	
Sampling Date	4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97	
Lead	727	J	8 4	J	542	J	9 2	J	166	J	13	J	51 4		1030	
Magnesium	313	J	237	J	1250		368	J	251	J	783	J	92 7	J	129	J
Manganese	459	J	2 1	J	526	J	3 9	J	2 8	J	2 8	J	3 6	J	6 1	
Mercury	0 07	U	0 08	U	1 2		0 07	U	0 13		0 07	U	0 06	UJ	0 06	UJ
Nickel	174	J	2 7	J	233	J	3 5	J	2	J	2 4	J	1 9	J	3 5	J
Potassium	82 4	J	122	J	177	J	237	J	106	J	231	J	79 6	J	142	J
Selenium	1 2		2 8	U	2 3	U	2 7	U	2 3	U	2 7	U	1 1	U	1	U
Silver	3 5		0 46	U	5 5	U	0 42	U	0 37	U	1 8	U	0 17	U	1 3	J
Sodium	368	U	326	U	360	U	376	U	357	U	376	U	376	U	435	U
Thallium	2 7	U	3 6	U	3	U	3 4	U	3	U	3 5	U	1 4	U	1 3	U
Vanadium	3 9	J	28 8		6 2	J	19 1		9 6	J	16 8		9 9	J	8 3	J
Zinc	476	J	3 4	J	684	J	5 4	J	7 3	J	7 7	J	9 5		121	

Appendix C-2

Laboratory Analytical Results
Surface Soil - TCL Volatile Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

Sample ID	51B00501		51B00502		51B00601		51B00602		51BQ0701		51B00702		51B00702D		51B00801		51B00802		51B00901		51B00902	
Sampling Date	28-Oct-97		28-Oct-97		28-Oct-97		28-Oct-97		28-Oct-97		28-Oct-97		28-Oct-97		28-Oct-97		28-Oct-97		28-Oct-97		28-Oct-97	
Volatile Organics, ug/kg																						
1,1,1-Trichloroethane	12	U	30	U	12	U	12	U	12	U	12	U	12	U	30	U	30	U	12	U	12	U
1,1,2,2-Tetrachloroethane	12	U	30	U	12	U	12	U	12	U	12	U	12	U	30	U	30	U	12	U	12	U
1,1,2-Trichloroethane	12	U	30	U	12	U	12	U	12	U	12	U	12	U	30	U	30	U	12	U	12	U
1,1-Dichloroethane	12	U	30	U	12	U	12	U	12	U	12	U	12	U	30	U	30	U	12	U	12	U
1,1-Dichloroethene	12	U	30	U	12	U	12	U	12	U	12	U	12	U	30	U	30	U	12	U	12	U
1,2-Dichloroethane	12	U	30	U	12	U	12	U	12	U	12	U	12	U	30	U	30	U	12	U	12	U
1,2-Dichloroethene (total)	12	U	30	U	12	U	12	U	12	U	12	U	12	U	30	U	30	U	12	U	12	U
1,2-Dichloropropane	12	U	30	U	12	U	12	U	12	U	12	U	12	U	30	U	30	U	12	U	12	U
2-Butanone	75		30	U	12	U	12	U	12	U	12	U	12	U	30	U	30	U	12	U	12	U
2-Hexanone	12	U	30	U	12	U	12	U	12	UJ	12	UJ	12	UJ	30	U	30	U	12	UJ	12	UJ
4-Methyl-2-pentanone	12	U	30	U	12	U	12	U	12	UJ	12	UJ	12	UJ	30	U	30	U	12	UJ	12	UJ
Acetone	72	J	200	J	100	J	19	J	12	U	23	J	13	J	52	J	86	J	14	J	49	J
Benzene	8	J	31		8	J	4	J	2	J	12	U	3	J	12	J	32		2	J	2	J
Bromodichloromethane	12	U	30	U	12	U	12	U	12	U	12	U	12	U	30	U	30	U	12	U	12	U
Bromoform	12	U	30	U	12	U	12	U	12	U	12	U	12	U	30	U	30	U	12	U	12	U
Bromomethane	12	U	30	U	12	U	12	U	12	U	12	U	12	U	30	U	30	U	12	U	12	U
Carbon disulfide	12	U	30	U	12	U	12	U	12	U	12	U	12	U	30	U	30	U	12	U	12	U
Carbon tetrachloride	12	U	30	U	12	U	12	U	12	U	12	U	12	U	6	J	30	U	12	U	12	U
Chlorobenzene	12	U	30	U	12	U	12	U	12	U	12	U	12	U	30	U	30	U	12	U	12	U
Chloroethane	12	U	30	U	12	U	12	U	12	U	12	U	12	U	30	U	30	U	12	U	12	U
Chloroform	1	J	4	J	18		10	J	12	U	12	U	4	J	15	J	28	J	12	U	12	U
Chloromethane	12	U	30	U	12	U	12	U	12	U	12	U	12	U	30	U	30	U	12	U	12	U
cis-1,3-Dichloropropene	12	U	30	U	12	U	12	U	12	U	12	U	12	U	30	U	30	U	12	U	12	U
Dibromochloromethane	12	U	30	U	12	U	12	U	12	U	12	U	12	U	30	U	30	U	12	U	12	U
Ethylbenzene	69		150		43		21		14		13		16		49		120		30		45	
Methylene chloride	12	U	31	U	17	U	12	U	33		59		35		19	U	30	U	50		75	
Styrene	4	J	30	U	12	U	1	J	12	U	12	U	12	U	30	U	30	U	12	U	12	U
Tetrachloroethene	12	U	30	U	12	U	12	U	12	U	12	U	12	U	30	U	30	U	12	U	12	U
Toluene	31		120		6	J	12	U	12	U	12	U	12	U	210	J	71		12	U	2	J
trans-1,3-Dichloropropene	12	U	30	U	12	U	12	U	12	U	12	U	12	U	30	U	30	U	12	U	12	U
Trichloroethene	14		62		15		6	J	7	J	2	J	8	J	11	J	29	J	3	J	5	J
Vinyl chloride	12	U	30	U	12	U	12	U	12	U	12	U	12	U	30	U	30	U	12	U	12	U
Xylene (total)	460		860		250		130		110		110		110		280		620		230		360	

Appendix C-2

Laboratory Analytical Results
Surface Soil - TCL Volatile Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

Sample ID	51B01001		51B01002	
Sampling Date	28-Oct-97		28-Oct-97	
Volatile Organics, ug/kg				
1,1,1-Trichloroethane	12	U	12	U
1,1,2,2-Tetrachloroethane	12	U	12	U
1,1,2-Trichloroethane	12	U	12	U
1,1-Dichloroethane	12	U	12	U
1,1-Dichloroethene	12	U	12	U
1,2-Dichloroethane	12	U	12	U
1,2-Dichloroethene (total)	12	U	12	U
1,2-Dichloropropane	12	U	12	U
2-Butanone	12	U	12	U
2-Hexanone	12	UJ	12	U
4-Methyl-2-pentanone	12	UJ	12	U
Acetone	10	J	60	
Benzene	4	J	8	J
Bromodichloromethane	12	U	12	U
Bromoform	12	U	12	U
Bromomethane	12	U	12	U
Carbon disulfide	12	U	12	U
Carbon tetrachloride	12	U	12	U
Chlorobenzene	12	U	12	U
Chloroethane	12	U	12	U
Chloroform	12	U	12	U
Chloromethane	12	U	12	U
cis-1,3-Dichloropropene	12	U	12	U
Dibromochloromethane	12	U	12	U
Ethylbenzene	50		84	
Methylene chloride	44		28	B
Styrene	12	U	12	U
Tetrachloroethene	12	U	12	U
Toluene	4	J	7	J
trans-1,3-Dichloropropene	12	U	12	U
Trichloroethene	5	J	6	J
Vinyl chloride	12	U	12	U
Xylene (total)	420		590	

Appendix C-3

Validated Laboratory Analytical Results
Subsurface Soil - TAL Metals and TCL Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

Sample ID	51B00103		51B00104		51B00203		51B00204		51B00303		51B00304		51B00403		51B00701	
Sampling Date	4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		8/6/97	
Volatile Organics, ug/kg																
1,1,1-Trichloroethane	12	U	12	U	12	U	12	U	12	U	12	U	7100	U	13	U
1,1,2,2-Tetrachloroethane	12	U	12	U	12	U	12	U	12	U	12	U	7100	U	13	UJ
1,1,2-Trichloroethane	12	U	12	U	12	U	12	U	12	U	12	U	7100	U	13	U
1,1-Dichloroethane	12	U	12	U	12	U	12	U	12	U	12	U	7100	U	13	U
1,1-Dichloroethene	12	U	12	U	12	U	12	U	12	U	12	U	7100	U	13	U
1,2-Dichloroethane	12	U	12	U	12	U	12	U	12	U	12	U	7100	UJ	13	U
1,2-Dichloroethene (total)	12	U	12	U	12	U	12	U	12	U	12	U	7100	U	13	U
1,2-Dichloropropane	12	U	12	U	12	U	12	U	12	U	12	U	7100	U	13	U
2-Butanone	12	UJ	12	U	12	UJ	12	UJ	12	UJ	12	UJ	7100	UJ	13	U
2-Hexanone	12	UJ	12	U	12	UJ	12	UJ	12	UJ	12	UR	7100	UJ	13	U
4-Methyl-2-pentanone	12	U	12	U	12	U	12	U	12	U	12	UJ	7100	UJ	13	U
Acetone	81	J	29	UJ	38	UJ	44	UJ	44	U	77	U	7100	UJ	13	U
Benzene	12	U	12	U	12	U	12	U	12	U	12	U	7100	U	13	U
Bromodichloromethane	12	U	12	U	12	U	12	U	12	U	12	U	7100	U	13	U
Bromoform	12	U	12	U	12	U	12	U	12	U	12	U	7100	U	13	U
Bromomethane	12	U	12	U	12	U	12	U	12	U	12	U	7100	U	13	U
Carbon disulfide	12	U	12	U	12	U	12	U	12	U	12	U	7100	U	13	U
Carbon tetrachloride	12	U	12	U	12	U	12	U	12	U	12	U	89000		13	U
Chlorobenzene	12	U	12	U	12	U	12	U	12	U	12	U	7100	U	13	U
Chloroethane	12	U	12	U	12	U	12	U	12	U	12	U	7100	U	13	U
Chloroform	12	U	12	U	12	U	12	U	12	U	12	U	14000		13	U
Chloromethane	12	U	12	U	12	U	12	U	12	U	12	U	7100	U	13	U
cis-1,3-Dichloropropene	12	U	12	U	12	U	12	U	12	U	12	U	7100	U	13	U
Dibromochloromethane	12	U	12	U	12	U	12	U	12	U	12	U	7100	U	13	U
Ethylbenzene	12	U	12	U	12	U	12	U	11	J	18		2300	J	13	U
Methylene chloride	12	U	12	U	12	U	12	U	12	U	12	U	7100	U	13	U
Styrene	12	U	12	U	12	U	12	U	12	U	12	U	7100	U	13	U
Tetrachloroethene	12	U	12	U	12	U	12	U	12	U	12	U	7100	U	13	U
Toluene	12	U	12	UJ	12	U	12	U	1	J	2	J	12000	J	13	U
trans-1,3-Dichloropropene	12	U	12	U	12	U	12	U	12	U	12	U	7100	U	13	U
Trichloroethene	12	U	12	U	12	U	12	U	2	J	2	J	7100	U	13	U
Vinyl chloride	12	U	12	U	12	U	12	U	12	U	12	U	7100	U	13	U
Xylene (total)	12	U	12	U	12	U	12	U	64		110		13000		13	U

Appendix C-3

Validated Laboratory Analytical Results
Subsurface Soil - TAL Metals and TCL Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

Sample ID	51B00103		51B00104		51B00203		51B00204		51B00303		51B00304		51B00403		51B00701	
Sampling Date	4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		8/6/97	
Semivolatile Organics, ug/kg																
1,2,4-Trichlorobenzene	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
1,2-Dichlorobenzene	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
1,3-Dichlorobenzene	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
1,4-Dichlorobenzene	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
2,2'-oxybis(1-Chloropropane)	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
2,4,5-Trichlorophenol	1000	UJ	1000	UJ	1000	UJ	1000	U	1000	U	1000	U	4900	U	NA	
2,4,6-Trichlorophenol	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
2,4-Dichlorophenol	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
2,4-Dimethylphenol	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	840	J	NA	
2,4-Dinitrophenol	1000	UJ	1000	UJ	1000	UJ	1000	U	1000	U	1000	U	4900	U	NA	
2,4-Dinitrotoluene	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
2,6-Dinitrotoluene	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
2-Chloronaphthalene	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
2-Chlorophenol	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
2-Methylnaphthalene	410	UJ	400	UJ	400	UJ	400	U	400	U	870		8000	J	NA	
2-Methylphenol	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	730	J	NA	
2-Nitroaniline	1000	UJ	1000	UJ	1000	UJ	1000	U	1000	U	1000	U	4900	U	NA	
2-Nitrophenol	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
3,3'-Dichlorobenzidine	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
3-Nitroaniline	1000	UJ	1000	UJ	1000	UJ	1000	U	1000	U	1000	U	4900	U	NA	
4,6-Dinitro-2-methylphenol	1000	UJ	1000	UJ	1000	UJ	1000	U	1000	U	1000	U	4900	U	NA	
4-Bromophenyl-phenylether	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
4-Chloro-3-methylphenol	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
4-Chloroaniline	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
4-Chlorophenyl-phenylether	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
4-Methylphenol	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	5300		NA	
4-Nitroaniline	1000	UJ	1000	UJ	1000	UJ	1000	U	1000	U	1000	U	4900	U	NA	
4-Nitrophenol	1000	UJ	1000	UJ	1000	UJ	1000	U	1000	U	1000	U	4900	U	NA	
Acenaphthene	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	390	J	NA	
Acenaphthylene	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
Anthracene	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	450	J	NA	
Benzo(a)anthracene	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1200	J	NA	
Benzo(a)pyrene	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	290	J	NA	
Benzo(b)fluoranthene	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	570	J	NA	

Appendix C-3

Validated Laboratory Analytical Results
Subsurface Soil - TAL Metals and TCL Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

Sample ID	51B00103		51B00104		51B00203		51B00204		51B00303		51B00304		51B00403		51B00701	
Sampling Date	4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		8/6/97	
Benzo(g,h,i)perylene	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
Benzo(k)fluoranthene	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	610	J	NA	
bis(2-Chloroethoxy)methane	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
bis(2-Chloroethyl)ether	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
bis(2-Ethylhexyl)phthalate	410	UJ	48	J	400	UJ	57	J	140	J	71	J	1900	U	NA	
Butylbenzylphthalate	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
Carbazole	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
Chrysene	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1800	J	NA	
Di-n-butylphthalate	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	430	J	NA	
Di-n-octylphthalate	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
Dibenz(a,h)anthracene	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
Dibenzofuran	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	730	J	NA	
Diethylphthalate	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
Dimethylphthalate	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
Fluoranthene	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1000	J	NA	
Fluorene	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	740	J	NA	
Hexachlorobenzene	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
Hexachlorobutadiene	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
Hexachlorocyclopentadiene	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
Hexachloroethane	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
Indeno(1,2,3-cd)pyrene	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
Isophorone	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
N-Nitroso-di-n-propylamine	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
N-Nitrosodiphenylamine (1)	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
Naphthalene	410	UJ	400	UJ	400	UJ	400	U	400	U	290	J	1100	J	NA	
Nitrobenzene	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1900	U	NA	
Pentachlorophenol	1000	UJ	1000	UJ	1000	UJ	1000	U	1000	U	1000	U	4900	U	NA	
Phenanthrene	410	UJ	400	UJ	400	UJ	400	U	400	U	44	J	12000		NA	
Phenol	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	1500	J	NA	
Pyrene	410	UJ	400	UJ	400	UJ	400	U	400	U	400	U	7800		NA	
Pesticides/PCB, ug/kg																
4,4'-DDD	4 1	UJ	4	U	4	U	0 32	J	5 6	J	3 7	J	28	J	NA	
4,4'-DDE	4 1	UJ	0 74	J	0 72	J	0 65	J	1 3	J	0 4	J	13	J	NA	
4,4'-DDT	4 1	UJ	5 3	U	9 4		7 9	J	64		4 9	U	840		NA	
Aldrin	2 1	UJ	2	U	2	U	2 1	U	0 09	J	2	U	10	U	NA	

Appendix C-3

Validated Laboratory Analytical Results
Subsurface Soil - TAL Metals and TCL Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

Sample ID	51B00103		51B00104		51B00203		51B00204		51B00303		51B00304		51B00403		51B00701	
Sampling Date	4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		8/6/97	
alpha-BHC	2 1	UJ	2	U	2	U	2 1	U	2	U	2	U	4 2	J	NA	
alpha-Chlordane	2 1	UJ	2	U	0 26	J	2 1	U	0 27	J	2	U	10	U	NA	
Aroclor-1016	41	UJ	40	U	40	U	41	U	40	U	40	U	200	U	NA	
Aroclor-1221	83	UJ	81	U	80	U	82	U	81	U	81	U	400	U	NA	
Aroclor-1232	41	UJ	40	U	40	U	41	U	40	U	40	U	200	U	NA	
Aroclor-1242	41	UJ	40	U	40	U	41	U	40	U	40	U	200	U	NA	
Aroclor-1248	41	UJ	40	U	40	U	41	U	40	U	40	U	200	U	NA	
Aroclor-1254	41	UJ	40	U	40	U	41	U	40	U	40	U	200	U	NA	
Aroclor-1260	41	UJ	40	U	40	U	41	U	40	U	40	U	200	U	NA	
beta-BHC	2 1	UJ	2	U	2	U	2 1	U	2	U	2	U	10	U	NA	
delta-BHC	2 1	UJ	2	U	2	U	2 1	U	2	U	2	U	0 41	J	NA	
Dieldrin	4 1	UJ	4	U	4	U	4 1	U	0 28	J	4	U	20	U	NA	
Endosulfan I	2 1	UJ	2	U	2	U	2 1	U	2	U	2	U	10	U	NA	
Endosulfan II	4 1	UJ	4	U	4	U	4 1	U	4	U	4	U	20	U	NA	
Endosulfan sulfate	4 1	UJ	4	U	4	U	4 1	U	4	U	4	U	35	J	NA	
Endrin	4 1	UJ	4	U	4	U	4 1	U	0 15	J	0 2	J	20	U	NA	
Endrin aldehyde	4 1	UJ	4	U	4	U	4 1	U	4	U	4	U	20	U	NA	
Endrin ketone	4 1	UJ	4	U	4	U	4 1	U	4	U	4	U	19	J	NA	
gamma-BHC (Lindane)	2 1	UJ	2	U	2	U	2 1	U	2	U	2	U	10	U	NA	
gamma-Chlordane	2 1	UJ	2	U	0 16	J	0 15	J	0 37	J	0 13	J	8	J	NA	
Heptachlor	2 1	UJ	2	U	2	U	2 1	U	0 22	J	2	U	10	U	NA	
Heptachlor epoxide	2 1	UJ	2	U	2	U	2 1	U	2	U	2	U	10	U	NA	
Methoxychlor	21	UJ	20	U	20	U	21	U	20	U	20	U	100	U	NA	
Toxaphene	210	UJ	200	U	200	U	210	U	200	U	200	U	1000	U	NA	
Inorganics, mg/kg																
Aluminum	9630	J	8900	J	9930	J	11600	J	5780	J	4400		3370		NA	
Antimony	1 5	U	1 4	U	1 4	U	1 4	U	1 4	U	0 59	U	0 57	U	NA	
Arsenic	2 5		1 8	J	1 6	U	1	J	5 1		0 69	U	0 66	U	NA	
Barium	28 8	J	34 9	J	25 3	J	54		43 2	J	43 3	J	31 9	J	NA	
Beryllium	0 23	J	0 31	J	0 17	J	0 23	J	0 44	J	0 33	U	0 09	U	NA	
Cadmium	0 25	U	0 24	U	0 24	U	0 25	U	0 24	U	0 1	U	8 8		NA	
Calcium	145	J	169	J	185	J	266	J	391	J	414	J	155	J	NA	
Chromium	17 4		14 1		12 9		14 3		8 2		5 4		24 4		NA	
Cobalt	0 53	J	0 45	J	0 6	J	0 7	J	0 84	J	0 75	J	0 59	J	NA	
Copper	16 1	J	3	J	6	J	2 9	J	2	J	0 97	J	8 9		NA	

Appendix C-3

Validated Laboratory Analytical Results
Subsurface Soil - TAL Metals and TCL Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

Sample ID	51B00103		51B00104		51B00203		51B00204		51B00303		51B00304		51B00403		51B00701	
Sampling Date	4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		8/6/97	
Iron	16700	J	22800	J	2850	J	2440	J	16800	J	4720	J	4020	J	NA	
Lead	10 6	J	10 6	J	9 2	J	18	J	8 7	J	6 7		423		NA	
Magnesium	635	J	691	J	482	J	624	J	900	J	803	J	122	J	NA	
Manganese	4 7	J	2 8	J	4 9	J	5	J	2 6	J	1 4	J	4		NA	
Mercury	0 07	U	0 07	U	0 07	U	0 07	U	0 07	U	0 06	UJ	0 06	UJ	NA	
Nickel	1 9	J	2 6	J	3	J	4 1	J	2	J	1 2	J	2 3	J	NA	
Potassium	249	J	270	J	293	J	293	J	210	J	120	J	145	J	NA	
Selenium	2 7	U	2 4	U	2 4	U	2 7	U	2 7	U	1 1	U	1	U	NA	
Silver	0 42	U	0 41	U	0 41	U	0 42	U	0 42	U	0 17	U	1 6	J	NA	
Sodium	313	U	337	U	331	U	332	U	353	U	412	U	395	U	NA	
Thallium	3 5	U	3 2	U	3 1	U	3 4	U	3 2	U	1 3	U	1 3	U	NA	
Vanadium	19 8		16 3		9 9	J	9 2	J	12 6		7 6	J	10 8	J	NA	
Zinc	5	J	3 8	J	5 9	J	6 3	J	5 2	J	4	J	67 4		NA	

Appendix C-4

Validated Laboratory Analytical Results
Groundwater - TAL Metals and TCL Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

Sample ID	51G00101		51G00201		51G00401	
Sampling Date	4/8/97		4/8/97		4/21/97	
Volatile Organics, ug/L						
1,1,1-Trichloroethane	10	U	10	U	10	U
1,1,2,2-Tetrachloroethane	10	U	10	U	10	U
1,1,2-Trichloroethane	10	U	10	U	10	U
1,1-Dichloroethane	10	U	10	U	10	U
1,1-Dichloroethene	10	U	10	U	1	J
1,2-Dichloroethane	10	U	10	U	10	U
1,2-Dichloroethene (total)	10	U	10	U	81	
1,2-Dichloropropane	10	U	10	U	10	U
2-Butanone	10	UJ	10	UJ	10	UJ
2-Hexanone	10	U	10	U	10	U
4-Methyl-2-pentanone	10	U	10	U	10	U
Acetone	4	J	10	U	10	U
Benzene	10	U	10	U	130	
Bromodichloromethane	10	U	10	U	10	U
Bromoform	10	U	10	U	10	U
Bromomethane	10	U	10	U	10	U
Carbon disulfide	10	U	10	U	10	U
Carbon tetrachloride	10	U	10	U	10	U
Chlorobenzene	10	U	10	U	10	U
Chloroethane	10	U	10	U	10	U
Chloroform	10	U	10	U	10	U
Chloromethane	10	U	10	U	10	U
cis-1,3-Dichloropropene	10	U	10	U	10	U
Dibromochloromethane	10	U	10	U	10	U
Ethylbenzene	10	U	10	U	17	
Methylene chloride	10	U	10	U	10	U
Styrene	10	U	10	U	10	U
Tetrachloroethene	10	U	10	U	10	U
Toluene	10	U	10	U	2	J
trans-1,3-Dichloropropene	10	U	10	U	10	U
Trichloroethene	10	U	10	U	1	J
Vinyl chloride	10	U	10	U	10	U
Xylene (total)	10	U	10	U	33	
Semivolatile Organics, ug/L						
1,2,4-Trichlorobenzene	10	U	10	U	10	U
1,2-Dichlorobenzene	10	U	10	U	10	U

Appendix C-4

Validated Laboratory Analytical Results
Groundwater - TAL Metals and TCL Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

Sample ID	51G00101		51G00201		51G00401	
Sampling Date	4/8/97		4/8/97		4/21/97	
1,3-Dichlorobenzene	10	U	10	U	10	U
1,4-Dichlorobenzene	10	U	10	U	10	U
2,2'-oxybis(1-Chloropropane)	10	U	10	U	10	U
2,4,5-Trichlorophenol	25	U	25	U	25	U
2,4,6-Trichlorophenol	10	U	10	U	10	U
2,4-Dichlorophenol	10	U	10	U	10	U
2,4-Dimethylphenol	10	U	10	U	2	J
2,4-Dinitrophenol	25	U	25	U	25	U
2,4-Dinitrotoluene	10	U	10	U	10	U
2,6-Dinitrotoluene	10	U	10	U	10	U
2-Chloronaphthalene	10	U	10	U	10	U
2-Chlorophenol	10	U	10	U	10	U
2-Methylnaphthalene	10	U	10	U	17	
2-Methylphenol	10	U	10	U	10	U
2-Nitroaniline	25	U	25	U	25	U
2-Nitrophenol	10	U	10	U	10	U
3,3'-Dichlorobenzidine	10	U	10	U	10	U
3-Nitroaniline	25	U	25	U	25	U
4,6-Dinitro-2-methylphenol	25	U	25	U	25	U
4-Bromophenyl-phenylether	10	U	10	U	10	U
4-Chloro-3-methylphenol	10	U	10	U	10	U
4-Chloroaniline	10	U	10	U	10	U
4-Chlorophenyl-phenylether	10	U	10	U	10	U
4-Methylphenol	10	U	10	U	10	U
4-Nitroaniline	25	U	25	U	25	U
4-Nitrophenol	25	U	25	U	25	U
Acenaphthene	10	U	10	U	10	U
Acenaphthylene	10	U	10	U	10	U
Anthracene	10	U	10	U	10	U
Benzo(a)anthracene	10	U	10	U	10	U
Benzo(a)pyrene	10	U	10	U	10	U
Benzo(b)fluoranthene	10	U	10	U	10	U
Benzo(g,h,i)perylene	10	U	10	U	10	U
Benzo(k)fluoranthene	10	U	10	U	10	U
bis(2-Chloroethoxy)methane	10	U	10	U	10	U
bis(2-Chloroethyl)ether	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate	10	UJ	10	U	10	U

Appendix C-4

Validated Laboratory Analytical Results
Groundwater - TAL Metals and TCL Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

Sample ID	51G00101		51G00201		51G00401	
Sampling Date	4/8/97		4/8/97		4/21/97	
Butylbenzylphthalate	10	UJ	10	U	10	U
Carbazole	10	U	10	U	10	U
Chrysene	10	U	10	U	10	U
Di-n-butylphthalate	10	U	10	U	10	U
Di-n-octylphthalate	10	UJ	10	U	10	U
Dibenz(a,h)anthracene	10	U	10	U	10	U
Dibenzofuran	10	U	10	U	10	U
Diethylphthalate	10	U	10	U	10	U
Dimethylphthalate	10	U	10	U	10	U
Fluoranthene	10	U	10	UJ	10	U
Fluorene	10	U	10	U	10	U
Hexachlorobenzene	10	U	10	U	10	U
Hexachlorobutadiene	10	U	10	U	10	U
Hexachlorocyclopentadiene	10	U	10	U	10	U
Hexachloroethane	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene	10	U	10	U	10	U
Isophorone	10	U	10	U	10	U
N-Nitroso-di-n-propylamine	10	U	10	U	10	U
N-Nitrosodiphenylamine (1)	10	U	10	U	10	U
Naphthalene	10	U	10	U	26	
Nitrobenzene	10	U	10	U	10	U
Pentachlorophenol	25	U	25	U	25	U
Phenanthrene	10	U	10	U	10	U
Phenol	10	U	10	U	2	J
Pyrene	10	UJ	10	U	10	U
Pesticides/PCB, ug/L						
4,4'-DDD	0 1	U	0 1	U	0 1	U
4,4'-DDE	0 1	U	0 1	U	0 1	U
4,4'-DDT	0 1	U	0 1	U	0 1	U
Aldrin	0 05	U	0 05	U	0 05	U
alpha-BHC	0 05	U	0 05	U	0 05	U
alpha-Chlordane	0 05	U	0 05	U	0 05	U
Aroclor-1016	1	U	1	U	1	U
Aroclor-1221	2	U	2	U	2	U
Aroclor-1232	1	U	1	U	1	U
Aroclor-1242	1	U	1	U	1	U
Aroclor-1248	1	U	1	U	1	U

Appendix C-4

Validated Laboratory Analytical Results
Groundwater - TAL Metals and TCL Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

Sample ID	51G00101		51G00201		51G00401	
Sampling Date	4/8/97		4/8/97		4/21/97	
Aroclor-1254	1	U	1	U	1	U
Aroclor-1260	1	U	1	U	1	U
beta-BHC	0 05	U	0 05	U	0 05	U
delta-BHC	0 05	U	0 05	U	0 05	U
Dieldrin	0 1	U	0 1	U	0 1	U
Endosulfan I	0 05	U	0 05	U	0 0049	J
Endosulfan II	0 1	U	0 1	U	0 1	U
Endosulfan sulfate	0 1	U	0 1	U	0 1	U
Endrin	0 1	U	0 1	U	0 1	U
Endrin aldehyde	0 1	U	0 1	U	0 1	U
Endrin ketone	0 1	U	0 1	U	0 1	U
gamma-BHC (Lindane)	0 05	U	0 05	U	0 03	J
gamma-Chlordane	0 05	U	0 05	U	0 05	U
Heptachlor	0 05	U	0 05	U	0 05	U
Heptachlor epoxide	0 05	U	0 05	U	0 05	U
Methoxychlor	0 5	U	0 5	U	0 5	U
Toxaphene	5	U	5	U	5	U
Inorganics, ug/L						
Aluminum	313	U	205	U	548	
Antimony	5 1	J	2 4	U	2 4	U
Arsenic	2 8	U	2 8	U	7 2	J
Barium	87 6	J	119	J	56 5	J
Beryllium	0 26	U	0 49	U	0 2	U
Cadmium	0 59	U	0 4	U	0 4	U
Calcium	6760		2490	J	2140	J
Chromium	1 5	J	0 9	U	0 9	U
Cobalt	1 8	J	3	J	2 2	U
Copper	7 1	J	11 8	J	6	J
Iron	687		1310		7350	
Lead	2 2	J	2 2	U	2 2	U
Magnesium	2480	J	3310	J	3320	J
Manganese	45 4		81 5		72	
Mercury	0 1	U	0 12	J	0 1	UJ
Nickel	7 4	J	12	J	3 4	J
Potassium	669	J	1310	J	405	J
Selenium	4 3	U	4 3	U	4 3	U
Silver	0 7	U	0 7	U	0 7	U

Appendix C-4

Validated Laboratory Analytical Results
Groundwater - TAL Metals and TCL Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

Sample ID	51G00101		51G00201		51G00401	
Sampling Date	4/8/97		4/8/97		4/21/97	
Sodium	8290		5360		14100	J
Thallium	5 5	U	5 5	U	5 5	U
Vanadium	1 8	J	0 8	U	1 4	U
Zinc	15 2	J	34 7		4 3	J

Appendix C-5

Validated Laboratory Analytical Results
Groundwater - TCL Volatile Organics
Supplemental Sampling
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

Sample ID	51G00501		51G00601		51G00701	
Sampling Date	8/6/97		8/6/97		8/6/97	
Volatile Organics, ug/L						
1,1,1-Trichloroethane	10	U	17	U	10	U
1,1,2,2-Tetrachloroethane	10	U	17	U	10	U
1,1,2-Trichloroethane	10	U	17	U	10	U
1,1-Dichloroethane	10	U	17	U	10	U
1,1-Dichloroethene	2	J	3	J	10	U
1,2-Dichloroethane	10	U	17	U	10	U
1,2-Dichloroethene (total)	37		120		2	J
1,2-Dichloropropane	10	U	17	U	10	U
2-Butanone	10	U	17	U	10	U
2-Hexanone	10	U	17	U	10	U
4-Methyl-2-pentanone	10	U	17	U	10	U
Acetone	10	U	17	U	10	U
Benzene	34		240		4	J
Bromodichloromethane	10	U	17	U	10	U
Bromoform	10	U	17	U	10	U
Bromomethane	10	U	17	U	10	U
Carbon disulfide	10	U	17	U	10	U
Carbon tetrachloride	10	U	17	U	10	U
Chlorobenzene	10	U	17	U	10	U
Chloroethane	10	U	17	U	10	U
Chloroform	10	U	17	U	10	U
Chloromethane	10	U	17	U	10	U
cis-1,3-Dichloropropene	10	U	17	U	10	U
Dibromochloromethane	10	U	17	U	10	U
Ethylbenzene	10	U	83		10	U
Methylene chloride	10	U	17	U	10	U
Styrene	10	U	17	U	10	U
Tetrachloroethene	10	U	17	U	10	U
Toluene	10	U	280		10	U
trans-1,3-Dichloropropene	10	U	17	U	10	U
Trichloroethene	23		17		14	
Vinyl chloride	10	U	10	J	10	U
Xylene (total)	10	U	410		10	U

Appendix C-6

Laboratory Analytical Results
DPT Groundwater - Volatile Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

Sample ID	51Q00101		51Q00102		51Q00103		51Q00201		51Q00202		51Q00203		51Q00301		51Q00302		51Q00303	
Sampling Date	3-Sep-97		3-Sep-97		3-Sep-97		4-Sep-97		4-Sep-97		4-Sep-97		4-Sep-97		4-Sep-97		4-Sep-97	
Volatile Organics, ug/L																		
1,1,1-Trichloroethane	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,1,2,2-Tetrachloroethane	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,1,2-Trichloroethane	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,1-Dichloroethane	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,1-Dichloroethene	1	U	1	U	1	U	1	U	1	U	1	U	1 3	J	1	U	1	U
1,2-Dichlorobenzene	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,2-Dichloroethane	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,2-Dichloroethene (total)	NQ		NQ		NQ		NQ		NQ		NQ		NQ		NQ		NQ	
1,2-Dichloropropane	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,3-Dichlorobenzene	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,4-Dichlorobenzene	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
2-Butanone	NQ		NQ		NQ		NQ		NQ		NQ		NQ		NQ		NQ	
2-Chloroethylvinyl ether	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
2-Hexanone	NQ		NQ		NQ		NQ		NQ		NQ		NQ		NQ		NQ	
4-Methyl-2-pentanone	NQ		NQ		NQ		NQ		NQ		NQ		NQ		NQ		NQ	
Acetone	NQ		NQ		NQ		NQ		NQ		NQ		NQ		NQ		NQ	
Acrolein	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Acrylonitrile	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Benzene	48		40		1	U	7 9		13		1	U	12		10		1	U
Bromodichloromethane	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Bromoform	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Bromomethane	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Carbon disulfide	NQ		NQ		NQ		NQ		NQ		NQ		NQ		NQ		NQ	
Carbon tetrachloride	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Chlorobenzene	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Chloroethane	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Chloroform	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Chloromethane	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
cis-1,3-Dichloropropene	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Dibromochloromethane	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Dichlorodifluoromethane	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Ethylbenzene	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Methyl tert-butyl ether	6	U	6	U	6	U	6	U	6	U	6	U	6	U	6	U	6	U
Methylene chloride	3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	U
o-Xylene	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U

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Laboratory Analytical Results
DPT Groundwater - Volatile Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

Sample ID	51Q00101		51Q00102		51Q00103		51Q00201		51Q00202		51Q00203		51Q00301		51Q00302		51Q00303	
Sampling Date	3-Sep-97		3-Sep-97		3-Sep-97		4-Sep-97		4-Sep-97		4-Sep-97		4-Sep-97		4-Sep-97		4-Sep-97	
Styrene	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Tetrachloroethene	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Toluene	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
trans-1,2-Dichloroethene	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
trans-1,3-Dichloropropene	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Trichloroethene	1	U	1	U	1	U	1	U	3 1		1	U	8		2 2		1	U
Trichlorofluoromethane	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Vinyl chloride	18		13		1	U	12		1 8	J	1	U	1	U	1	U	1	U
Xylene (total)	NQ		NQ		NQ		NQ		NQ		NQ		NQ		NQ		NQ	
m/p-Xylene	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U

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Laboratory Analytical Results
DPT Groundwater - Volatile Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

Sample ID	51Q00401		51Q00402		51Q00403		51Q00501		51Q00502		51Q00503		51Q00601		51Q00602		51Q00701	
Sampling Date	4-Sep-97		4-Sep-97		5-Sep-97		5-Sep-97		5-Sep-97		5-Sep-97		9-Sep-97		9-Sep-97		9-Sep-97	
Volatile Organics, ug/L																		
1,1,1-Trichloroethane	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,1,2,2-Tetrachloroethane	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,1,2-Trichloroethane	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,1-Dichloroethane	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,1-Dichloroethene	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,2-Dichlorobenzene	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,2-Dichloroethane	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,2-Dichloroethene (total)	NQ		NQ		NQ		NQ		NQ		NQ		NQ		NQ		NQ	
1,2-Dichloropropane	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,3-Dichlorobenzene	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,4-Dichlorobenzene	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
2-Butanone	NQ		NQ		NQ		NQ		NQ		NQ		NQ		NQ		NQ	
2-Chloroethylvinyl ether	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
2-Hexanone	NQ		NQ		NQ		NQ		NQ		NQ		NQ		NQ		NQ	
4-Methyl-2-pentanone	NQ		NQ		NQ		NQ		NQ		NQ		NQ		NQ		NQ	
Acetone	NQ		NQ		NQ		NQ		NQ		NQ		NQ		NQ		NQ	
Acrolein	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Acrylonitrile	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Benzene	1	U	1	U	1	U	13		1	U	1	U	2		1	U	5	
Bromodichloromethane	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Bromoform	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Bromomethane	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Carbon disulfide	NQ		NQ		NQ		NQ		NQ		NQ		NQ		NQ		NQ	
Carbon tetrachloride	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Chlorobenzene	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Chloroethane	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Chloroform	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Chloromethane	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
cis-1,3-Dichloropropene	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Dibromochloromethane	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Dichlorodifluoromethane	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Ethylbenzene	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Methyl tert-butyl ether	6	U	6	U	6	U	6	U	6	U	6	U	6	U	6	U	6	U
Methylene chloride	3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	U
o-Xylene	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U

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Laboratory Analytical Results
DPT Groundwater - Volatile Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

Sample ID	51Q00401		51Q00402		51Q00403		51Q00501		51Q00502		51Q00503		51Q00601		51Q00602		51Q00701	
Sampling Date	4-Sep-97		4-Sep-97		5-Sep-97		5-Sep-97		5-Sep-97		5-Sep-97		9-Sep-97		9-Sep-97		9-Sep-97	
Styrene	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Tetrachloroethene	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Toluene	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
trans-1,2-Dichloroethene	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
trans-1,3-Dichloropropene	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Trichloroethene	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	2	
Trichlorofluoromethane	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Vinyl chloride	1	U	1	U	1	U	5		1	U	1	U	4		1	U	5	
Xylene (total)	NQ		NQ		NQ		NQ		NQ		NQ		NQ		NQ		NQ	
m/p-Xylene	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U

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Laboratory Analytical Results
DPT Groundwater - Volatile Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

Sample ID	51Q00702		51Q00801		51Q00901		51Q00902		51Q00903		51Q01001		51Q01002		51Q01003		51Q01101	
Sampling Date	9-Sep-97		12-Sep-97		29-Sep-97		29-Sep-97		29-Sep-97		30-Sep-97		30-Sep-97		30-Sep-97		1-Oct-97	
Volatile Organics, ug/L																		
1,1,1-Trichloroethane	1	U	1	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
1,1,2,2-Tetrachloroethane	1	U	1	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
1,1,2-Trichloroethane	1	U	1	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
1,1-Dichloroethane	1	U	1	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
1,1-Dichloroethene	1	U	1	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
1,2-Dichlorobenzene	1	U	1	U	NQ		NQ		NQ		NQ		NQ		NQ		NQ	
1,2-Dichloroethane	1	U	1	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
1,2-Dichloroethene (total)	NQ		NQ		5	U	5	U	5	U	5	U	5	U	5	U	5	U
1,2-Dichloropropane	1	U	1	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
1,3-Dichlorobenzene	1	U	1	U	NQ		NQ		NQ		NQ		NQ		NQ		NQ	
1,4-Dichlorobenzene	1	U	1	U	NQ		NQ		NQ		NQ		NQ		NQ		NQ	
2-Butanone	NQ		NQ		25	U	25	U	25	U	25	U	25	U	25	U	25	U
2-Chloroethylvinyl ether	2	U	2	U	NQ		NQ		NQ		NQ		NQ		NQ		NQ	
2-Hexanone	NQ		NQ		25	U	25	U	25	U	25	U	25	U	25	U	25	U
4-Methyl-2-pentanone	NQ		NQ		25	U	25	U	25	U	25	U	25	U	25	U	25	U
Acetone	NQ		NQ		50	U	50	U	50	U	50	U	50	U	50	U	50	U
Acrolein	10	U	10	U	NQ		NQ		NQ		NQ		NQ		NQ		NQ	
Acrylonitrile	10	U	10	U	NQ		NQ		NQ		NQ		NQ		NQ		NQ	
Benzene	25		28		9 4		5	U	5	U	5	U	5	U	5	U	5	U
Bromodichloromethane	1	U	1	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Bromoform	1	U	1	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Bromomethane	2	U	2	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Carbon disulfide	NQ		NQ		5	U	5	U	5	U	5	U	5	U	5	U	9 9	
Carbon tetrachloride	1	U	1	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Chlorobenzene	1	U	1	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Chloroethane	2	U	2	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Chloroform	1	U	1	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Chloromethane	1	U	1	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
cis-1,3-Dichloropropene	1	U	1	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Dibromochloromethane	1	U	1	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Dichlorodifluoromethane	1	U	1	U	NQ		NQ		NQ		NQ		NQ		NQ		NQ	
Ethylbenzene	3		4		5	U	5	U	5	U	5	U	5	U	5	U	5	U
Methyl tert-butyl ether	6	U	6	U	NQ		NQ		NQ		NQ		NQ		NQ		NQ	
Methylene chloride	3	U	3	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
o-Xylene	5		5		NQ		NQ		NQ		NQ		NQ		NQ		NQ	

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Laboratory Analytical Results
DPT Groundwater - Volatile Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

Sample ID	51Q00702		51Q00801		51Q00901		51Q00902		51Q00903		51Q01001		51Q01002		51Q01003		51Q01101	
Sampling Date	9-Sep-97		12-Sep-97		29-Sep-97		29-Sep-97		29-Sep-97		30-Sep-97		30-Sep-97		30-Sep-97		1-Oct-97	
Styrene	1	U	1	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Tetrachloroethene	2	U	2	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Toluene	1	J	1	J	5	U	5	U	5	U	5	U	5	U	5	U	5	U
trans-1,2-Dichloroethene	1	U	1	U	NQ		NQ		NQ		NQ		NQ		NQ		NQ	
trans-1,3-Dichloropropene	1	U	1	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Trichloroethene	1	U	1	U	11		5	U	5	U	5	U	5	U	5	U	5	U
Trichlorofluoromethane	1	U	1	U	NQ		NQ		NQ		NQ		NQ		NQ		NQ	
Vinyl chloride	4		4		10	U	10	U	10	U	10	U	10	U	10	U	10	U
Xylene (total)	NQ		NQ		5	U	5	U	5	U	5	U	5	U	5	U	5	U
m/p-Xylene	9		10		NQ		NQ		NQ		NQ		NQ		NQ		NQ	

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Laboratory Analytical Results
DPT Groundwater - Volatile Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

Sample ID	51Q01102		51Q01103	
Sampling Date	1-Oct-97		1-Oct-97	
Volatile Organics, ug/L				
1,1,1-Trichloroethane	5	U	5	U
1,1,2,2-Tetrachloroethane	5	U	5	U
1,1,2-Trichloroethane	5	U	5	U
1,1-Dichloroethane	5	U	5	U
1,1-Dichloroethene	5	U	5	U
1,2-Dichlorobenzene	NQ		NQ	
1,2-Dichloroethane	5	U	5	U
1,2-Dichloroethene (total)	5	U	5	U
1,2-Dichloropropane	5	U	5	U
1,3-Dichlorobenzene	NQ		NQ	
1,4-Dichlorobenzene	NQ		NQ	
2-Butanone	25	U	25	U
2-Chloroethylvinyl ether	NQ		NQ	
2-Hexanone	25	U	25	U
4-Methyl-2-pentanone	25	U	25	U
Acetone	50	U	50	U
Acrolein	NQ		NQ	
Acrylonitrile	NQ		NQ	
Benzene	5	U	5	U
Bromodichloromethane	5	U	5	U
Bromoform	5	U	5	U
Bromomethane	10	U	10	U
Carbon disulfide	5	U	5	U
Carbon tetrachloride	5	U	5	U
Chlorobenzene	5	U	5	U
Chloroethane	10	U	10	U
Chloroform	5	U	5	U
Chloromethane	10	U	10	U
cis-1,3-Dichloropropene	5	U	5	U
Dibromochloromethane	5	U	5	U
Dichlorodifluoromethane	NQ		NQ	
Ethylbenzene	5	U	5	U
Methyl tert-butyl ether	NQ		NQ	
Methylene chloride	5	U	5	U
o-Xylene	NQ		NQ	

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Laboratory Analytical Results
DPT Groundwater - Volatile Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

Sample ID	51Q01102		51Q01103	
Sampling Date	1-Oct-97		1-Oct-97	
Styrene	5	U	5	U
Tetrachloroethene	5	U	5	U
Toluene	5	U	5	U
trans-1,2-Dichloroethene	NQ		NQ	
trans-1,3-Dichloropropene	5	U	5	U
Trichloroethene	5	U	5	U
Trichlorofluoromethane	NQ		NQ	
Vinyl chloride	10	U	10	U
Xylene (total)	5	U	5	U
m/p-Xylene	NQ		NQ	

Appendix C-7

Laboratory Analytical Results
Sediment - TCL Volatile Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

Sample ID	51D00101		51D00201	
Sampling Date	9/29/97		9/29/97	
Volatile Organics, ug/kg				
1,1,1-Trichloroethane	7 2	U	7 2	U
1,1,2,2-Tetrachloroethane	7 2	U	7 2	U
1,1,2-Trichloroethane	7 2	U	7 2	U
1,1-Dichloroethane	7 2	U	7 2	U
1,1-Dichloroethene	7 2	U	7 2	U
1,2-Dichloroethane	7 2	U	7 2	U
1,2-Dichloroethene (total)	7 2	U	7 2	U
1,2-Dichloropropane	7 2	U	7 2	U
2-Butanone	36	U	36	U
2-Hexanone	36	U	36	U
4-Methyl-2-pentanone	36	U	36	U
Acetone	72	U	72	U
Benzene	7 2	U	7 2	U
Bromodichloromethane	7 2	U	7 2	U
Bromoform	7 2	U	7 2	U
Bromomethane	14	U	14	U
Carbon disulfide	7 2	U	7 2	U
Carbon tetrachloride	7 2	U	7 2	U
Chlorobenzene	7 2	U	7 2	U
Chloroethane	14	U	14	U
Chloroform	7 2	U	7 2	U
Chloromethane	14	U	14	U
cis-1,3-Dichloropropene	7 2	U	7 2	U
Dibromochloromethane	7 2	U	7 2	U
Ethylbenzene	7 2	U	7 2	U
Methylene chloride	7 2	U	7 2	U
Styrene	7 2	U	7 2	U
Tetrachloroethene	7 2	U	7 2	U
Toluene	7 2	U	7 2	U
trans-1,3-Dichloropropene	7 2	U	7 2	U
Trichloroethene	7 2	U	7 2	U
Vinyl chloride	14	U	14	U
Xylene (total)	7 2	U	7 2	U

Appendix C-8

Laboratory Analytical Results
Surface Water - TCL Volatile Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

Sample ID	51W00101	
Sampling Date	9/29/97	
Volatile Organics, ug/L		
1,1,1-Trichloroethane	5	U
1,1,2,2-Tetrachloroethane	5	U
1,1,2-Trichloroethane	5	U
1,1-Dichloroethane	5	U
1,1-Dichloroethene	5	U
1,2-Dichloroethane	5	U
1,2-Dichloroethene (total)	5	U
1,2-Dichloropropane	5	U
2-Butanone	25	U
2-Hexanone	25	U
4-Methyl-2-pentanone	25	U
Acetone	50	U
Benzene	5	U
Bromodichloromethane	5	U
Bromoform	5	U
Bromomethane	10	U
Carbon disulfide	5	U
Carbon tetrachloride	5	U
Chlorobenzene	5	U
Chloroethane	10	U
Chloroform	5	U
Chloromethane	10	U
cis-1,3-Dichloropropene	5	U
Dibromochloromethane	5	U
Ethylbenzene	5	U
Methylene chloride	5	U
Styrene	5	U
Tetrachloroethene	5	U
Toluene	5	U
trans-1,3-Dichloropropene	5	U
Trichloroethene	5	U
Vinyl chloride	10	U
Xylene (total)	5	U

Appendix C

Notes to Laboratory Analytical Results Tables
PSC 51

Naval Air Station Jacksonville
Jacksonville, Florida

TAL = Target Analyte List
TCL = Target Compound List
NA = Identified parameter not analyzed
Sample ID = Sample Identifier

Units

mg/kg	milligram per kilogram
ug/kg	microgram per kilogram
ug/L	microgram per liter
NQ	Parameter not quantified or reported in Form 1s total 1,2-Dichloroethene and total Xylene can be summed from their respective isomers
NA	Not Analyzed
	The following standard laboratory and validation qualifiers have the following definitions
U	The analyte/compound was analyzed for but was not detected above the reported sample quantitation limit The number preceding the U qualifier is the reported sample quantitation limit
J	The analyte/compound was positively identified and the associated numerical value is an estimated concentration of the analyte/compound in the sample For most detected analytes and compounds, the J qualifier is also used to indicate that the reported concentration is below the contract required detection or quantitation limit
UJ	The analyte/compound was not detected above the reported sample quantitation limit The reported quantitation limit, however, is approximate and may or may not represent the actual limit of quantitation necessary to accurately measure the analyte/compound in the sample
B	For unvalidated organic analytical results, this flag indicates that the compound is also found in an associated laboratory QA/QC blank
R	The sample results are rejected during data validation because of serious deficiencies in meeting quality control criteria

APPENDIX D

SUMMARY OF DETECTIONS IN ANALYTICAL RESULTS

Appendix D

Summary of Detections in Analytical Results
Surface Soil - TAL Metals and TCL Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

SampleID	FDEP SCG	51B00101	51B00102	51B00201	51B00202	51B00301	51B00302	51B00401	51B00402	51B00501
Sampling Date	Residential	4/16/97	4/16/97	4/16/97	4/16/97	4/16/97	4/16/97	4/16/97	4/16/97	28-Oct-97
Volatile Organics, ug/kg										
2-Butanone	2,200,000									75
Acetone	260,000								390 J	72 J
Benzene	1,400						1 J			8 J
Carbon tetrachloride	**600**							7 J	**1800**	
Chloroform	**600**							26	**2400**	1 J
Ethylbenzene	1,400,000						38		65 J	69
Methylene chloride	16,000								55 J	
Styrene	4,100,000									4 J
Toluene	520,000						2 J		470 J	31
Trichloroethene	6,500						5 J			14
Xylene (total)	13,000,000						200		380	460
Semivolatile Organics, ug/kg										
2-Methylnaphthalene	960,000					370 J	1800		3600 J	NA
4-Methylphenol	340,000								2400 J	NA
Benzo(a)anthracene	**1400**								**1800** J	NA
Benzo(a)pyrene	**100**								**1100** J	NA
Benzo(b)fluoranthene	**1400**								**1400** J	NA
Benzo(g,h,i)perylene	14,000								650 J	NA
Benzo(k)fluoranthene	14,000								1300 J	NA
bis(2-Ethylhexyl)phthalate	48,000					50 J	70 J	72 J		NA
Chrysene	140,000								3100 J	NA
Fluoranthene	2,900,000								1100 J	NA
Fluorene	2,400,000						59 J		660 J	NA
Naphthalene	1,300,000					130 J	400 J			NA
Phenanthrene	1,700,000						130 J		7700	NA
Phenol	34,000,000								800 J	NA
Pyrene	2,200,000						92 J		14000	NA
Pesticides/PCBs, ug/kg										
4,4'-DDD	4,500			99 J		7 6	10 J	12 J		NA
4,4'-DDE	3,000	1 4 J		1 3 J		2 2 J	0 66 J	18	130 J	NA
4,4'-DDT	3,100			1200		14	16	180	530 J	NA
Aldrin	60						0 19 J			NA
alpha-BHC	**200**								**200**	NA
alpha-Chlordane	800	0 2 J		1 9 J		0 42 J	0 23 J			NA
Dieldrin	70						0 46 J		56 J	NA

Appendix D

Summary of Detections in Analytical Results
Surface Soil - TAL Metals and TCL Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

SampleID	FDEP SCG	51B00101		51B00102		51B00201		51B00202		51B00301		51B00302		51B00401		51B00402		51B00501	
Sampling Date	Residential	4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		28-Oct-97	
Endosulfan I	390,000															77		NA	
Endrin	23,000									1	J	0 65	J					NA	
Endrin aldehyde	23,000									0 56	J							NA	
Endrin ketone	23,000											0 24	J					NA	
gamma-Chlordane	800					1 7	J			0 26	J	0 33	J			10	J	NA	
Heptachlor	200	0 15	J															NA	
Inorganics, mg/kg																			
Aluminum	75,000	44900	J	6340	J	53600	J	8500	J	3920	J	6910	J	3110		3340		NA	
Antimony	26	24 5				32 3										0 95	J	NA	
Arsenic	**0.8**	**1.2**	J	**2.6**		**1.6**	J	**1.1**	J	**1.1**	J	**4.2**						NA	
Barium	5200	79 8		19 5	J	201		25 3	J	15 8	J	54 7		9 1	J	76 1		NA	
Beryllium	**0.2**	**0.26**	J	0 14	J	**0.4**	J	0 13	J	0 12	J	**0.4**	J					NA	
Cadmium	37	7 7	J			16 7	J			2 5	J	0 61	J	1 1	J	16 8		NA	
Calcium	ND	2490		181	J	3790		266	J	142	J	304	J	156	J	127	J	NA	
Chromium	**290**	**365**		12 2		**573**		17		6 2		11 1		6 4		86 6		NA	
Cobalt	4700	3 4	J			4 7	J	0 34	J	0 39	J	0 87	J			0 83	J	NA	
Copper	ND	4680	J	10 1	J	5210	J	22 1	J	2 9	J	2 3	J	11 4		38 5		NA	
Iron	ND	16300	J	11100	J	17700	J	8120	J	4750	J	12700	J	4830	J	2810	J	NA	
Lead	**500**	**727**	J	8 4	J	**542**	J	9 2	J	166	J	13	J	51 4		**1030**		NA	
Magnesium	ND	313	J	237	J	1250		368	J	251	J	783	J	92 7	J	129	J	NA	
Manganese	**370**	**459**	J	2 1	J	**526**	J	3 9	J	2 8	J	2 8	J	3 6	J	6 1		NA	
Mercury	23					1 2				0 13								NA	
Nickel	1,500	174	J	2 7	J	233	J	3 5	J	2	J	2 4	J	1 9	J	3 5	J	NA	
Potassium	ND	82 4	J	122	J	177	J	237	J	106	J	231	J	79 6	J	142	J	NA	
Selenium	390	1 2																NA	
Silver	390	3 5														1 3	J	NA	
Vanadium	490	3 9	J	28 8		6 2	J	19 1		9 6	J	16 8		9 9	J	8 3	J	NA	
Zinc	23,000	476	J	3 4	J	684	J	5 4	J	7 3	J	7 7	J	9 5		121		NA	

Appendix D

Summary of Detections in Analytical Results
Surface Soil - TAL Metals and TCL Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

SampleID	FDEP SCG	51B00502		51B00601		51B00602		51B00701		51B00702		51B00702D		51B00801		51B00802		51B00901	
Sampling Date	Residential	28-Oct-97		28-Oct-97		28-Oct-97		28-Oct-97		28-Oct-97		28-Oct-97		28-Oct-97		28-Oct-97		28-Oct-97	
Volatile Organics, ug/kg																			
2-Butanone	2,200,000																		
Acetone	260,000	200	J	100	J	19	J			23	J	13	J	52	J	86	J	14	J
Benzene	1,400	31		8	J	4	J	2	J			3	J	12	J	32		2	J
Carbon tetrachloride	**600**													6	J				
Chloroform	**600**	4	J	18		10	J					4	J	15	J	28	J		
Ethylbenzene	1,400,000	150		43		21		14		13		16		49		120		30	
Methylene chloride	16,000							33		59		35						50	
Styrene	4,100,000					1	J												
Toluene	520,000	120		6	J									210	J	71			
Trichloroethene	6,500	62		15		6	J	7	J	2	J	8	J	11	J	29	J	3	J
Xylene (total)	13,000,000	860		250		130		110		110		110		280		620		230	
Semivolatile Organics, ug/kg																			
2-Methylnaphthalene	960,000	NA		NA		NA		NA		NA		NA		NA		NA		NA	
4-Methylphenol	340,000	NA		NA		NA		NA		NA		NA		NA		NA		NA	
Benzo(a)anthracene	**1400**	NA		NA		NA		NA		NA		NA		NA		NA		NA	
Benzo(a)pyrene	**100**	NA		NA		NA		NA		NA		NA		NA		NA		NA	
Benzo(b)fluoranthene	**1400**	NA		NA		NA		NA		NA		NA		NA		NA		NA	
Benzo(g,h,i)perylene	14,000	NA		NA		NA		NA		NA		NA		NA		NA		NA	
Benzo(k)fluoranthene	14,000	NA		NA		NA		NA		NA		NA		NA		NA		NA	
bis(2-Ethylhexyl)phthalate	48,000	NA		NA		NA		NA		NA		NA		NA		NA		NA	
Chrysene	140,000	NA		NA		NA		NA		NA		NA		NA		NA		NA	
Fluoranthene	2,900,000	NA		NA		NA		NA		NA		NA		NA		NA		NA	
Fluorene	2,400,000	NA		NA		NA		NA		NA		NA		NA		NA		NA	
Naphthalene	1,300,000	NA		NA		NA		NA		NA		NA		NA		NA		NA	
Phenanthrene	1,700,000	NA		NA		NA		NA		NA		NA		NA		NA		NA	
Phenol	34,000,000	NA		NA		NA		NA		NA		NA		NA		NA		NA	
Pyrene	2,200,000	NA		NA		NA		NA		NA		NA		NA		NA		NA	
Pesticides/PCBs, ug/kg																			
4,4'-DDD	4,500	NA		NA		NA		NA		NA		NA		NA		NA		NA	
4,4'-DDE	3,000	NA		NA		NA		NA		NA		NA		NA		NA		NA	
4,4'-DDT	3,100	NA		NA		NA		NA		NA		NA		NA		NA		NA	
Aldrin	60	NA		NA		NA		NA		NA		NA		NA		NA		NA	
alpha-BHC	**200**	NA		NA		NA		NA		NA		NA		NA		NA		NA	
alpha-Chlordane	800	NA		NA		NA		NA		NA		NA		NA		NA		NA	
Dieldrin	70	NA		NA		NA		NA		NA		NA		NA		NA		NA	

Appendix D

Summary of Detections in Analytical Results
Surface Soil - TAL Metals and TCL Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

SampleID	FDEP SCG	51B00502	51B00601	51B00602	51B00701	51B00702	51B00702D	51B00801	51B00802	51B00901
Sampling Date	Residential	28-Oct-97	28-Oct-97	28-Oct-97	28-Oct-97	28-Oct-97	28-Oct-97	28-Oct-97	28-Oct-97	28-Oct-97
Endosulfan I	390,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	23,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin aldehyde	23,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	23,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	800	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	200	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics, mg/kg										
Aluminum	75,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	26	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	**0.8**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	5200	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	**0.2**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	37	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	**290**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	4700	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	**500**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	**370**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	23	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	1,500	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	390	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	390	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	490	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	23,000	NA	NA	NA	NA	NA	NA	NA	NA	NA

Appendix D

Summary of Detections in Analytical Results
Surface Soil - TAL Metals and TCL Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

SampleID	FDEP SCG	51B00902		51B01001		51B01002	
Sampling Date	Residential	28-Oct-97		28-Oct-97		28-Oct-97	
Volatile Organics, ug/kg							
2-Butanone	2,200,000						
Acetone	260,000	49	J	10	J	60	J
Benzene	1,400	2	J	4	J	8	J
Carbon tetrachloride	**600**						
Chloroform	**600**						
Ethylbenzene	1,400,000	45		50		84	
Methylene chloride	16,000	75		44		28	B
Styrene	4,100,000						
Toluene	520,000	2	J	4	J	7	J
Trichloroethene	6,500	5	J	5	J	6	J
Xylene (total)	13,000,000	360		420		590	
Semivolatile Organics, ug/kg							
2-Methylnaphthalene	960,000	NA		NA		NA	
4-Methylphenol	340,000	NA		NA		NA	
Benzo(a)anthracene	**1400**	NA		NA		NA	
Benzo(a)pyrene	**100**	NA		NA		NA	
Benzo(b)fluoranthene	**1400**	NA		NA		NA	
Benzo(g,h,i)perylene	14,000	NA		NA		NA	
Benzo(k)fluoranthene	14,000	NA		NA		NA	
bis(2-Ethylhexyl)phthalate	48,000	NA		NA		NA	
Chrysene	140,000	NA		NA		NA	
Fluoranthene	2,900,000	NA		NA		NA	
Fluorene	2,400,000	NA		NA		NA	
Naphthalene	1,300,000	NA		NA		NA	
Phenanthrene	1,700,000	NA		NA		NA	
Phenol	34,000,000	NA		NA		NA	
Pyrene	2,200,000	NA		NA		NA	
Pesticides/PCBs, ug/kg							
4,4'-DDD	4,500	NA		NA		NA	
4,4'-DDE	3,000	NA		NA		NA	
4,4'-DDT	3,100	NA		NA		NA	
Aldrin	60	NA		NA		NA	
alpha-BHC	**200**	NA		NA		NA	
alpha-Chlordane	800	NA		NA		NA	
Dieldrin	70	NA		NA		NA	

Appendix D

Summary of Detections in Analytical Results
Surface Soil - TAL Metals and TCL Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

SampleID	FDEP SCG	51B00902	51B01001	51B01002
Sampling Date	Residential	28-Oct-97	28-Oct-97	28-Oct-97
Endosulfan I	390,000	NA	NA	NA
Endrin	23,000	NA	NA	NA
Endrin aldehyde	23,000	NA	NA	NA
Endrin ketone	23,000	NA	NA	NA
gamma-Chlordane	800	NA	NA	NA
Heptachlor	200	NA	NA	NA
Inorganics, mg/kg				
Aluminum	75,000	NA	NA	NA
Antimony	26	NA	NA	NA
Arsenic	**0.8**	NA	NA	NA
Barium	5200	NA	NA	NA
Beryllium	**0.2**	NA	NA	NA
Cadmium	37	NA	NA	NA
Calcium	ND	NA	NA	NA
Chromium	**290**	NA	NA	NA
Cobalt	4700	NA	NA	NA
Copper	ND	NA	NA	NA
Iron	ND	NA	NA	NA
Lead	**500**	NA	NA	NA
Magnesium	ND	NA	NA	NA
Manganese	**370**	NA	NA	NA
Mercury	23	NA	NA	NA
Nickel	1,500	NA	NA	NA
Potassium	ND	NA	NA	NA
Selenium	390	NA	NA	NA
Silver	390	NA	NA	NA
Vanadium	490	NA	NA	NA
Zinc	23,000	NA	NA	NA

Appendix D

Notes to Summary of Detections in Analytical Results
Surface Soil - TAL Metals and TCL Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

NOTES:

SCG = Soil Cleanup Goals for Florida (Florida Department of Environmental Protection memorandum, September 29, 1995)
Chromium values are for Chromium VI Arsenic values are from a carcinogenic pathway and as revised per FDEP memorandum dated January 19, 1996
ND = Not determined
mg/kg = milligrams per kilogram
ug/kg = micrograms per kilogram
J = Reported concentration is an estimated quantity
All inorganics results expressed in milligrams per kilogram (mg/kg) soil dry weight, organics in micrograms per kilogram (ug/kg) soil dry weight
Bold/shaded values indicate exceedance of FDEP residential soil cleanup goal
Blank space indicates analyte/compound was not detected at the reporting limit

Appendix D

Summary of Detections in Analytical Results
Subsurface Soil - TAL Metals and TCL Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

SampleID	FDEP SCG (leaching)	51B00103		51B00104		51B00203		51B00204		51B00303		51B00304		51B00403	
Sampling Date		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97	
Volatile Organics, ug/kg															
Acetone	NA	81	J												
Carbon tetrachloride	NA													89000	
Chloroform	NA													14000	
Ethylbenzene	NA									11	J	18		2300	J
Toluene	NA									1	J	2	J	12000	J
Trichloroethene	10									2	J	2	J		
Xylene (total)	NA									64		110		13000	
Semivolatile Organics, ug/kg															
2,4-Dimethylphenol	NA													840	J
2-Methylnaphthalene	NA											870		8000	J
2-Methylphenol	NA													730	J
4-Methylphenol	NA													5300	
Acenaphthene	NA													390	J
Anthracene	NA													450	J
Benzo(a)anthracene	NA													1200	J
Benzo(a)pyrene	NA													290	J
Benzo(b)fluoranthene	NA													570	J
Benzo(k)fluoranthene	NA													610	J
bis(2-Ethylhexyl)phthalate	NA			48	J			57	J	140	J	71	J		
Chrysene	NA													1800	J
Di-n-butylphthalate	NA													430	J
Dibenzofuran	NA													730	J
Fluoranthene	NA													1000	J
Fluorene	NA													740	J
Naphthalene	100											**290**	J	**1100**	J
Phenanthrene	NA											44	J	12000	
Phenol	NA													1500	J
Pyrene	NA													7800	
Pesticides/PCBs, ug/kg															
4,4'-DDD	NA							0 32	J	5 6	J	3 7	J	28	J
4,4'-DDE	NA			0 74	J	0 72	J	0 65	J	1 3	J	0 4	J	13	J
4,4'-DDT	NA					9 4		7 9	J	64				840	
Aldrin	NA									0 09	J				
alpha-BHC	NA													4 2	J
alpha-Chlordane	NA					0 26	J			0 27	J				

Appendix D

Summary of Detections in Analytical Results
Subsurface Soil - TAL Metals and TCL Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

SampleID	FDEP SCG (leaching)	51B00103		51B00104		51B00203		51B00204		51B00303		51B00304		51B00403	
Sampling Date		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97		4/16/97	
delta-BHC	NA													0 41	J
Dieldrin	NA									0 28	J				
Endosulfan sulfate	NA													35	J
Endrin	NA									0 15	J	0 2	J		
Endrin ketone	NA													19	J
gamma-Chlordane	NA					0 16	J	0 15	J	0 37	J	0 13	J	8	J
Heptachlor	NA									0 22	J				
Inorganics, mg/kg															
Aluminum	NC	9630	J	8900	J	9930	J	11600	J	5780	J	4400		3370	
Arsenic	NC	2 5		1 8	J			1	J	5 1					
Barium	NC	28 8	J	34 9	J	25 3	J	54		43 2	J	43 3	J	31 9	J
Beryllium	NC	0 23	J	0 31	J	0 17	J	0 23	J	0 44	J				
Cadmium	NC													8 8	
Calcium	NC	145	J	169	J	185	J	266	J	391	J	414	J	155	J
Chromium	NC	17 4		14 1		12 9		14 3		8 2		5 4		24 4	
Cobalt	NC	0 53	J	0 45	J	0 6	J	0 7	J	0 84	J	0 75	J	0 59	J
Copper	NC	16 1	J	3	J	6	J	2 9	J	2	J	0 97	J	8 9	
Iron	NC	16700	J	22800	J	2850	J	2440	J	16800	J	4720	J	4020	J
Lead	NC	10 6	J	10 6	J	9 2	J	18	J	8 7	J	6 7		423	
Magnesium	NC	635	J	691	J	482	J	624	J	900	J	803	J	122	J
Manganese	NC	4 7	J	2 8	J	4 9	J	5	J	2 6	J	1 4	J	4	
Nickel	NC	1 9	J	2 6	J	3	J	4 1	J	2	J	1 2	J	2 3	J
Potassium	NC	249	J	270	J	293	J	293	J	210	J	120	J	145	J
Silver	NC													1 6	J
Sodium	NC	19 8		16 3		9 9	J	9 2	J	12 6		7 6	J	10 8	J
Zinc	NC	5	J	3 8	J	5 9	J	6 3	J	5 2	J	4	J	67 4	

Appendix D

Notes to Summary of Detections in Analytical Results
Subsurface Soil - TAL Metals and TCL Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

NOTES:

SCG = Soil Cleanup Goals for Florida (Florida Department of Environmental Protection memorandum, September 29, 1995)
For subsurface soils (below 2 feet), leachability-based cleanup goals are not applicable (NA) when there is no exceedance of groundwater guidance concentrations
SCGs for metals are not calculated by FDEP
NA = Not applicable
NC = Not calculated
ND = Not determined
mg/kg = milligrams per kilogram
ug/kg = micrograms per kilogram
J = Reported concentration is an estimated quantity
All inorganics results expressed in milligrams per kilogram (mg/kg) soil dry weight,
organics in micrograms per kilogram (ug/kg) soil dry weight
Blank space indicates analyte/compound was not detected at the reporting limit
Bold/shaded values indicate exceedance of FDEP soil cleanup goal, leaching criteria

Appendix D

Summary of Detections in Analytical Results
Groundwater - TAL Metals and TCL Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

Identifier	FDEPGGC		FEDMCL		51G00101		51G00201		51G00401		51G00501		51G00601		51G00701		51Q00101		51Q00102		51Q00201		51Q0	
Sampling Date					8-Apr-97		8-Apr-97		21-Apr-97		6-Aug-97		6-Aug-97		6-Aug-97		3-Sep-97		3-Sep-97		4-Sep-97		4-Se	
Volatile Organics, ug/L																								
1,1-Dichloroethene	7	p	7	p					1	J	2	J	3	J										
1,2-Dichloroethene (Total)	**70**	p*	**70**	p					**81**		37		**120**		2	J								
Acetone	700	st	ND		4	J																		
Benzene	**1**	p	**5**	p					**130**		**34**		**240**		**4**	J	**48**		**40**		**7.9**		**13**	
Carbon disulfide	700	st	ND																					
Ethylbenzene	700	p	700	p					17				83											
Toluene	1000	p	1000	p					2	J			280											
Trichloroethene	**3**	p	**5**	p					1	J	**23**		**17**		**14**								**3.1**	
Vinyl chloride	**1**	p	**2**	p									**10**	J			**18**		**13**		**12**		**1.8**	
Xylene (total)	10000	p	10000	p					33				410											
Semivolatile Organics, ug/L																								
2,4-Dimethylphenol	400	o	ND						2	J	NA		NA		NA		NA		NA		NA		NA	
2-Methylnaphthalene	ND		ND						17		NA		NA		NA		NA		NA		NA		NA	
Naphthalene	**6.8**	o	ND						**26**		NA		NA		NA		NA		NA		NA		NA	
Phenol	10	t	ND						2	J	NA		NA		NA		NA		NA		NA		NA	
Pesticides, ug/L																								
Endosulfan I	0 35	st	ND						0 0049	J	NA		NA		NA		NA		NA		NA		NA	
Gamma-BHC (Lindane)	0 2	p	0 2	p					0 03	J	NA		NA		NA		NA		NA		NA		NA	
Inorganics, ug/L																								
Aluminum	**200**	s	**200**	s					**548**		NA		NA		NA		NA		NA		NA		NA	
Antimony	6	p	6	p	5 1	J					NA		NA		NA		NA		NA		NA		NA	
Arsenic	50	p	50	p					7 2	J	NA		NA		NA		NA		NA		NA		NA	
Barium	2000	p	2000	p	87 6	J	119	J	56 5	J	NA		NA		NA		NA		NA		NA		NA	
Calcium	ND		ND		6760		2490	J	2140	J	NA		NA		NA		NA		NA		NA		NA	
Chromium	100	p	100	p	1 5	J					NA		NA		NA		NA		NA		NA		NA	
Cobalt	ND		ND		1 8	J	3	J			NA		NA		NA		NA		NA		NA		NA	
Copper	1000	s	1000	s	7 1	J	11 8	J	6	J	NA		NA		NA		NA		NA		NA		NA	
Iron	**300**	s	**300**	s	**687**		**1310**		**7350**		NA		NA		NA		NA		NA		NA		NA	
Lead	15	a	15	a	2 2	J					NA		NA		NA		NA		NA		NA		NA	
Magnesium	ND		ND		2480	J	3310	J	3320	J	NA		NA		NA		NA		NA		NA		NA	
Manganese	**50**	s	**50**	s	45 4		**81.5**		**72**		NA		NA		NA		NA		NA		NA		NA	
Mercury	2	p	2	p			0 12	J			NA		NA		NA		NA		NA		NA		NA	
Nickel	100	p	100	p	7 4	J	12	J	3 4	J	NA		NA		NA		NA		NA		NA		NA	
Potassium	ND		ND		669	J	1310	J	405	J	NA		NA		NA		NA		NA		NA		NA	
Sodium	160000	p	ND		8290		5360		14100	J	NA		NA		NA		NA		NA		NA		NA	
Vanadium	49	st	ND		1 8	J					NA		NA		NA		NA		NA		NA		NA	
Zinc	5000	s	5000	s	15 2	J	34 7		4 3	J	NA		NA		NA		NA		NA		NA		NA	

Appendix D

Summary of Detections in Analytical Results
Groundwater - TAL Metals and TCL Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

Identifier	FDEPGGC		FEDMCL		02	51Q00301		51Q00302		51Q00501		51Q00601		51Q00701		51Q00702		51Q00801		51Q00901		51Q01101	
Sampling Date					97	4-Sep-97		4-Sep-97		5-Sep-97		9-Sep-97		9-Sep-97		9-Sep-97		12-Sep-97		29-Sep-97		1-Oct-97	
Volatile Organics, ug/L																							
1,1-Dichloroethene	7	p	7	p		1 3	I																
1,2-Dichloroethene (Total)	**70**	p*	**70**	p																			
Acetone	700	st	ND																				
Benzene	**1**	p	**5**	p		**12**		**10**		**13**		**2**		**5**		**25**		**28**		**9.4**			
Carbon disulfide	700	st	ND																			9 9	
Ethylbenzene	700	p	700	p												3		4					
Toluene	1000	p	1000	p												1	J	1	J				
Trichloroethene	**3**	p	**5**	p		**8**		2 2						2						**11**			
Vinyl chloride	**1**	p	**2**	p	J					**5**		**4**		**5**		**4**		**4**					
Xylene (total)	10000	p	10000	p												14		15					
Semivolatile Organics, ug/L																							
2,4-Dimethylphenol	400	o	ND			NA		NA		NA		NA		NA		NA		NA		NA		NA	
2-Methylnaphthalene	ND		ND			NA		NA		NA		NA		NA		NA		NA		NA		NA	
Naphthalene	**6.8**	o	ND			NA		NA		NA		NA		NA		NA		NA		NA		NA	
Phenol	10	t	ND			NA		NA		NA		NA		NA		NA		NA		NA		NA	
Pesticides, ug/L																							
Endosulfan I	0 35	st	ND			NA		NA		NA		NA		NA		NA		NA		NA		NA	
Gamma-BHC (Lindane)	0 2	p	0 2	p		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Inorganics, ug/L																							
Aluminum	**200**	s	**200**	s		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Antimony	6	p	6	p		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Arsenic	50	p	50	p		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Barium	2000	p	2000	p		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Calcium	ND		ND			NA		NA		NA		NA		NA		NA		NA		NA		NA	
Chromium	100	p	100	p		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Cobalt	ND		ND			NA		NA		NA		NA		NA		NA		NA		NA		NA	
Copper	1000	s	1000	s		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Iron	**300**	s	**300**	s		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Lead	15	a	15	a		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Magnesium	ND		ND			NA		NA		NA		NA		NA		NA		NA		NA		NA	
Manganese	**50**	s	**50**	s		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Mercury	2	p	2	p		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Nickel	100	p	100	p		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Potassium	ND		ND			NA		NA		NA		NA		NA		NA		NA		NA		NA	
Sodium	160000	p	ND			NA		NA		NA		NA		NA		NA		NA		NA		NA	
Vanadium	49	st	ND			NA		NA		NA		NA		NA		NA		NA		NA		NA	
Zinc	5000	s	5000	s		NA		NA		NA		NA		NA		NA		NA		NA		NA	

Appendix D

Notes to Summary of Detections in Analytical Results
Groundwater - TAL Metals and TCL Organics
PSC 51

Naval Air Station, Jacksonville
Jacksonville, FL

NOTES:
Analytical results for Terraprobe (DPT) samples are screening data not subjected to full independent data validation

FDEPGGC = Florida Department of Environmental Protection, Groundwater Guidance Concentrations, June 1994
FEDMCL= Federal Maximum Contaminant Levels, Primary Drinking Water Regulations and Health Advisories, February 1996
For DPT samples (identifier with Q designation), values shown for total dichloroethene and total xylenes are summed from their respective isomers
J = Reported concentration is an estimated quantity

p = primary standard
s = secondary standard
st = systemic toxicant
c = carcinogen
o = organoleptic
a = Concentration is an action level
* = Concentration indicated is for cis-1,2-Dichloroethene
ND = Not determined
NA = Not Analyzed
ug/l = micrograms per liter
Bold/shaded numbers indicate exceedance of groundwater guidance concentration