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CONTAMINATION ASSESSMENT OF BUILDING 795, THE ADDITION NAVAL AIR STATION-JACKSONVILLE, JACKSONVILLE, FLORIDA

Prepared for

NAVAL FACILITIES ENGINEERING COMMAND
SOUTHERN DIVISION
Charleston, South Carolina

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PREFACE

This report represents the results of a contamination study conducted at the site of a planned addition to Building 795, Fuel Accessories Overhaul Shop, Naval Air Station - Jacksonville, Jacksonville, Florida.

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This is to certify that this report has been prepared by the undersigned or by individuals under their direct supervision. The information contained herein is true, correct and complete to the best of their knowledge and belief.

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1.0 EXECUTIVE SUMMARY

In March 1988, Geraghty & Miller, Inc., (G&M) was retained by the Naval Facilities Engineering Command, Southern Division (Navy) to conduct a soil and ground-water investigation at the proposed construction site of an addition to the Fuel Accessories Overhaul Shop (FAOS) at the Naval Air Station in Jacksonville, Florida. The investigation was initiated because of the FAOS's proximity to Site 15-Naval Air Depot, an inactive solvent and paint sludge disposal area.

The scope of the investigation included the installation of a temporary monitor well, collection of soil and ground-water samples, and the measurement of water levels. The data collected during the investigation was used to determine if contaminant-related constraints existed for construction of the FAOS addition.

On March 14, 1988, Geraghty & Miller personnel installed temporary monitor well WP-1 to a depth of 15 feet below land surface (bls). The ground water was analyzed for the Environmental Protection Agency's (EPA) list of priority pollutants and amenable cyanide. No organic constituents and only low levels of inorganic constituents were detected in the smaple from WP-1.

Soil samples from six shallow borings were analyzed for total cyanide, sulfide, and Extraction Procedure toxicity for metals. Also, selected samples were analyzed for polychlorinated biphenyls, EPA's priority pollutants list (excluding cyanide), and for Toxic Characteristic Leaching Procedure (TCLP) constituents.

Low concentrations of two pesticides, dieldrin and 4,4-DDT were detected in only the 1 to 5 ft bls interval of

soil boring SB-4. Low concentrations (0.15 to 13 parts per million of metals were detected in the 1 to 5 ft bls interval of three soil borings. None of the EP toxicity tests for metals showed concentration limits above the maximum contaminant levels.

Based on data collected during this investigation and the previous NACIP investigations, the surficial aquifer beneath the FAOS addition is unconfined and the water table occurs from 3 to 8 feet below land surface. The horizontal ground-water flow direction in the surficial aquifer is generally to the northeast, indicating FAOS addition is hydraulically upgradient of Site 15.

The findings of the investigation indicate no gross contamination is present at the proposed construction site compared to that previously identified at Site 15. No contaminated-related constraints exist for construction of the FAOS addition.

2.0 INTRODUCTION

In March 1988, Geraghty & Miller, Inc., (G&M) was retained by the Naval Facilities Engineering Command, Southern Division (Navy) to conduct a soil and ground-water investigation at the Naval Air Station-Jacksonville (NAS), Jacksonville, Florida. The area of investigation is the future construction site for an addition to the Fuel Accessories Overhaul Shop (FAOS) housed in Building 795 (Figure 1). The FAOS was constructed in 1971. Repairs to J-52 engine fuel accessories are conducted in the building. The addition will serve as an overhaul area for F-18 fighter engine fuel accessories. The Navy initiated this study because of the proximity of known soil and ground-water contamination at Site 15-Naval Air Depot (NADEP). Site 15 was designated during the Initial Assessment Study (IAS) of

NAS-Jacksonville conducted under the Naval Assessment and Control of Installation Pollutants (NACIP) program. The concern was that if contamination at the site existed, there might be possible constraints on construction activities (excavation, dewatering, etc.). Therefore, this investigation was developed to determine the presence or absence of subsurface contamination at the site and, if any, to characterize the type and extent of contamination. The following report presents background information relevant to the study area, the work performed, and the findings of the investigation.

3.0 BACKGROUND

Site 15, the inactive Solvent and Paint Sludge Disposal Area, encompasses an area approximately 100 feet by 100 feet (Hart and Associates, 1983) and is located to the northeast of Building 970 (formerly an electrical substation) and east of the proposed construction site. As recently as 1978, the area was used for disposal of solvents and paint sludges. The study area is about 50 feet to the west of Site 15 (Figure 1).

Previous work at Site 15 was conducted under the NACIP program. This program was designed to identify, assess, and control contamination of Navy lands resulting from the past hazardous materials operations and to institute corrective measures as needed.

During the NACIP Initial Assessment Study, Site 15 was identified as a potential contamination site. It was estimated that as much as 2,000 gallons of solvents and paint sludges were disposed of annually at this site for approximately 36 years (Hart and Associates, 1983). Analyses of soil samples taken from Site 15 showed the presence of

several types of solvents. Based on the findings during the IAS, Site 15 was recommended for additional work under NACIP.

During the Verification Study, G&M installed monitor well JAX-15-B-1 at Site 15. Analyses of ground-water samples detected relatively high concentrations of several volatile organic compounds (VOCs) in excess of the detection limit of 100 ppb (parts per billion). In addition, three soil samples were collected near Site 15 and analyzed for Extraction Procedure (EP) Toxicity including the eight primary drinking-water metals and nickel. The results showed that the concentrations in the soil were not classified as a hazardous waste as defined by 40 Code of Federal Regulations (CFR) 261.24.

Based on findings from the Verification Study, three shallow monitor wells and one deep monitor well were installed near Site 15 during the Characterization phase. Ground-water samples collected from the four new wells were analyzed for VOCs, and samples from two wells, JAX-15-D-2 and JAX-15-B-1, were analyzed for EPA's list of priority pollutants. Results of the analyses showed that ground water sampled from monitor wells JAX-15-9, -10, -11, and -D-2 contained concentrations of total VOCs (the sum of all VOCs analyzed) ranging from 4 to 17.4 ppb. Higher concentrations of total VOC's (greater than 13,400 ppb) were detected in well JAX-15-B-1 (Table 1). Figure 2 shows the locations of the above- mentioned wells; Table 2 lists the construction details of the wells installed during the NACIP studies.

4.0 SITE HYDROGEOLOGY

The uppermost soils to a depth of 50± underlying NAS generally consists of unconsolidated deposits of Pleistocene and Holocene marine sands, coquina, shell, and sandy clay lenses. Within these sediments occurs the surficial aquifer

which ranges from 10 to 30 feet in thickness. Ground water in the surficial aquifer is unconfined and the water table occurs at depths from 3 to 8 feet below land surface (bls). Recharge to the surficial aquifer is by infiltration of precipitation. Based on data previously collected at Site 15, the horizontal ground-water flow direction is generally to the northeast (Figure 2).

5.0 WORK PERFORMED

The investigation consisted of: (1) installation of a temporary monitor well at the construction site to assess the quality of the shallow ground water, (2) collection of soil samples for chemical analysis, and (3) the measurement of ground-water levels from the monitor wells at Site 15 to verify the direction of ground-water flow determined during the NACIP investigations.

5.1 WATER-LEVEL MEASUREMENTS

On March 14, 1988, water-levels were measured in monitor wells JAX-15-9, -10, -11, -D-2, and -B-1 (Table 3). Based on these measurements, Figure 2 shows the water-table contours near the site and the ground-water flow direction to be northeast with a gradient of about 0.002 to 0.004 feet per feet. Therefore, the construction site is upgradient from Site 15.

5.2 WELL INSTALLATION

On March 14, 1988, a temporary monitor well WP-1 was installed in the surficial aquifer. The location for the well was selected because it was near the deepest planned excavation at the FAOS addition (duplex grinder pumping station) and because of its position between the construction site and Site 15. An 8-inch-inside-diameter borehole was

drilled to 16 feet bls using a hollow stem auger, during which split-spoon soil samples were collected and described. Next, a 2-inch diameter PVC well, screened from 5 to 15 feet bls, was installed in the borehole. The well was developed by pumping until a sediment-free discharge was obtained. Appendix A contains the well-construction diagram of the temporary monitor well.

5.3 GROUND-WATER SAMPLING AND ANALYSIS

Ground-water samples were collected from well WP-1 about 12 hours after installation. Three well-casing volumes of water were removed from the well prior to sample collection using a peristaltic pump with Teflon™ tubing. The ground-water samples were collected with a Teflon bailer for analysis of organic compounds and a peristaltic pump with Teflon™ tubing for analysis of inorganic compounds. The pH, temperature and specific conductance of the water were measured prior to sample collection. The pH and specific conductance meters were calibrated with standard solutions before measurements were taken. Water samples were placed in appropriate containers and preserved with ice for analysis. Samples for metals were preserved with nitric acid and also cooled with ice. The sampling equipment was thoroughly cleaned with MICRO™ laboratory cleaning soap and a distilled water rinse prior to sampling.

5.4 SOIL SAMPLING

Soil samples were collected from six locations (SB-1 through SB-6) drilled at the proposed construction site (Figure 2). Figure 3 is a fence diagram of the sediments; Appendix B contains the lithologic descriptions of the soil samples. Several soil samples were collected from 0 to 1 feet bls, and from 1 to 5 feet bls from each location. At the deeper boring (SB-1), samples also were collected from

the following intervals: 5 to 9 ft bls, 10 to 14 ft bls, and 14 to 16 ft bls.

Soil samples were collected using a split-spoon sampler. Samples were removed from the spoons with a plastic spatula and composited in a stainless-steel bowl before they were placed in standard 32 glass laboratory jars. At each sampling location, four closely-spaced borings were advanced with a split-spoon sampler to collect samples from 0 to 1 feet. These samples were then composited into a single soil sample. Also, at each of the sampling locations, samples were collected from two borings from 1 to 5 feet bls and composited into a single sample. The compositing procedure was necessary to ensure a sufficient amount of sample would be collected for analysis. The sampling equipment was thoroughly cleaned with MICRO™ laboratory soap and a distilled water rinse before sampling to prevent cross-contamination.

5.5 ANALYSES OF GROUND-WATER AND SOIL

Upon completion of sampling, the water and soil samples were sent for analyses via overnight express courier service to Pioneer Laboratory of Pensacola, Florida. The water sample was analyzed for the EPA priority pollutants list (metals, VOCs, acid/base/neutral extractable compounds, pesticides, and amenable cyanide.

All of the soil samples were analyzed for total cyanide, sulfide, and EP toxicity for metals. Soil samples from the 0-1 ft intervals of SB-5 and SB-6 were analyzed for polychlorinated biphenyls (PCBs). In addition, selected soil samples from three soil borings (SB-1, SB-3, and SB-4) were analyzed for the EPA priority pollutants list (excluding cyanide), and for TCLP (Toxic Characteristic Leaching

Procedure) constituents. Table 4 lists the analytical scheme for soils collected from the site.

6.0 RESULTS OF ANALYSES

6.1 GROUND WATER

Sample analytes, analytical methods, and laboratory report sheets of ground-water analyses are contained in Appendix C. No organic constituents were detected by the analysis of ground water from well WP-1. Of the inorganic constituents analyzed, only a low concentration of zinc was detected at 0.09 ppm (parts per million), which is significantly below the Florida Secondary Drinking Water Standard of 5.0 ppm.

6.2 SOIL

The results of the analyses of the soil samples are summarized in Table 5. Sample analytes, analytical methods, and laboratory report sheets are contained in Appendix D. No organic compounds from the EPA priority pollutants or TCLP analyses were detected exceptfor dieldrin (6.8 ppb [parts per billion] and 4,4-DDT [2.9 ppb]) in the 1 to 5 ft bls soil sample from boring SB-4.

Of the inorganic constituents analyzed, low concentrations of several metals (chromium, mercury, zinc, copper, and lead) from the interval of 1 to 5 ft bls in borings SB-1, SB-3, and SB-4, were quantified above analytical detection limits using priority pollutant analytical methods. However, none of the EP Toxicity or TCLP test results for metals showed concentrations of metals above the maximum contaminant levels. Furthermore, no cyanide or sulfide was detected in any of the samples.

7.0 FINDINGS

- Soil borings indicate silty sand, clay, and sand to a depth of approximately 18 ft bls. A 9.5-ft thick clay layer was encountered in boring SB-1 from 2.5 to 12.0 ft bls. The clay layer is underlain by fine-grained sand.

- Ground-water flow at the site is generally northeast; therefore, the proposed construction site is hydraulically upgradient from Site 15.

- Analysis of ground water sampled from temporary monitor well WP-1 has not been impacted at that location due to Site 15.

- Except for low concentrations of several metals and two pesticide compounds, no gross soil contamination exists in the soils at the proposed construction.

8.0 CONCLUSIONS

Based on the comprehensive sampling and analyses program of ground water and soil, no gross contamination is present at the proposed construction site compared to that previously identified at Site 15. The data collected indicates no constraints beyond standard accepted construction safety practices due to contamination exist for workers at the site. Also, the data indicates soil and ground-water removal can be accomplished by conventional, accepted practices with no constraints due to contamination.

9.0 REFERENCES

Geraghty & Miller, Inc., 1986, Characterization Phase, Assessment of Ground-water Contamination at Naval Air Station Jacksonville, Florida: Prepared for Department of the Navy, Southern Division, Naval Facilities Engineering Command.

Geraghty & Miller, Inc., 1985, Verification Phase, Assessment of Potential Ground-water Pollution at Naval Air Station-Jacksonville, Florida: Prepared for Department of the Navy, Southern Division, Naval Facilities Engineering Command.

Hart, Fred C., and Associates, 1983, Initial Assessment Study of Naval Air Station and Naval Fuel Depot Jacksonville, Florida. Prepared for Department of the Navy, Southern Division, Naval Facilities Engineering Command.

Table 1. Compounds Detected in Ground Water at Site 15
During the Characterization and Verification Studies
(all concentrations in parts per billion)

Compound	Monitor-Well Designations				
	JAX-15-1 (NARF B-1)	JAX-15-D-2 (D-2)	JAX-15-9 (9)	JAX-15-10 (10)	JAX-15-11 (11)
			Verification Phase		
Date Sampled:	9-10-83	NI	NI	NI	NI
Analysis Performed:	EPA 624				
1,1-Dichloroethene	53,500	--	--	--	--
trans-1,2-Dichloroethene	8,300	--	--	--	--
1,1,1-Trichloroethane	25,500	--	--	--	--
Trichloroethene	155,300	--	--	--	--
Tetrachloroethene	480	--	--	--	--
			Characterization Phase		
Date Sampled:	4-2-85	4-2-85	4-2-85	4-3-85	4-2-85
Analyses Performed:	EPA 624, 625, and PP Metals[a/]	EPA 624, 625, and PP Metals	EPA 624	EPA 624	EPA 624
Toluene	11	35	BDL	BDL	7
1,1,1-Trichloroethane	6,550	2	BDL	BDL	BDL
Carbon Tetrachloride	2	2	BDL	BDL	BDL
Bromodichloromethane	4	BDL	2	BDL	2.5
Trichloroethane	<6,680	3	BDL	9.6	BDL
1,1,2-Trichloroethane	170	BDL	BDL	BDL	BDL
Cis-1,3-Dichloropropene	6	BDL	BDL	BDL	BDL
Ethyl Benzene	4	BDL	BDL	BDL	BDL
Chlorofoam	BDL	BDL	2	BDL	2
1,2-Dichloroethene	BDL	BDL	BDL	1.3	BDL
1,2-Dichloroethane	BDL	BDL	BDL	5.5	BDL

a/ EPA Methods 624 and 625 according to Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, EPA 600/4-82-057, July 1982
NI = Not installed
BDL = Below laboratory detection limit
EPA = Environmental Protection Agency
PP Metals = Priority pollutant metals (silver, arsenic, beryllium, cadmium, chromium, copper, mercury, nickel, lead, antimony, selenium, thallium, and zinc)

Table 2. Permanent Monitor-Well Construction Details

	Monitor-Well Designations				
	JAx-15-B-1 (B-1)[1/]	JAX-15-D-2 (D-2)	JAX-15-9 (9)	JAX-15-10 (10)	JAX-15-11 (11)
Study under which well was installed	Characterization	Verification	Verification	Verification	Verification
Date Installed (month/year)	8/83	3/85	3/85	3/85	3/85
Depth of Screen Setting (ft msl)	-3.6 to -6.6	-41.2 to -51.2	-3.80 to -8.8	-1.3 to -6.3	-2.7 to -7.7
(ft bls)	13 to 16	51 to 61	19 to 24	11 to 16	19 to 24
Land Surface Elevation (ft msl)	9.4	9.8	15.2	9.7	16.3
Measuring Point Elevation (ft msl)	11.60	10.50	17.33	10.62	18.33

1/ First designation is the Naval Installation Restoration Program (NIRP) designation; designation in parenthesis is the NACIP designation

ft msl = ft above to mean sea level

ft bls = ft below land surface

Table 3. Ground-Water Elevations in Monitor Wells on March 14, 1988

	Monitor-Well Designations				
	JAX-15-B-1 (B-1)[1/]	JAX-15-D-2 (D-2)	JAX-15-9 (9)	JAX-15-10 (10)	JAX-15-11 (11)
Measuring Point Elevation (ft msl)	11.60	10.50	17.33	10.62	18.33
Depth to Water Below Measuring Point (ft)	9.72	8.61	14.72	8.65	15.82
Water Table Elevation (ft msl)	1.88	1.89	2.61	1.97	2.51

1/ First designation is the Naval Installation Restoration Program (NIRP) designation; designation in parenthesis is the Naval Assessment and Control of Pollutants (NACIP) designation.
ft msl = feet above mean sea level

Table 4. Summary of Analyses of Soil Samples

Boring/Sampling Number/Interval ft, bls		Total Cyanide	Sulfide	PCBs[a/]	EP Toxicity Metals[b/]	TCLP[c/]	Priority Pollutants
SB-1	0-1	X	X		X		
	1-5	X	X		X	X	X
	5-9	X	X		X		
	10-14	X	X		X		
	14-16	X	X		X		
SB-2	0-1	X	X		X		
	1-5	X	X		X		
SB-3	0-1	X	X		X		
	1-5	X	X		X	X	X
SB-4	0-1	X	X		X		
	1-5	X	X		X	X	X
SB-5	0-1	X	X	X	X		
	1-5	X	X		X		
SB-6	0-1	X	X	X	X		
	1-5	X	X		X		
SB-6	1-5[d/]				X		

a/ Polychlorinated Biphenyls
b/ Extraction Procedure Toxicity for metals as defined by 40 Code of Federal Regulation 261.24
c/ Toxic Characteristic Leaching Procedure (Federal Register, Vol. 51, No. 114, Friday, June 13, 1986)
d/ Duplicate sample

Table 5. Constituents Detected in Soil Samples
(all results in parts per million [ppm]
except where noted)

	Detection Limits	SB-1	SB-3	SB-4
Sampling Inteval ft, bls		1 - 5	1 - 5	1 - 5
Parameter Group		Priority Pollutants	Priority Pollutants	Priority Pollutants
Mercury (7421)[a/]	0.02	0.35	BDL	0.15
Chromium (7190)	1	8	2	2
Copper (7210)	1	7	3	BDL
Lead (7420)	5	13	8	6
Zinc (7950)	1	4	3	4
Dieldrin (8080)(ppb)	2.5	BDL	BDL	6.8
4,4-DDT (8080) (ppb)	2.5	BDL	BDL	2.9

a/ Methods according to Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW-846; Third Edition, November 1986
ppb = parts per billion
BDL = below detectable laboratory limits

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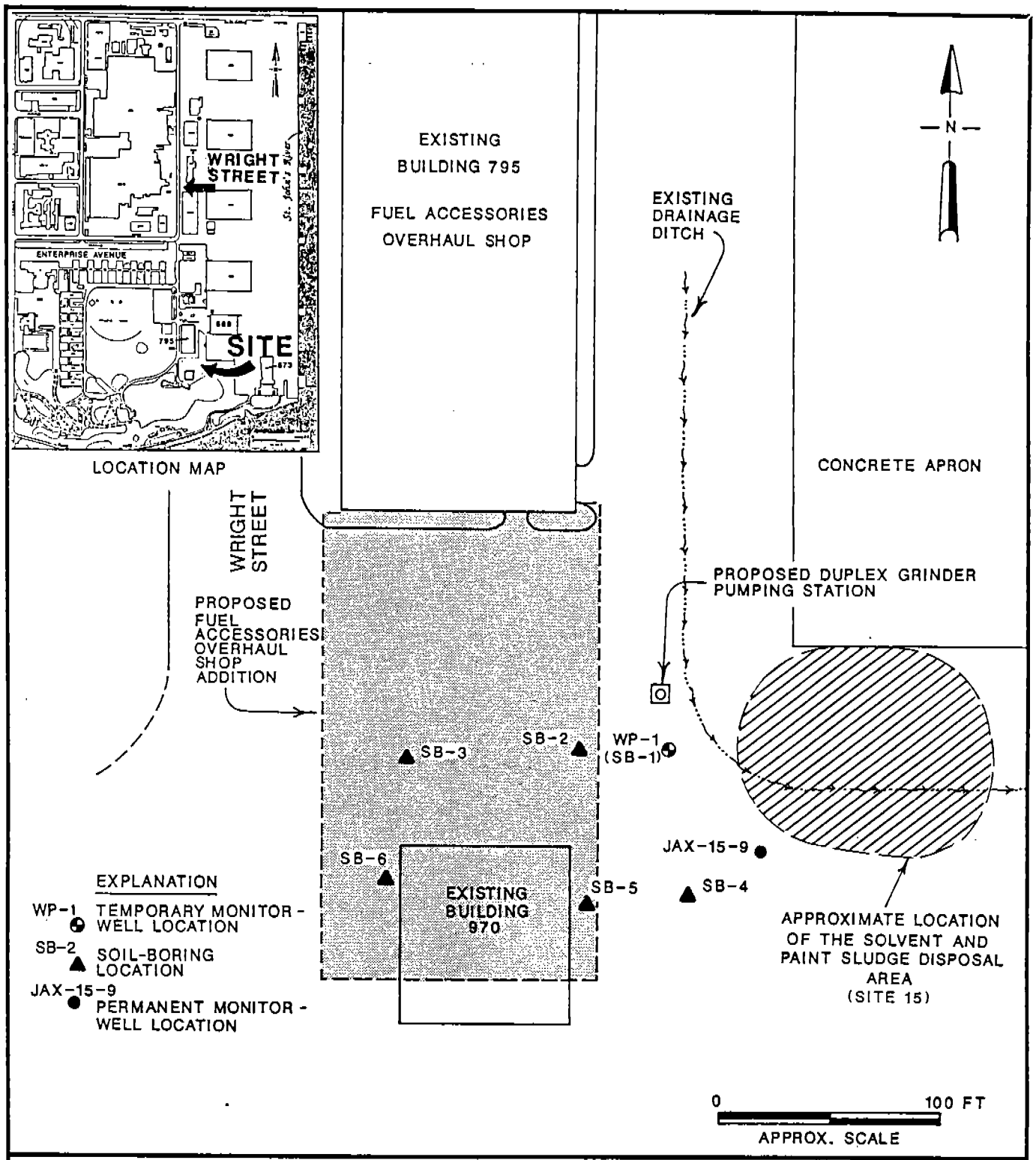


Figure 1. Locations of Proposed Construction Site and Site 15 Contamination Assessment of Building 795, The Addition Naval Air Station - Jacksonville, Jacksonville, Florida
Southern Division Naval Facilities Engineering Command

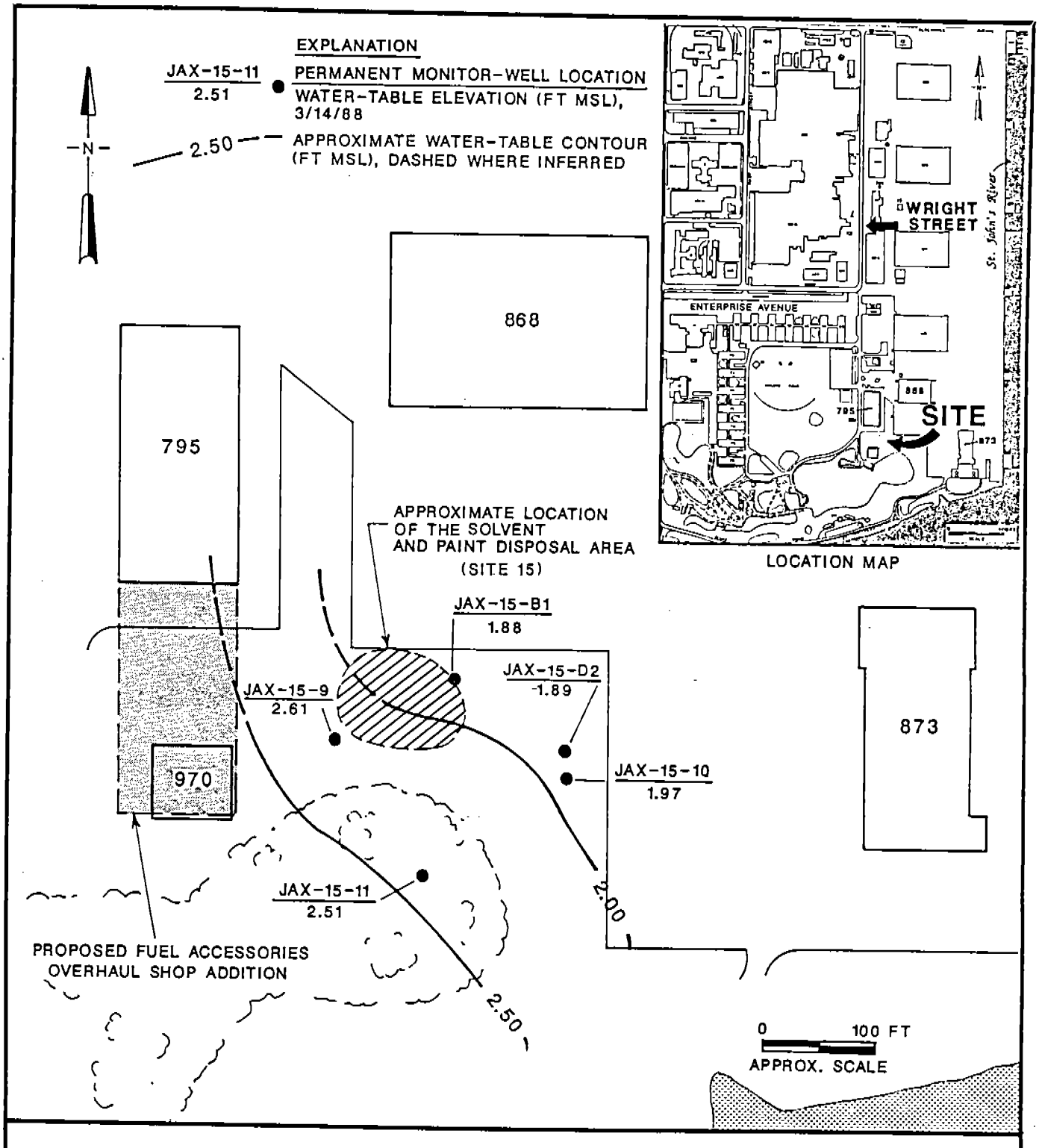


Figure 2. Water-Table Contours Near Area of Investigation
Contamination Assessment of Building 795, The Addition Naval Air Station - Jacksonville, Jacksonville, Florida
Southern Division Naval Facilities Engineering Command

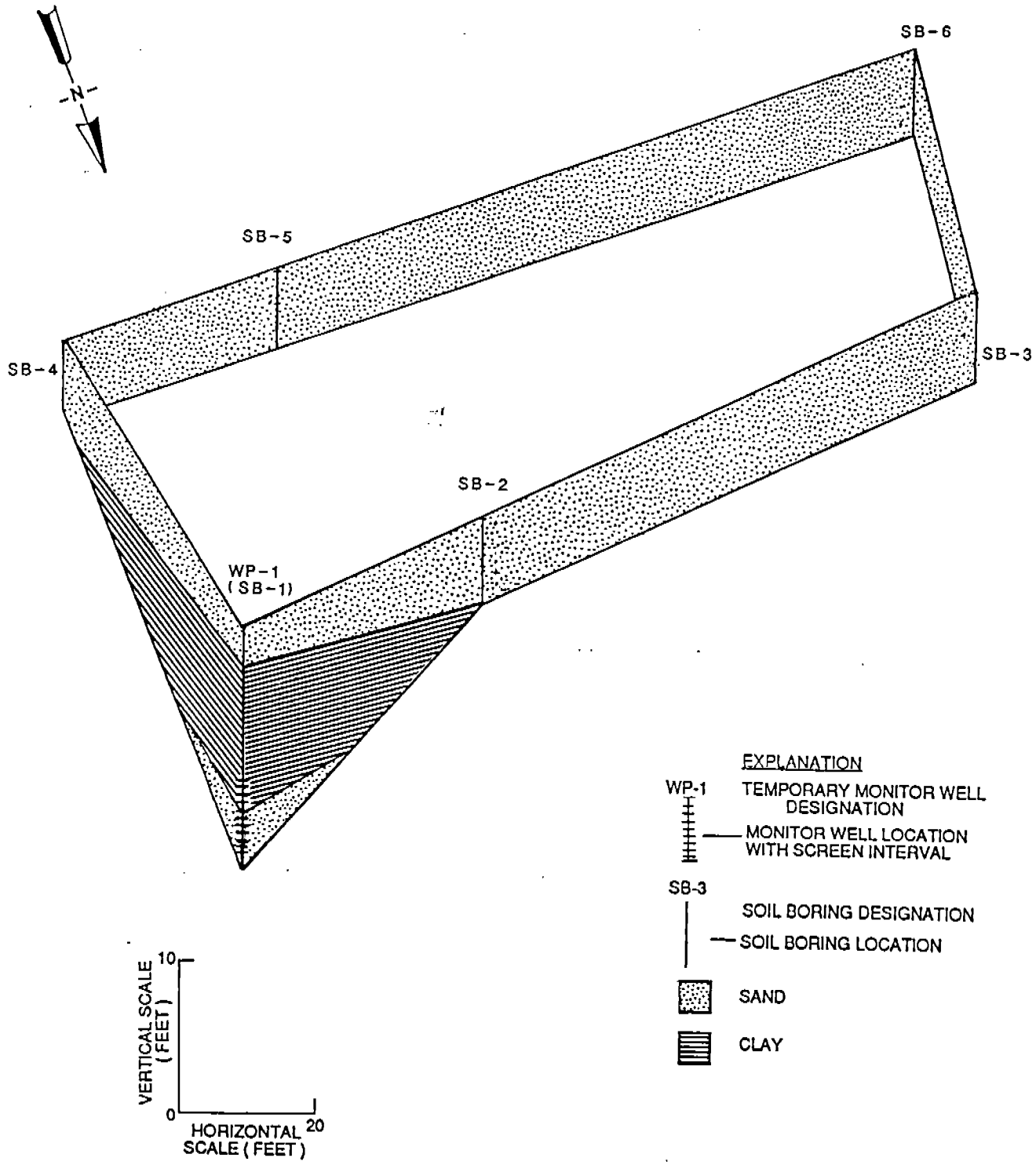
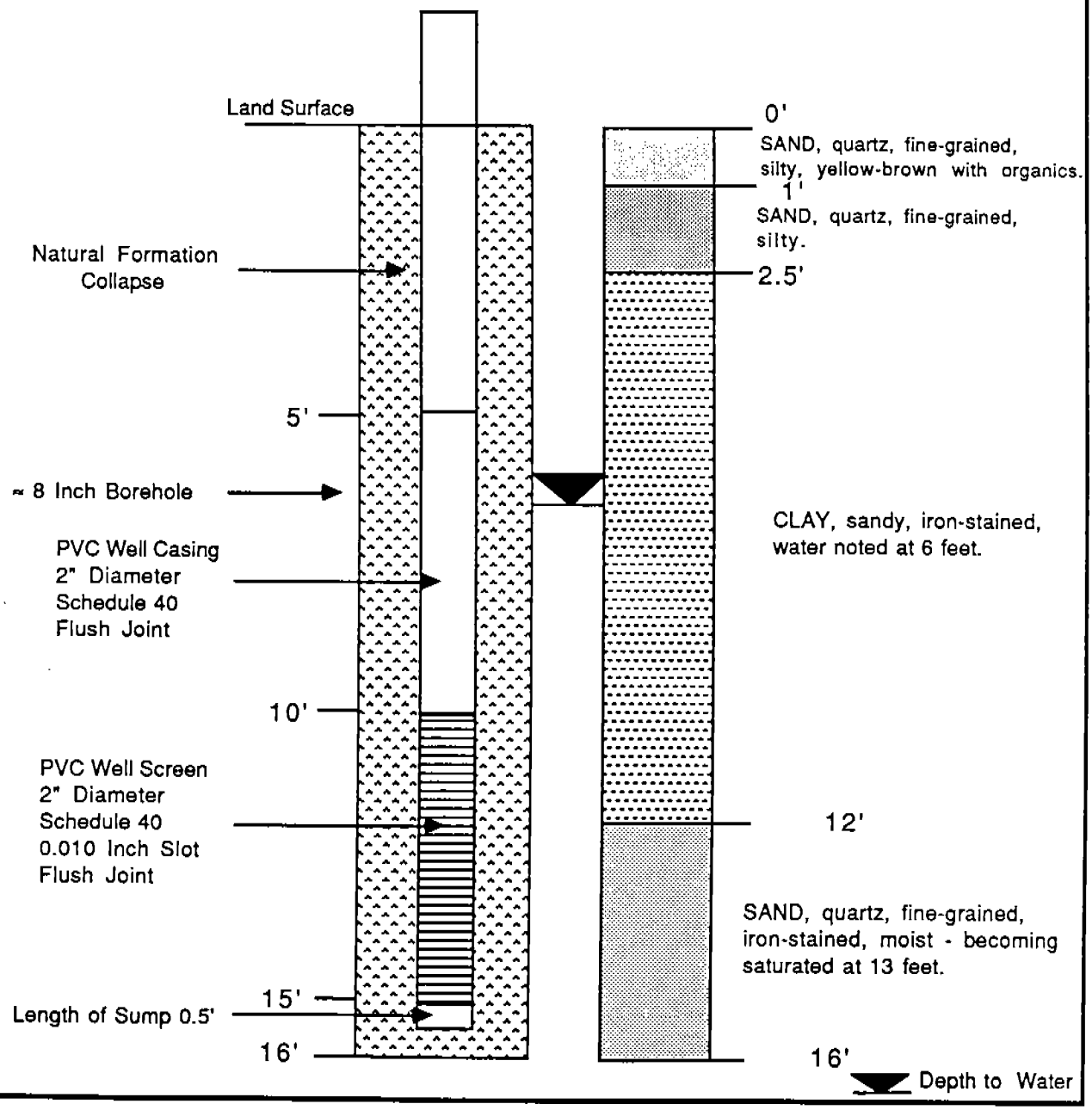


Figure 3. Fence Diagram
Contamination Assessment of Building 795, The Addition Naval Air Station - Jacksonville, Jacksonville, Florida
Southern Division Naval Facilities Engineering Command

GERAGHTY & MILLER, INC. Ground-Water Consultants	WELL LOG	OBSERVATION WELL NO. WP-1
		PROJECT Navy TFO290GWO9

CLIENT	LOCATION		TOTAL DEPTH
DEPARTMENT OF THE NAVY Southen Division Naval Facilities Engineering Command	Jacksonville Naval Air Station Jacksonville, Florida		16 ft bls
	SAMPLE INTERVAL Continuous	SAMPLE TYPE Split-Spoon	DATE WELL COMPLETED 03-14-88
GEOLOGIST Mike O'Hagan	DRILLING CONTRACTOR Geraghy & Miller, Inc.	DRILLING METHOD Hollow-stem auger	DATE WELL GROUTED 03-14-88

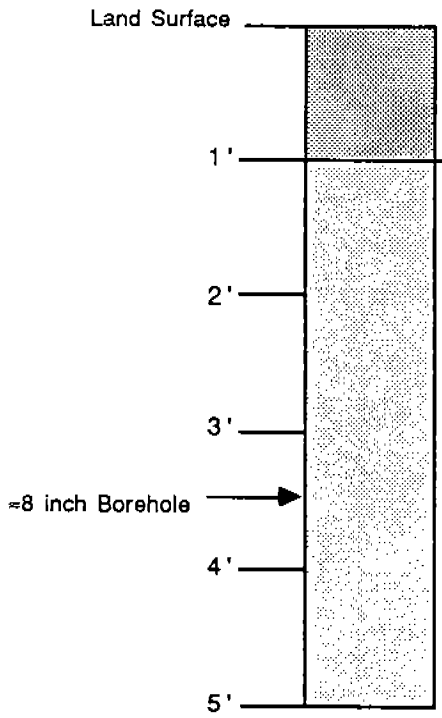
WELL CONSTRUCTION	LITHOLOGIC LOG



GERAGHTY & MILLER, INC. *Ground-Water Consultants*	**LITHOLOGIC LOG**	BORING NO. SB-2
		PROJECT NAVY TF0290GWO9

CLIENT	LOCATION		TOTAL DEPTH
DEPARTMENT OF THE NAVY Southen Division Naval Facilities Engineering Command	Jacksonville Naval Air Station Jacksonville, Florida		5 ft bls
	SAMPLE INTERVAL Continuous	SAMPLE TYPE Split-Spoon	DATE DRILLED 03-14-88
GEOLOGIST Mike O'Hagan	DRILLING CONTRACTOR Geraghty & Miller, Inc.	DRILLING METHOD Hollow-Stem Auger	DATE BORING BACK FILLED 03-14-88

LITHOLOGIC LOG



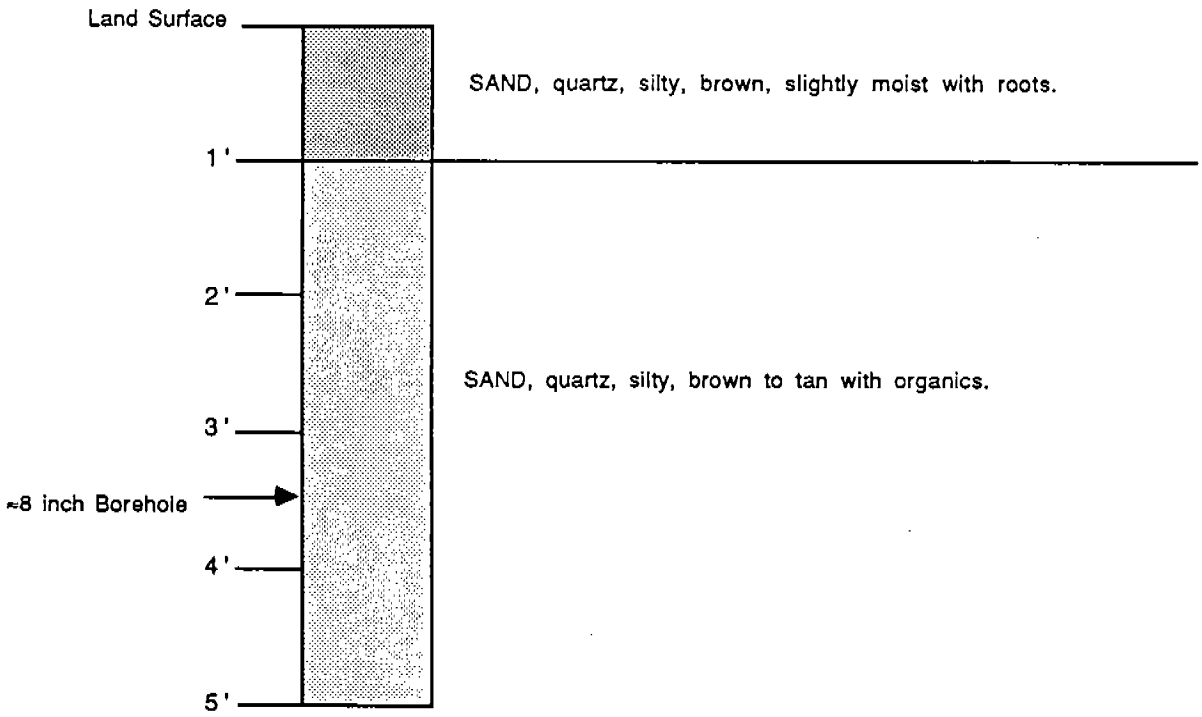
SAND, quartz, silty, brown to black with organics.

SAND, quartz, silty, brown to black with organics grading into sand, clean, white to yellow.

GERAGHTY & MILLER, INC. *Ground-Water Consultants*	**LITHOLOGIC LOG**	BORING NO. SB-3
		PROJECT NAVY TF0290GWO9

CLIENT	LOCATION		TOTAL DEPTH
DEPARTMENT OF THE NAVY Southen Division Naval Facilities Engineering Command	Jacksonville Naval Air Station Jacksonville, Florida		5 ft bls
	SAMPLE INTERVAL Continuous	SAMPLE TYPE Split-Spoon	DATE DRILLED 03-14-88
GEOLOGIST Mike O'Hagan	DRILLING CONTRACTOR Geraghty & Miller, Inc.	DRILLING METHOD Hollow-Stem Auger	DATE BORING BACK FILLED 03-14-88

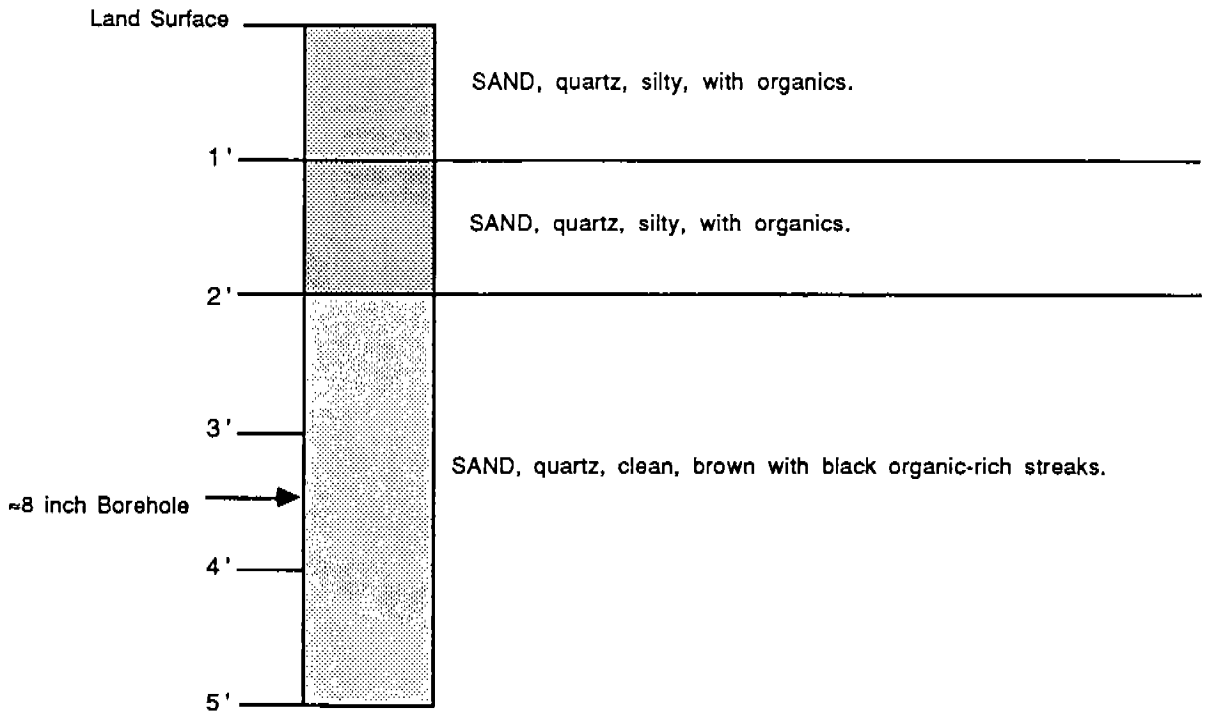
LITHOLOGIC LOG



GERAGHTY & MILLER, INC. *Ground-Water Consultants*	**LITHOLOGIC LOG**	BORING NO. SB-4
		PROJECT NAVY TF0290GWO9

CLIENT	LOCATION		TOTAL DEPTH
DEPARTMENT OF THE NAVY Southen Division Naval Facilities Engineering Command	Jacksonville Naval Air Station Jacksonville, Florida		5 ft bls
	SAMPLE INTERVAL Continuous	SAMPLE TYPE Split-Spoon	DATE DRILLED 03-14-88
GEOLOGIST Mike O'Hagan	DRILLING CONTRACTOR Geraghty & Miller, Inc.	DRILLING METHOD Hollow-Stem Auger	DATE BORING BACK FILLED 03-14-88

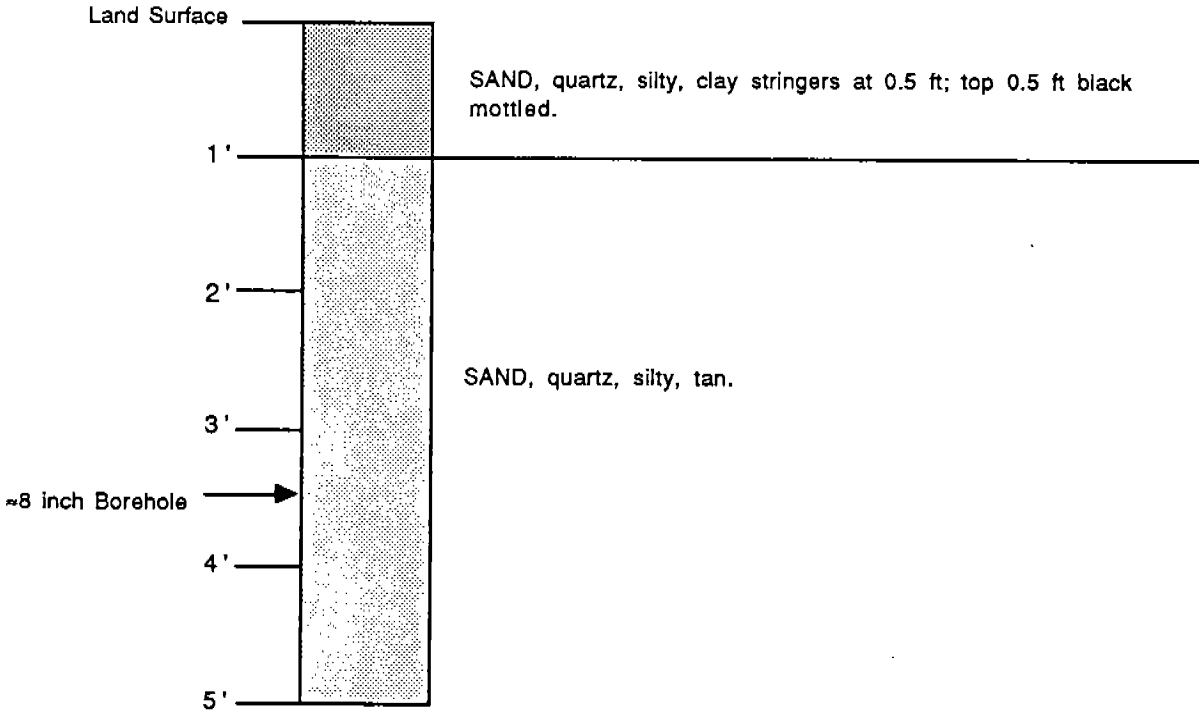
LITHOLOGIC LOG



GERAGHTY & MILLER, INC. *Ground-Water Consultants*	**LITHOLOGIC LOG**	BORING NO. SB-5
		PROJECT NAVY TF0290GWO9

CLIENT	LOCATION		TOTAL DEPTH
DEPARTMENT OF THE NAVY Southen Division Naval Facilities Engineering Command	Jacksonville Naval Air Station Jacksonville, Florida		5 ft bls
	SAMPLE INTERVAL Continuous	SAMPLE TYPE Split-Spoon	DATE DRILLED 03-14-88
GEOLOGIST Mike O'Hagan	DRILLING CONTRACTOR Geraghty & Miller, Inc.	DRILLING METHOD Hollow-Stem Auger	DATE BORING BACK FILLED 03-14-88

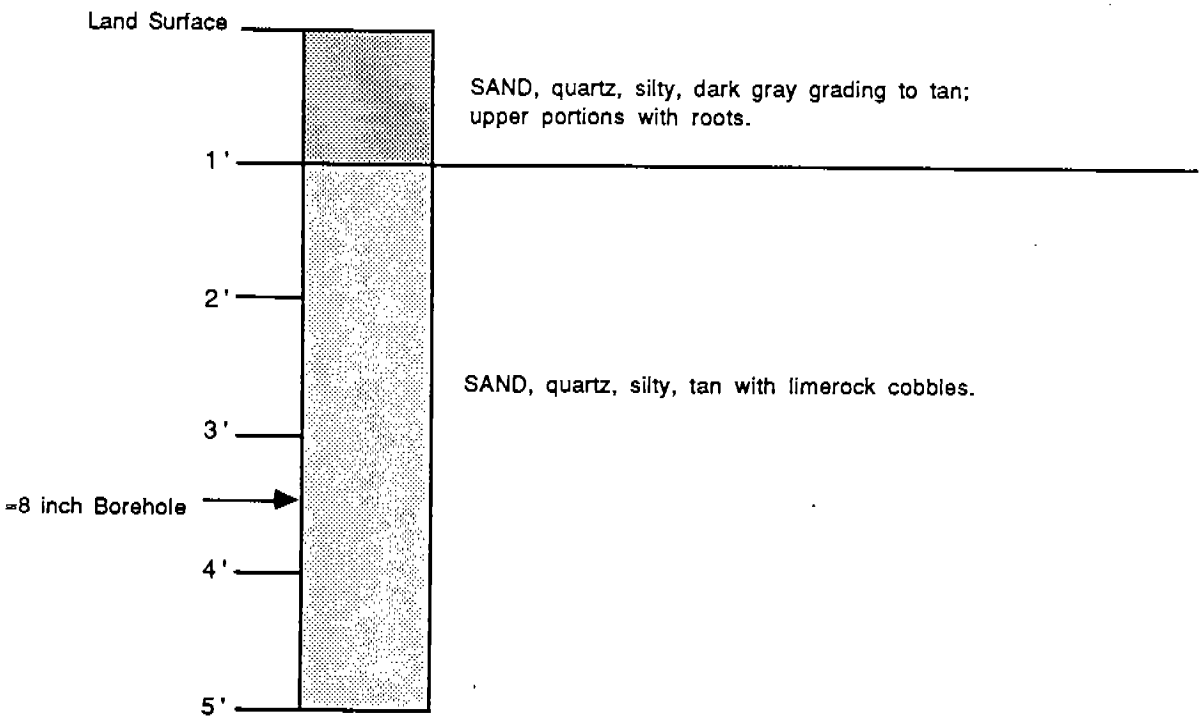
LITHOLOGIC LOG



GERAGHTY & MILLER, INC. *Ground-Water Consultants*	**LITHOLOGIC LOG**	BORING NO. SB-6
		PROJECT NAVY TF0290

CLIENT	LOCATION		TOTAL DEPTH
DEPARTMENT OF THE NAVY Southen Division Naval Facilities Engineering Command	Jacksonville Naval Air Station Jacksonville, Florida		5 ft bls
	SAMPLE INTERVAL Continuous	SAMPLE TYPE Split-Spoon	DATE DRILLED 03-14-88
GEOLOGIST Mike O'Hagan	DRILLING CONTRACTOR Geraghty & Miller, Inc.	DRILLING METHOD Hollow-Stem Auger	DATE BORING BACK FILLED 03-14-88

LITHOLOGIC LOG



APPENDIX C

Ground-Water Sample
Monitor Well WP-1

CONTENTS

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Water-Sampling Log	C-13

Table C-1. Water Samples Analytes and Analytical Methods

	Analytical Method
Cyanide, Total	EPA 335.2[A/]
Cyanide, Amenable	EPA 335.1
Priority Pollutants	
Metals	
Silver	EPA 272.7
Arsenic	206.2
Beryllium	200.7
Cadmium	200.7
Chromium	200.7
Copper	200.7
Mercury	245.1
Nickel	200.7
Lead	239.2
Antimony	200.7
Selenium	270.2
Thallium	279.2
Zinc	200.7
Volatiles	EPA 624[B/]
Acrolein	
Acrylonitrile	
Benzene	
Bis (Chloromethyl) Ether	
Bromoform	
Carbon Tetrachloride	
Chlorobenzene	
Chlorodibromomethane	
Chloroethane	
Chloroform	
Dichlorobromomethane	
Dichlorodifluoromethane	
Ethylbenzene	
Methyl Bromide	
Methyl Chloride	
Methylene Chloride	
Tetrachloroethene	
Toluene	
Trichloroethylene	
Trichlorofluoromethane	
Vinyl Chloride	
1,1,1-Trichloroethane	
1,1,2,2-Tetrachloroethane	

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Table C-1. (Continued)

	Analytical Methods
(Volatiles, cont'd)	
1,1,2-Trichloroethane	
1,1-Dichloroethane	
1,1-Dichloroethene	
1,2-Dichloroethane	
1,2-Dichloropropane	
1,2-Transdichloroethylene	
2-Chloroethylvinyl Ether	
Base/Neutral Extractables	EPA 625
Acenaphthene	
Acenaphthylene	
Anthracene	
Benzidine	
Benzo (A) Anthracene	
Benzo (A) Pyrene	
Benzo (GHI) Perylene	
Benzo (K) Fluoranthane	
Bis(2-Chloroethoxy) Methane	
Bis(2-Chloroethyl) Ether	
Bis(2-Chloroisopropyl) Ether	
Bis(2-Ethylhexyl) Phthalate	
Buytlbenzyl Phthalate	
Chrysene	
Dibenzo (A,H) Anthracene	
Diethylphthalate	
Dimethylphthalate	
Di-N-Butyl Phthalate	
Di-N-Octyl-Phthalate	
Fluoranthene	
Fluorene	
Hexachlorobenzene	
Hexachlorobutadiene	
Hexachlorocyclopentadiene	
Hexachloroethane	
Ideno (1,2,3-CD) Pyrene	
Isophorone	
Naphthalene	
Nitrobenzene	
N-Nitrosodimethylamine	
N-Nitrosodi-N-Propylamine	
N-Nitrosodiphenylamine	
Phenathrene	
Pyrene	

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Table C-1. (Continued)

	Analytical Methods
Base/Neutral Extractables (Cont'd)	
1,2,4-Trichlorobenzene	
1,2-Dichlorobenzene	
1,2-Diphenylhydrazine	
1,3-Dichlorobenzene	
1,4-Dichlorobenzene	
2,4-Dinitrotoluene	
2,6-Dinitrotoluene	
2-Chloronaphthalene	
3,3-Dichlorobenzidine	
3,4-Benzofluoranthene	
4-Bromophenyl Phenyl Ether	
4-Chlorophenyl Phenyl Ether	
Acid Extractables	EPA 625
P-Chloro-M-Cresol	
Pentachlorophenol	
Phenol	
2,4,6-Trichlorophenol	
2,4-Dichlorophenol	
2,4-Dimethylphenol	
2,4-Dinitrophenol	
2-Chlorophenol	
2-Nitrophenol	
4,6-Dinitro-O-Cresol	
4-Nitrophenol	
Pesticides	EPA 608
A-BHC	
A-Endosulfan I	
Aldrin	
B-BHC	
B-Endosulfan II	
Chlorodane	
D-BHC	
Dieldrin	
Endosulfan Sulfate	
Endrin	
Endrin Aldehyde	
G-BHC (Lindane)	
Heptachlor	
Heptachlor Epoxide	
PCB-1016	

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Table C-1. (Continued)

	Analytical Methods
Pesitcides, Cont'd)	
PCB-1221	
PCB-1232	
PCB-1242	
PCB-1248	
PCB-1254	
PCB-1260	
Toxaphene	
4,4'-DDD	
4,4'-DDE	
4,4'-DDT	

A/ Methods for Chemical Analysis of Water and Wastes, EPA/600/4-79.020, revised March 1983.

B/ Methods for Organic Chemical Analysis of Muncipal and Industrial Wastewater, EPA-600/4-82-057, July 1982.

736/39

Pioneer
PL LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
07001 3820 NORTHDALE BLVD.
SUITE 200
TAMPA FL 33624-0000

Lab I.D.#: 88-0869A
Order Number: P11393
Order Date: 03/15/88
Sampled By: M.O'HAGAN
Sample Date: 03/14/88
Sample Time: N/S

Project Number: 88-0869A
Project Name: GERAGHTY & MILLER
Sample Site: NAS JACKSONVILLE
Sample Type: GROUNDWATER

N/S = Not Submitte

Lab ID	Sample ID	Parameter	Units	Results	Detectio Limit
88-0869A-1	WP-1	CYANIDE,AMENABLE	PPM	BDL	0.005
88-0869A-1	WP-1	CYANIDE,TOTAL	PPM	BDL	0.005

Comments: PPM = Parts Per Million, mg/l; PPB = Parts Per Billion, ug/l;
BDL = Below Detection Limit; Reference: EPA 600/4-79-020, Revised March 1983
Reference: Federal Register 40 CFR Part 136, July 1, 1987.

Approved By : Paul Cameron

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL094 • FDER # EL020 • AL LAB ID # 40150 • NIOSH # 32514-001 • FL ENV # E81010

Pioneer LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-0869A-1
Order Date: 03/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: GROUNDWATER

Sample ID.: WP-1 Sample Date: 03/14/88 Time: N/S

PP/METALS PRIORITY POLLUTANTS-METALS ANALYSES

Parameter	Units	Result	Detection Limit
SILVER	PPM	BDL	0.0001
ARSENIC	PPM	BDL	0.001
BERYLLIUM	PPM	BDL	0.01
CADMIUM	PPM	BDL	0.0001
CHROMIUM	PPM	BDL	0.01
COPPER	PPM	BDL	0.01
MERCURY	PPM	BDL	0.0001
NICKEL	PPM	BDL	0.05
LEAD	PPM	BDL	0.001
ANTIMONY	PPM	BDL	0.05
SELENIUM	PPM	BDL	0.001
THALLIUM	PPM	BDL	0.40
ZINC	PPM	0.09	0.01

CERTIFICATION NUMBERS: FL LAB ID = 81142 • EPA = FL094 • FDER = EL020 • AL LAB ID = 40150 • NIOSH = 32514-001 • FL ENV = E81010

Pioneer
PL LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-0869A-1
Order Date: 03/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: GROUNDWATER

Sample ID.: WP-1 Sample Date: 03/14/88 Time: N/S

PP/VOLATILE PRIORITY POLLUTANT VOLATILES

Parameter	Units	Result	Detection Limit
ACROLEIN	PPB	BDL	100
ACRYLONITRILE	PPB	BDL	100
BENZENE	PPB	BDL	1
BIS(CHLOROMETHYL) ETHER	PPB	BDL	5
BROMOFORM	PPB	BDL	5
CARBON TETRACHLORIDE	PPB	BDL	3
CHLOROBENZENE	PPB	BDL	1
CHLORODIBROMOMETHANE	PPB	BDL	5
CHLOROETHANE	PPB	BDL	5
CHLOROFORM	PPB	BDL	5
DICHLOROBROMOMETHANE	PPB	BDL	5
DICHLORODIFLUOROMETHANE	PPB	BDL	5
ETHYLBENZENE	PPB	BDL	1
METHYL BROMIDE	PPB	BDL	5
METHYL CHLORIDE	PPB	BDL	5
METHYLENE CHLORIDE	PPB	BDL	5
TETRACHLOROETHENE	PPB	BDL	3
TOLUENE	PPB	BDL	1
TRICHLOROETHYLENE	PPB	BDL	1
TRICHLOROFLUOROMETHANE	PPB	BDL	5
VINYL CHLORIDE	PPB	BDL	1
1,1,1-TRICHLOROETHANE	PPB	BDL	5
1,1,2,2-TETRACHLOROETHANE	PPB	BDL	5
1,1,2-TRICHLOROETHANE	PPB	BDL	5
1,1-DICHLOROETHANE	PPB	BDL	5
1,1-DICHLOROETHENE	PPB	BDL	5
1,2-DICHLOROETHANE	PPB	BDL	3
1,2-DICHLOROPROPANE	PPB	BDL	5
1,2DICHLOROPROPYLENE	PPB	BDL	5
1,2TRANSDICHLOROETHYLENE	PPB	BDL	5
2-CHLOROETHYLVINYL ETHER	PPB	BDL	5

end of repo:

CERTIFICATION NUMBERS: FL LAB ID = 81142 • EPA = FL094 • FDER = EL020 • AL [illegible] 40150 • NIOSH # 32514-001 • FL ENV = E81010

Pioneer LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-0869A-1
Order Date: 03/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: GROUNDWATER

Sample ID.: WP-1 Sample Date: 03/14/88 Time: N/S

PP/ACID/WATER PP ACID EXTRACTABLES

Parameter	Units	Result	Detection Limit
P-CHLORO-M-CRESOL	PPB	BDL	25
PENTACHLOROPHENOL	PPB	BDL	30
PHENOL	PPB	BDL	5
2,4,6-TRICHLOROPHENOL	PPB	BDL	20
2,4-DICHLOROPHENOL	PPB	BDL	10
2,4-DIMETHYLPHENOL	PPB	BDL	5
2,4-DINITROPHENOL	PPB	BDL	30
2-CHLOROPHENOL	PPB	BDL	15
2-NITROPHENOL	PPB	BDL	10
4,6-DINITRO-O-CRESOL	PPB	BDL	30
4-NITROPHENOL	PPB	BDL	20

CERTIFICATION NUMBERS: FL LAB ID = 81142 • EPA = FL094 • FDER = EL020 • AL LAB ID = 40150 • NIOSH = 32514-001 • FL ENV = E81010

Pioneer LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-0869A-1
Order Date: 03/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: GROUNDWATER

Sample ID.: WP-1 Sample Date: 03/14/88 Time: N/S

PP/BASE/WATER PP BASE/NEUTRAL EXTRACTABLES

Parameter	Units	Result	Detection Limit
ACENAPHTHENE	PPB	BDL	10
ACENAPHTHYLENE	PPB	BDL	10
ANTHRACENE	PPB	BDL	10
BENZIDINE	PPB	BDL	10
BENZO(A)ANTHRACENE	PPB	BDL	10
BENZO(A)PYRENE	PPB	BDL	10
BENZO(GHI)PERYLENE	PPB	BDL	10
BENZO(K)FLUORANTHANE	PPB	BDL	10
BIS(2-CHLOROETHOXY) METHANE	PPB	BDL	10
BIS(2-CHLOROETHYL)ETHER	PPB	BDL	10
BIS(2-CHLOROISOPROPYL)ETHER	PPB	BDL	10
BIS(2-ETHYLHEXYL)PHTHALATE	PPB	BDL	10
BUYTLBENZYL PHTHALATE	PPB	BDL	10
CHRYSENE	PPB	BDL	10
DIBENZO(A,H)ANTHRACENE	PPB	BDL	25
DIETHYLPHTHALATE	PPB	BDL	10
DIMETHYLPHTHALATE	PPB	BDL	10
DI-N-BUTYL PHTHALATE	PPB	BDL	10
DI-N-OCTYL-PHTHALATE	PPB	BDL	10
FLUORANTHENE	PPB	BDL	10
FLUORENE	PPB	BDL	10
HEXACHLOROBENZENE	PPB	BDL	10
HEXACHLOROBUTADIENE	PPB	BDL	10
HEXACHLOROCYCLOPENTADIENE	PPB	BDL	10
HEXACHLOROETHANE	PPB	BDL	10
INDENO(1,2,3-CD)PYRENE	PPB	BDL	10
ISOPHORONE	PPB	BDL	10
NAPHTHALENE	PPB	BDL	10
NITROBENZENE	PPB	BDL	10
N-NITROSODIMETHYLAMINE	PPB	BDL	10
N-NITROSODI-N-PROPYLAMINE	PPB	BDL	10
N-NITROSODIPHENYLAMINE	PPB	BDL	10
PHENANTHRENE	PPB	BDL	10
PYRENE	PPB	BDL	10
1,2,4-TRICHLOROBENZENE	PPB	BDL	10

Sample ID.: WP-1

Test Parameters continued on next page

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL094 • FDER # EL020 • AL LAB ID # 40150 • NIOSH # 32514-001 • FL ENV # E81010

Pioneer LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-0869A-1
Order Date: 03/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: GROUNDWATER

Sample ID.: WP-1 Sample Date: 03/14/88 Time: N/S

PP/BASE/WATER PP BASE/NEUTRAL EXTRACTABLES

Parameter	Units	Result	Detection Limit
1,2-DICHLOROBENZENE	PPB	BDL	10
1,2-DIPHENYLHYDRAZINE	PPB	BDL	10
1,3-DICHLOROBENZENE	PPB	BDL	10
1,4-DICHLOROBENZENE	PPB	BDL	10
2,4-DINITROTOLUENE	PPB	BDL	10
2,6-DINTROTOLUENE	PPB	BDL	10
2-CHLORONAPHTHALENE	PPB	BDL	10
3,3-DICHLOROBENZIDINE	PPB	BDL	10
3,4-BENZOFLUORANTHENE	PPB	BDL	10
4-BROMOPHENYL PHENYL ETHER	PPB	BDL	10
4-CHLOROPHENYL PHENYL ETHER	PPB	BDL	10

CERTIFICATION NUMBERS: FL LAB ID = 81142 • EPA = FL094 • FDER = EL020 • AL LAB ID = 40150 • NIOSH = 32514-001 • FL ENV = E81010

Pioneer LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-0869A-1
Order Date: 03/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: GROUNDWATER

Sample ID.: WP-1 Sample Date: 03/14/88 Time: N/S

PP/PESTICIDE PRIORITY POLLUTANT PESTICIDES

Parameter	Units	Result	Detection Limit
A-BHC	PPB	BDL	0.01
A-ENDOSULFAN I	PPB	BDL	0.01
ALDRIN	PPB	BDL	0.01
B-BHC	PPB	BDL	0.01
B-ENDOSULFAN II	PPB	BDL	0.01
CHLORODANE	PPB	BDL	0.01
D-BHC	PPB	BDL	0.01
DIELDRIN	PPB	BDL	0.01
ENDOSULFAN SULFATE	PPB	BDL	0.01
ENDRIN	PPB	BDL	0.07
ENDRIN ALDEHYDE	PPB	BDL	0.03
G-BHC (LINDANE)	PPB	BDL	0.01
HEPTACHLOR	PPB	BDL	0.01
HEPTACHLOR EPOXIDE	PPB	BDL	0.01
PCB-1016	PPB	BDL	0.2
PCB-1221	PPB	BDL	0.2
PCB-1232	PPB	BDL	0.2
PCB-1242	PPB	BDL	0.2
PCB-1248	PPB	BDL	0.2
PCB-1254	PPB	BDL	0.2
PCB-1260	PPB	BDL	0.2
TOXAPHENE	PPB	BDL	1
4,4'-DDD	PPB	BDL	0.01
4,4'-DDE	PPB	BDL	0.01
4.4'-DDT	PPB	BDL	0.01

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL094 • FDER # EL020 • AL LAB ID # 40150 • NIOSH # 32514-001 • FL ENV # E81010

GE[illegible]GHTY & MILLER, INC.
Ground-Water Consultants

CHAIN-OF-CUSTODY RECORD

Project/Number

Location:

Laboratory:

Shipping Container ID: [illegible]

Sampler(s) O'Hagan

SAMPLE CONTAINER DESCRIPTION

SAMPLE IDENTITY	Date Sampled	1-litre bc. glass	40-ml VOC vials	1-litre plastic HNO3	1-litre plastic NaOH	TRZP Bottle								Total	Remarks
~~[illegible]~~															
TRP-1	3-14-88	3	3	1	1	1								9	
				Analyze for Priority Pollutants.											
				Please [illegible] seen & heard for [illegible] signs of [illegible]											

Total No. of Containers 9

Relinquished by: M. O'Hagan Organization: [illegible]
Date: 3-14-88 Time: 2145

Received by: Organization:
Date: Time:

Relinquished by: Organization:
Date: Time:

Received by: Organization:
Date: Time:

Relinquished by: Organization:
Date: Time:

Received by: Organization:
Date: Time:

Delivery Method: Fed Ex No. 3334482445 (attach shipping bill, if any)

(Use extra sheets, if necessary)

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GERAGHTY & MILLER, INC.
Ground-Water Consultants

WATER SAMPLING LOG

Project/No. TF0290GW09 Page 1 of 1

Site Location Site 15 - NAS - Jax

Site/Well No. MP-7 Coded/ Replicate No. — Date 3-14-88

Weather cool, sunny Time Sampling Began 1800 Time Sampling Completed 1845

EVACUATION DATA

Description of Measuring Point (MP) TOC

Height of MP Above/Below Land Surface — MP Elevation —

Total Sounded Depth of Well Below MP 15.4 Water-Level Elevation —

Held _____ Depth to Water Below MP 10.0 Diameter of Casing 2"

Wet _____ Water Column in Well 5.0 Gallons Pumped/Bailed Prior to Sampling 3.20

Gallons per Foot 0.16

Gallons in Well 0.80 Sampling Pump Intake Setting (feet below land surface) @ bottom

Evacuation Method peristaltic @ 0.5 gpm ; evacuation = 7 minutes

SAMPLING DATA/FIELD PARAMETERS

Color brownish yellow Odor none Appearance turbid Temperature 18 °C/~~°F~~

Other (specific ion; OVA; HNU; etc.) —

Specific Conductance, umhos/cm 900 pH 4.10

Sampling Method and Material teflon bailer & nylon string for VOCs; peristaltic pump / teflon tubing for remainder of samples

Constituents Sampled	Container Description From Lab ✓ or G&M _____	Preservative
VOCs	40 ml VOC vials	4°C
CN^-	1-litre plastic	NaOH
Metals	1-litre plastic	HNO_3 4°C
Acid/Base/Neutrals	1-litre amber (3)	4°C
MBC. Organics	1-litre amber	4°C

Remarks

Sampling Personnel M. O'Hagan

WELL CASING VOLUMES

GAL./FT				
	1-¼" = 0.077		3" = 0.37	4" = 0.65
	1-½" = 0.10	C-13	3-½" = 0.50	6" = 1.46

APPENDIX D

Soil Analytical Data

CONTENTS

	Page
Soil Analytes and Analytical Methods	D-1
Soil Analytical Data	
Cyanide, Total, Sulfides, PCBs	D-5
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Toxic Characteristics Leaching Procedure (TCLP) Data	
SB-1 (1'-5')	D-23
SB-3 (1'-5')	D-29
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Priority Pollutants Data	
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SB-3 (1'-5')	D-47
SB-4 (1'-5')	D-53
Chain-of-Custody Forms	D-59
Soil Sampling Logs	D-61

Table D-1. Soil Sample Analytes and Analytical Methods

	Analytical Method	
Total Cyanide	EPA[a/]	335.3
Sulfide	SW-846[b/]	9030
Polychlorinated Biphenyls (PCBs)	SW-846	8080
EP Toxicity Metal		
Arsenic	SW-846	7060
Barium	SW-846	6010
Cadmium	SW-846	7130
Chromium	SW-846	7190
Lead	SW-846	7420
Mercury	SW-846	7421
Selenium	SW-846	7740
Silver	SW-846	7760
Priority Pollutants		
Metals		
Silver	SW-846	7760
Arsenic	SW-846	7060
Beryllium	SW-846	7090
Cadmium	SW-846	7130
Chromium	SW-846	7190
Copper	SW-846	7210
Mercury	SW-846	7471
Nickel	SW-846	7520
Lead	SW-846	7420
Antimony	SW-846	7040
Selenium	SW-846	7740
Thallium	SW-846	7840
Zinc	SW-846	7950
Volatiles		
Acrolein	SW-846	8240
Acrylonitrile		
Benzene		
Bis(Chloromethyl) Ether		
Bromoform		
Carbon Tetrachloride		
Chlorobenzene		
Chlorodibromomethane		
Chloroethane		
Chloroform		

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Table D-1. Continued

	Analytical Method	
Volatiles (Cont'd)		
Dichlorobromomethane	SW-846	8240
Dichlorodifluoromethane		
Ethylbenzene		
Methyl Bromide		
Methyl Chloride		
Methylene Chloride		
Tetrachloroethene		
Toluene		
Trichloroethylene		
Trichlorofluoromethane		
Vinyl Chloride		
1,1,1-Trichloroethane		
1,1,2,2-Tetrachloroethane		
1,1,2-Trichloroethane		
1,1-Dichloroethane		
1,1-Dichloroethene		
1,2-Dichloroethane		
1,2-Dichloropropane		
1,2-Dichloropropylene		
1,2-Transdichloroethylene		
2-Chloroethylvinyl Ether		
Base/Neutral Extractables	SW-846	8270
Acenaphthene		
Acenaphthylene		
Anthracene		
Benzidine		
Benzo(A) Anthracene		
Benzo(A) Pyrene		
Benzo(GHI) Perylene		
Benzo(K) Fluoranthane		
Bis(2-Chloroethoxy) Methane		
Bis(2-Chloroethyl) Ether		
Bis(2-Chloroisopropyl) Ether		
Bis(2-Ethylhexyl) Phthalate		
Buytlbenzyl Phthalate		
Chrysene		
Dibenzo(A,H) Anthracene		
Diethylphthalate		
Dimethylphthalate		
Di-N-Butyl Phthalate		
Di-N-Octyl-Phthalate		
Fluoranthene		
Fluorene		
Hexachlorobenzene		

Table D-1. Continued

	Analytical Method	
Base/Neutral Extractables (Cont'd)		
Hexachlorobutadiene	SW-846	8270
Hexachlorocyclopentadiene		
Hexachloroethane		
Indeno(1,2,3-CD) Pyrene		
Isophorone		
Naphthalene		
Nitrobenzene		
N-Nitrosodimethylamine		
N-Nitrosodi-N-Propylamine		
N-Nitrosodiphenylamine		
Phenanthrene		
Pyrene		
1,2,4-Trichlorobenzene		
1,2-Dichlorobenzene		
1,2-Diphenylhydrazine		
1,3-Dichlorobenzene		
1,4-Dichlorobenzene		
2,4-Dinitrotoluene		
2,6-Dinitrotoluene		
2-Chloronaphthalene		
3,3-Dichlorobenzidine		
3,4-Benzofluoranthene		
4-Bromophenyl Phenyl Ether		
4-Chlorophenyl Phenyl Ether		
Acid Extractables	SW-846	8270
P-Chloro-M-Cresol		
Pentachlorophenol		
Phenol		
2,4,6-Trichlorophenol		
2,4-Dichlorophenol		
2,4-Dimethylphenol		
2,4-Dinitrophenol		
2-Chlorophenol		
2-Nitrophenol		
4,6-Dinitro-O-Cresol		
4-Nitrophenol		
Pesticides	SW-846	8080
A-BHC		
A-Endosulfan I		
Aldrin		
B-BHC		
B-Endosulfan II		
Chlorodane		

Table D-1. Continued

	Analytical Method	
Pesticides (Cont'd)		
D-BHC	SW-846	8080
Dieldrin		
Endosulfan Sulfate		
Endrin		
Endrin Aldehyde		
G-BHC (Lindane)		
Heptachlor		
Heptachlor Epoxide		
PCB-1016		
PCB-1221		
PCB-1232		
PCB-1242		
PCB-1248		
PCB-1254		
PCB-1260		
Toxaphene		
4,4'-DDD		
4,4'-DDE		
4,4'-DDT		

[A/] Methods for Chemical Analysis of Water and Wastes, EPA/600/4-79-020

[B/] Test Methods for Evaluating Solid Waste-Physical/Chemical Methods, EPA SW-846, Third Edition, November 1986

736/40

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PLI LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
07001 3820 NORTHDALE BLVD.
SUITE 200
TAMPA FL 33624-0000

Lab I.D.#: 88-0869B
Order Number: P11396
Order Date: 03/15/88
Sampled By: M.O'HAGAN
Sample Date: 03/14/88
Sample Time: N/S

Project Number: TF0290GW009
Project Name: GERAGHTY & MILLER
Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

N/S = Not Submitted

Lab ID	Sample ID	Parameter	Units	Results	Detection Limit
88-0869B-1	SB-5(0-1')	CYANIDE,TOTAL	PPM	BDL	0.27
88-0869B-2	SB-6(0-1')	CYANIDE,TOTAL	PPM	BDL	0.27
88-0869B-3	SB-1(5-9')	CYANIDE,TOTAL	PPM	BDL	0.28
88-0869B-4	SB-1(10-14')	CYANIDE,TOTAL	PPM	BDL	0.29
88-0869B-5	SB-1(14-16')	CYANIDE,TOTAL	PPM	BDL	0.31
88-0869B-6	SB-2(0-1')	CYANIDE,TOTAL	PPM	BDL	0.26
88-0869B-7	SB-2(1-5')	CYANIDE,TOTAL	PPM	BDL	0.26
88-0869B-8	SB-3(0-1')	CYANIDE,TOTAL	PPM	BDL	0.26
88-0869B-9	SB-3(1-5')	CYANIDE,TOTAL	PPM	BDL	0.26
88-0869B-10	SB-4(0-1')	CYANIDE,TOTAL	PPM	BDL	0.26
88-0869B-11	SB-4(1-5')	CYANIDE,TOTAL	PPM	BDL	0.26
88-0869B-12	SB-5(1-5')	CYANIDE,TOTAL	PPM	BDL	0.27
88-0869B-13	SB-6(1-5')	CYANIDE,TOTAL	PPM	BDL	0.26
88-0869B-14	SB-1(0-1')	CYANIDE,TOTAL	PPM	BDL	0.25
88-0869B-15	SB-1(1-5')	CYANIDE,TOTAL	PPM	BDL	0.26
88-0869B-16	SB-6(1-5)DUP.	CYANIDE,TOTAL	PPM	BDL	0.26
88-0869B-1	SB-5(0-1')	SULFIDE	PPM	BDL	2.7
88-0869B-2	SB-6(0-1')	SULFIDE	PPM	BDL	2.7
88-0869B-3	SB-1(5-9')	SULFIDE	PPM	BDL	2.8
88-0869B-4	SB-1(10-14')	SULFIDE	PPM	BDL	2.9
88-0869B-5	SB-1(14-16')	SULFIDE	PPM	BDL	3.1
88-0869B-6	SB-2(0-1')	SULFIDE	PPM	BDL	2.6
88-0869B-7	SB-2(1-5')	SULFIDE	PPM	BDL	2.6
88-0869B-8	SB-3(0-1')	SULFIDE	PPM	BDL	2.6
88-0869B-9	SB-3(1-5')	SULFIDE	PPM	BDL	2.6
88-0869B-10	SB-4(0-1')	SULFIDE	PPM	BDL	2.6
88-0869B-11	SB-4(1-5')	SULFIDE	PPM	BDL	2.6
88-0869B-12	SB-5(1-5')	SULFIDE	PPM	BDL	2.7
88-0869B-13	SB-6(1-5')	SULFIDE	PPM	BDL	2.6
88-0869B-14	SB-1(0-1')	SULFIDE	PPM	BDL	2.5
88-0869B-15	SB-1(1-5')	SULFIDE	PPM	BDL	2.6

Comments: PPM = Parts Per Million, mg/l (metals); PPM = Parts Per Million, mg/kg on a dry basis for the remainder.
Method Reference: SW-846, 3rd Edition, November 1986.

Approved By : Paul Cameron

Pioneer
PLI LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-0869B
Order Date: 03/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Single Tests continued Sample Date: 03/14/88 Time: N/S

Lab ID	Sample ID	Parameter	Units	Results	Detection Limit
88-0869B-16	SB-6(1-5)DUP.	SULFIDE	PPM	BDL	2.6
88-0869B-1	SB-5(0-1')	PCB/SLUDGE	PPM	BDL	0.2
88-0869B-2	SB-6(0-1')	PCB/SLUDGE	PPM	BDL	0.2

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Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-0869B-14
Order Date: 03/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-1(0-1') Sample Date: 03/14/88 Time: N/S

EPTOX/METALS EP TOXICITY-METALS ANALYSIS

Parameter	Units	Result	Detection Limit
SILVER	PPM	BDL	0.50
ARSENIC	PPM	BDL	0.50
BARIUM	PPM	BDL	1.0
CADMIUM	PPM	BDL	0.10
CHROMIUM	PPM	BDL	0.50
MERCURY	PPM	BDL	0.01
LEAD	PPM	BDL	0.50
SELENIUM	PPM	BDL	0.10

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Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-0869B-15
Order Date: 03/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-1(1-5') Sample Date: 03/14/88 Time: N/S

EPTOX/METALS EP TOXICITY-METALS ANALYSIS

Parameter	Units	Result	Detection Limit
SILVER	PPM	BDL	0.50
ARSENIC	PPM	BDL	0.50
BARIUM	PPM	BDL	1.0
CADMIUM	PPM	BDL	0.10
CHROMIUM	PPM	BDL	0.50
MERCURY	PPM	BDL	0.01
LEAD	PPM	BDL	0.50
SELENIUM	PPM	BDL	0.10

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Client: GERAGHTY & MILLER
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Lab I.D.#: 88-0869B-3
Order Date: 03/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-1(5-9') Sample Date: 03/14/88 Time: N/S

EPTOX/METALS EP TOXICITY-METALS ANALYSIS

Parameter	Units	Result	Detection Limit
SILVER	PPM	BDL	0.50
ARSENIC	PPM	BDL	0.50
BARIUM	PPM	BDL	1.0
CADMIUM	PPM	BDL	0.10
CHROMIUM	PPM	BDL	0.50
MERCURY	PPM	BDL	0.01
LEAD	PPM	BDL	0.50
SELENIUM	PPM	BDL	0.10

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Client: GERAGHTY & MILLER
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Lab I.D.#: 88-0869B-4
Order Date: 03/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-1(10-14') Sample Date: 03/14/88 Time: N/S

EPTOX/METALS EP TOXICITY-METALS ANALYSIS

Parameter	Units	Result	Detection Limit
SILVER	PPM	BDL	0.50
ARSENIC	PPM	BDL	0.50
BARIUM	PPM	BDL	1.0
CADMIUM	PPM	BDL	0.10
CHROMIUM	PPM	BDL	0.50
MERCURY	PPM	BDL	0.01
LEAD	PPM	BDL	0.50
SELENIUM	PPM	BDL	0.10

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Client: GERAGHTY & MILLER
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Lab I.D.#: 88-0869B-5
Order Date: 03/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-1(14-16') Sample Date: 03/14/88 Time: N/S

EPTOX/METALS EP TOXICITY-METALS ANALYSIS

Parameter	Units	Result	Detection Limit
SILVER	PPM	BDL	0.50
ARSENIC	PPM	BDL	0.50
BARIUM	PPM	BDL	1.0
CADMIUM	PPM	BDL	0.10
CHROMIUM	PPM	BDL	0.50
MERCURY	PPM	BDL	0.01
LEAD	PPM	BDL	0.50
SELENIUM	PPM	BDL	0.10

CERTIFICATION NUMBERS: FL LAB ID # 84147 • EPA # FL084 • FDER # FL070 • AL LAB ID # 40150 • NIOSH # 3251 (.09) • FL EHL # 581012

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Client: GERAGHTY & MILLER
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Lab I.D.#: 88-0869B-6
Order Date: 03/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-2(0-1') Sample Date: 03/14/88 Time: N/S

LPTOX/METALS EP TOXICITY-METALS ANALYSIS

Parameter	Units	Result	Detection Limit
SILVER	PPM	BDL	0.50
ARSENIC	PPM	BDL	0.50
BARIUM	PPM	BDL	1.0
CADMIUM	PPM	BDL	0.10
CHROMIUM	PPM	BDL	0.50
MERCURY	PPM	BDL	0.01
LEAD	PPM	BDL	0.50
SELENIUM	PPM	BDL	0.10

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Lab I.D.#: 88-0869B-7
Order Date: 03/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-2(1-5') Sample Date: 03/14/88 Time: N/S

E-TOX/METALS EP TOXICITY-METALS ANALYSIS

Parameter	Units	Result	Detection Limit
SILVER	PPM	BDL	0.50
ARSENIC	PPM	BDL	0.50
BARIUM	PPM	BDL	1.0
CADMIUM	PPM	BDL	0.10
CHROMIUM	PPM	BDL	0.50
MERCURY	PPM	BDL	0.01
LEAD	PPM	BDL	0.50
SELENIUM	PPM	BDL	0.10

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL094 • EPER # FL020 • AL LAB ID # 40150 • NIOSH # 32514-001 • FL ENV # E81010

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Lab I.D.#: 88-0869B-8
Order Date: 03/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-3(0-1') Sample Date: 03/14/88 Time: N/S

EPTOX/METALS EP TOXICITY-METALS ANALYSIS

Parameter	Units	Result	Detection Limit
SILVER	PPM	BDL	0.50
ARSENIC	PPM	BDL	0.50
BARIUM	PPM	BDL	1.0
CADMIUM	PPM	BDL	0.10
CHROMIUM	PPM	BDL	0.50
MERCURY	PPM	BDL	0.01
LEAD	PPM	BDL	0.50
SELENIUM	PPM	BDL	0.10

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Lab I.D.#: 88-0869B-9
Order Date: 03/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-3(1-5')

Sample Date: 03/14/88 Time: N/S

EPTOX/METALS

EP TOXICITY-METALS ANALYSIS

Parameter	Units	Result	Detection Limit
SILVER	PPM	BDL	0.50
ARSENIC	PPM	BDL	0.50
BARIUM	PPM	BDL	1.0
CADMIUM	PPM	BDL	0.10
CHROMIUM	PPM	BDL	0.50
MERCURY	PPM	BDL	0.01
LEAD	PPM	BDL	0.50
SELENIUM	PPM	BDL	0.10

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Client: GERAGHTY & MILLER
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Lab I.D.#: 88-0869B-10
Order Date: 03/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-4(0-1') Sample Date: 03/14/88 Time: N/S

E.TOX/METALS EP TOXICITY-METALS ANALYSIS

Parameter	Units	Result	Detection Limit
SILVER	PPM	BDL	0.50
ARSENIC	PPM	BDL	0.50
BARIUM	PPM	BDL	1.0
CADMIUM	PPM	BDL	0.10
CHROMIUM	PPM	BDL	0.50
MERCURY	PPM	BDL	0.01
LEAD	PPM	BDL	0.50
SELENIUM	PPM	BDL	0.10

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL094 • FDER # FL070 • AL LAB ID # 40150 • NIOSH # 37514-001 • FL SNW # [illegible]

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Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-0869B-11
Order Date: 03/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-4(1-5') Sample Date: 03/14/88 Time: N/S

EPTOX/METALS EP TOXICITY-METALS ANALYSIS

Parameter	Units	Result	Detection Limit
SILVER	PPM	BDL	0.50
ARSENIC	PPM	BDL	0.50
BARIUM	PPM	BDL	1.0
CADMIUM	PPM	BDL	0.10
CHROMIUM	PPM	BDL	0.50
MERCURY	PPM	BDL	0.01
LEAD	PPM	BDL	0.50
SELENIUM	PPM	BDL	0.10

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Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-0869B-1
Order Date: 03/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-5(0-1') Sample Date: 03/14/88 Time: N/S

EPTOX/METALS EP TOXICITY-METALS ANALYSIS

Parameter	Units	Result	Detection Limit
SILVER	PPM	BDL	0.50
ARSENIC	PPM	BDL	0.50
BARIUM	PPM	BDL	1.0
CADMIUM	PPM	BDL	0.10
CHROMIUM	PPM	BDL	0.50
MERCURY	PPM	BDL	0.01
LEAD	PPM	BDL	0.50
SELENIUM	PPM	BDL	0.10

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Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-0869B-12
Order Date: 03/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-5(1-5') Sample Date: 03/14/88 Time: N/S

E.TOX/METALS EP TOXICITY-METALS ANALYSIS

Parameter	Units	Result	Detection Limit
SILVER	PPM	BDL	0.50
ARSENIC	PPM	BDL	0.50
BARIUM	PPM	BDL	1.0
CADMIUM	PPM	BDL	0.10
CHROMIUM	PPM	BDL	0.50
MERCURY	PPM	BDL	0.01
LEAD	PPM	BDL	0.50
SELENIUM	PPM	BDL	0.10

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL094 • FDER # FL020 • AL LAB ID # 40150 • NIOSH # 32514-001 • FL ENV # E81010

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Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-0869B-2
Order Date: 03/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-6(0-1') Sample Date: 03/14/88 Time: N/S

EPTOX/METALS EP TOXICITY-METALS ANALYSIS

Parameter	Units	Result	Detection Limit
SILVER	PPM	BDL	0.50
ARSENIC	PPM	BDL	0.50
BARIUM	PPM	BDL	1.0
CADMIUM	PPM	BDL	0.10
CHROMIUM	PPM	BDL	0.50
MERCURY	PPM	BDL	0.01
LEAD	PPM	BDL	0.50
SELENIUM	PPM	BDL	0.10

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PHONE (904) 474-1001

Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-0869B-13
Order Date: 03/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-6(1-5') Sample Date: 03/14/88 Time: N/S

EPTOX/METALS EP TOXICITY-METALS ANALYSIS

Parameter	Units	Result	Detection Limit
SILVER	PPM	BDL	0.50
ARSENIC	PPM	BDL	0.50
BARIUM	PPM	BDL	1.0
CADMIUM	PPM	BDL	0.10
CHROMIUM	PPM	BDL	0.50
MERCURY	PPM	BDL	0.01
LEAD	PPM	BDL	0.50
SELENIUM	PPM	BDL	0.10

CERTIFICATION NUMBERS: FL LAB ID = 81147 • FDA = FL 284 • FDER = FL 270 • AL LAB ID = 40150 • NJDEH = 73514 001 • FL ENV = E81010

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Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-0869B-16
Order Date: 03/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-6(1-5)DUP. Sample Date: 03/14/88 Time: N/S

EP-TOX/METALS EP TOXICITY-METALS ANALYSIS

Parameter	Units	Result	Detection Limit
SILVER	PPM	BDL	0.50
ARSENIC	PPM	BDL	0.50
BARIUM	PPM	BDL	1.0
CADMIUM	PPM	BDL	0.10
CHROMIUM	PPM	BDL	0.50
MERCURY	PPM	BDL	0.01
LEAD	PPM	BDL	0.50
SELENIUM	PPM	BDL	0.10

end of report

Pioneer LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-0869-1
Order Date: 03/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-1(1'-5')TCLP Sample Date: 03/14/88 Time: N/S

P/METALS PRIORITY POLLUTANTS-METALS ANALYSES

Parameter	Units	Result	Detection Limit
SILVER	PPM	BDL	0.50
ARSENIC	PPM	BDL	0.50
BERYLLIUM	PPM	BDL	1.0
CADMIUM	PPM	BDL	0.10
CHROMIUM	PPM	BDL	0.50
COPPER	PPM	BDL	0.10
MERCURY	PPM	BDL	0.01
NICKEL	PPM	BDL	0.50
LEAD	PPM	BDL	0.50
ANTIMONY	PPM	BDL	0.50
SELENIUM	PPM	BDL	0.10
THALLIUM	PPM	BDL	0.50
ZINC	PPM	BDL	0.10

CERTIFICATION NUMBERS: FL LAB ID = 81142 • EPA = FL094 • FDER = EL020 • AL LAB ID = 40150 • NIOSH = 32514-001 • FL ENV = E81010

Pioneer LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-0869-1
Order Date: 03/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-1(1'-5')TCLP Sample Date: 03/14/88 Time: N/S

TP/VOLATILE PRIORITY POLLUTANT VOLATILES

Parameter	Units	Result	Detection Limit
ACROLEIN	PPB	BDL	100
ACRYLONITRILE	PPB	BDL	100
BENZENE	PPB	BDL	1
BIS(CHLOROMETHYL) ETHER	PPB	BDL	5
BROMOFORM	PPB	BDL	5
CARBON TETRACHLORIDE	PPB	BDL	5
CHLOROBENZENE	PPB	BDL	1
CHLORODIBROMOMETHANE	PPB	BDL	5
CHLOROETHANE	PPB	BDL	5
CHLOROFORM	PPB	BDL	5
DICHLOROBROMOMETHANE	PPB	BDL	5
DICHLORODIFLUOROMETHANE	PPB	BDL	5
ETHYLBENZENE	PPB	BDL	1
METHYL BROMIDE	PPB	BDL	5
METHYL CHLORIDE	PPB	BDL	5
METHYLENE CHLORIDE	PPB	BDL	5
TETRACHLOROETHENE	PPB	BDL	5
TOLUENE	PPB	BDL	1
TRICHLOROETHYLENE	PPB	BDL	1
TRICHLOROFLUOROMETHANE	PPB	BDL	5
VINYL CHLORIDE	PPB	BDL	1
1,1,1-TRICHLOROETHANE	PPB	BDL	5
1,1,2,2-TETRACHLOROETHANE	PPB	BDL	5
1,1,2-TRICHLOROETHANE	PPB	BDL	5
1,1-DICHLOROETHANE	PPB	BDL	5
1,1-DICHLOROETHENE	PPB	BDL	5
1,2-DICHLOROETHANE	PPB	BDL	5
1,2-DICHLOROPROPANE	PPB	BDL	5
1,2DICHLOROPROPYLENE	PPB	BDL	5
1,2TRANSDICHLOROETHYLENE	PPB	BDL	5
2-CHLOROETHYLVINYL ETHER	PPB	BDL	5

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL094 • FDER # EL020 • AL LAB ID # 40150 • NIOSH # 32514-001 • FL ENV # E81010

Pioneer LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-0889-1
Order Date: 08/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-1(1'-5')TCLP Sample Date: 08/14/88 Time: N/S

PP/BASE/SOIL PP BASE/NEUTRAL EXTRACTABLES

Parameter	Units	Result	Detection Limit
ACENAPHTHENE	PPB	BDL	10
ACENAPHTHYLENE	PPB	BDL	10
ANTHRACENE	PPB	BDL	10
BENZIDINE	PPB	BDL	10
BENZO(A)ANTHRACENE	PPB	BDL	10
BENZO(A)PYRENE	PPB	BDL	10
BENZO(GHI)PERYLENE	PPB	BDL	10
BENZO(K)FLUORANTHANE	PPB	BDL	10
BIS(2-CHLOROETHOXY) METHANE	PPB	BDL	10
BIS(2-CHLOROETHYL)ETHER	PPB	BDL	10
BIS(2-CHLOROISOPROPYL)ETHER	PPB	BDL	10
BIS(2-ETHYLHEXYL)PHTHALATE	PPB	BDL	10
BUYTLBENZYL PHTHALATE	PPB	BDL	10
CHRYSENE	PPB	BDL	10
DIBENZO(A,H)ANTHRACENE	PPB	BDL	25
DIETHYLPHTHALATE	PPB	BDL	10
DIMETHYLPHTHALATE	PPB	BDL	10
DI-N-BUTYL PHTHALATE	PPB	BDL	10
DI-N-OCTYL-PHTHALATE	PPB	BDL	10
FLUORANTHENE	PPB	BDL	10
FLUORENE	PPB	BDL	10
HEXACHLOROBENZENE	PPB	BDL	10
HEXACHLOROBUTADIENE	PPB	BDL	10
HEXACHLOROCYCLOPENTADIENE	PPB	BDL	10
HEXACHLOROETHANE	PPB	BDL	10
INDENO(1,2,3-CD)PYRENE	PPB	BDL	10
ISOPHORONE	PPB	BDL	10
NAPHTHALENE	PPB	BDL	10
NITROBENZENE	PPB	BDL	10
N-NITROSODIMETHYLAMINE	PPB	BDL	10
N-NITROSODI-N-PROPYLAMINE	PPB	BDL	10
N-NITROSODIPHENYLAMINE	PPB	BDL	10
PHENANTHRENE	PPB	BDL	10
PYRENE	PPB	BDL	10
1,2,4-TRICHLOROBENZENE	PPB	BDL	10

Sample ID.: SB-1(1'-5')TCLP Test Parameters continued on next page

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL094 • FDER # EL020 • AL LAB ID # 40150 • NIOSH # 32514-001 • FL ENV # E81010

Pioneer LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-0889-1
Order Date: 03/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-1(1'-5')TCLP Sample Date: 03/14/88 Time: N/S

P/BASE/SOIL PP BASE/NEUTRAL EXTRACTABLES

Parameter	Units	Result	Detection Limit
1,2-DICHLOROBENZENE	PPB	BDL	10
1,2-DIPHENYLHYDRAZINE	PPB	BDL	10
1,3-DICHLOROBENZENE	PPB	BDL	10
1,4-DICHLOROBENZENE	PPB	BDL	10
2,4-DINITROTOLUENE	PPB	BDL	10
2,6DINITROTOLUENE	PPB	BDL	10
2-CHLORONAPHTHALENE	PPB	BDL	10
3,3-DICHLOROBENZIDINE	PPB	BDL	10
3,4-BENZOFLUORANTHENE	PPB	BDL	10
4-BROMOPHENYL PHENYL ETHER	PPB	BDL	10
4-CHLOROPHENYL PHENYL ETHER	PPB	BDL	10

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL094 • FDER # EL020 • AL LAB ID # 40150 • NIOSH # 32514-001 • FL ENV # E81010

Pioneer
PL LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
07001

Lab I.D.#: S8-0864-1
Order Date: 03/15/86
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-1(1'-5')TCLP Sample Date: 03/14/86 Time: N/S

TCLP/PESTICIDE PRIORITY POLLUTANT PESTICIDES

Parameter	Units	Result	Detection Limit
A-BHC	PPB	BDL	0.01
A-ENDOSULFAN I	PPB	BDL	0.01
ALDRIN	PPB	BDL	0.01
B-BHC	PPB	BDL	0.01
B-ENDOSULFAN II	PPB	BDL	0.01
CHLORODANE	PPB	BDL	0.01
D-BHC	PPB	BDL	0.01
DIELDRIN	PPB	BDL	0.01
ENDOSULFAN SULFATE	PPB	BDL	0.01
ENDRIN	PPB	BDL	0.07
ENDRIN ALDEHYDE	PPB	BDL	0.08
G-BHC (LINDANE)	PPB	BDL	0.01
HEPTACHLOR	PPB	BDL	0.01
HEPTACHLOR EPOXIDE	PPB	BDL	0.01
PCB-1016	PPB	BDL	0.2
PCB-1221	PPB	BDL	0.2
PCB-1232	PPB	BDL	0.2
PCB-1242	PPB	BDL	0.2
PCB-1248	PPB	BDL	0.2
PCB-1254	PPB	BDL	0.2
PCB-1260	PPB	BDL	0.2
TOXAPHENE	PPB	BDL	1
4,4'-DDD	PPB	BDL	0.01
4,4'-DDE	PPB	BDL	0.01
4.4'-DDT	PPB	BDL	0.01

CERTIFICATION NUMBERS: FL LAB ID # E1142 • EPA # FL094 • FDER # EL020 • AL LAB ID # 40150 • NIOSH # 32514-001 • FL ENV # E81010

Pioneer LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-0369-1
Order Date: 08/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-1(1'-5')TCLP Sample Date: 08/14/88 Time: N/S

P/ACID/SOIL PP ACID EXTRACTABLES

Parameter	Units	Result	Detection Limit
P-CHLORO-M-CRESOL	PPB	BDL	28
PENTACHLOROPHENOL	PPB	BDL	30
PHENOL	PPB	BDL	8
2,4,6-TRICHLOROPHENOL	PPB	BDL	90
2,4-DICHLOROPHENOL	PPB	BDL	10
2,4-DIMETHYLPHENOL	PPB	BDL	8
2,4-DINITROPHENOL	PPB	BDL	30
2-CHLOROPHENOL	PPB	BDL	18
2-NITROPHENOL	PPB	BDL	10
4,6-DINITRO-O-CRESOL	PPB	BDL	30
4-NITROPHENOL	PPB	BDL	20

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL094 • FDER # EL030 • AL LAB ID # 40150 • NIOSH # 32514-001 • FL ENV # E81010

Pioneer LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
CTC01

Lab I.D.#: 88-0869-2
Order Date: 03/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-8(1'-5')TCLP Sample Date: 03/14/88 Time: N/S

TCLP/METALS PRIORITY POLLUTANTS-METALS ANALYSES

Parameter	Units	Result	Detection Limit
SILVER	PPM	BDL	0.50
ARSENIC	PPM	BDL	0.50
BERYLLIUM	PPM	BDL	1.0
CADMIUM	PPM	BDL	0.10
CHROMIUM	PPM	BDL	0.50
COPPER	PPM	BDL	0.10
MERCURY	PPM	BDL	0.01
NICKEL	PPM	BDL	0.50
LEAD	PPM	BDL	0.50
ANTIMONY	PPM	BDL	0.50
SELENIUM	PPM	BDL	0.10
THALLIUM	PPM	BDL	0.50
ZINC	PPM	BDL	0.10

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL094 • FDER # EL020 • AL LAB ID # 40150 • NIOSH # 32514-001 • FL ENV # E81010

Pioneer LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
07001

Lab I.D.#: 86-0869-2
Order Date: 03/15/86
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-3(1'-5')TCLP Sample Date: 03/14/86 Time: N/S

PP/VOLATILE PRIORITY POLLUTANT VOLATILES

Parameter	Units	Result	Detection Limit
ACROLEIN	PPB	BDL	100
ACRYLONITRILE	PPB	BDL	100
BENZENE	PPB	BDL	1
BIS(CHLOROMETHYL) ETHER	PPB	BDL	5
BROMOFORM	PPB	BDL	5
CARBON TETRACHLORIDE	PPB	BDL	3
CHLOROBENZENE	PPB	BDL	1
CHLORODIBROMOMETHANE	PPB	BDL	5
CHLOROETHANE	PPB	BDL	5
CHLOROFORM	PPB	BDL	5
DICHLOROBROMOMETHANE	PPB	BDL	5
DICHLORODIFLUOROMETHANE	PPB	BDL	5
ETHYLBENZENE	PPB	BDL	1
METHYL BROMIDE	PPB	BDL	5
METHYL CHLORIDE	PPB	BDL	5
METHYLENE CHLORIDE	PPB	BDL	5
TETRACHLOROETHENE	PPB	BDL	3
TOLUENE	PPB	BDL	1
TRICHLOROETHYLENE	PPB	BDL	1
TRICHLOROFLUOROMETHANE	PPB	BDL	5
VINYL CHLORIDE	PPB	BDL	1
1,1,1-TRICHLOROETHANE	PPB	BDL	5
1,1,2,2-TETRACHLOROETHANE	PPB	BDL	5
1,1,2-TRICHLOROETHANE	PPB	BDL	5
1,1-DICHLOROETHANE	PPB	BDL	5
1,1-DICHLOROETHENE	PPB	BDL	5
1,2-DICHLOROETHANE	PPB	BDL	3
1,2-DICHLOROPROPANE	PPB	BDL	5
1,2DICHLOROPROPYLENE	PPB	BDL	5
1,2TRANSDICHLOROETHYLENE	PPB	BDL	5
2-CHLOROETHYLVINYL ETHER	PPB	BDL	5

CERTIFICATION NUMBERS: FL LAB ID = 81142 • EPA = FL094 • FDER = EL020 • AL LAB ID = 40150 • NIOSH = 325:4-001 • FL ENV = E81010

Pioneer
PLI LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
OT001

Lab I.D.#: 88-0869-2
Order Date: 03/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-3(1'-5')TCLP Sample Date: 03/14/88 Time: N/S

P/BASE/SOIL PP BASE/NEUTRAL EXTRACTABLES

Parameter	Units	Result	Detection Limit
1,2-DICHLOROBENZENE	PPB	BDL	10
1,2-DIPHENYLHYDRAZINE	PPB	BDL	10
1,3-DICHLOROBENZENE	PPB	BDL	10
1,4-DICHLOROBENZENE	PPB	BDL	10
2,4-DINITROTOLUENE	PPB	BDL	10
2,6DINITROTOLUENE	PPB	BDL	10
2-CHLORONAPHTHALENE	PPB	BDL	10
3,3-DICHLOROBENZIDINE	PPB	BDL	10
3,4-BENZOFLUORANTHENE	PPB	BDL	10
4-BROMOPHENYL PHENYL ETHER	PPB	BDL	10
4-CHLOROPHENYL PHENYL ETHER	PPB	BDL	10

CERTIFICATION NUMBERS: FL LAB D # 81142 • EPA # FL094 • FDER # EL020 • AL LAB D # 40150 • NIOSH # 32514-001 • FL ENV # E81010

Pioneer LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-0869-0
Order Date: 06/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-3(1'-5')ICLP Sample Date: 06/14/88 Time: N/S

PP/BASE/SOIL PP BASE/NEUTRAL EXTRACTABLES

Parameter	Units	Result	Detection Limit
ACENAPHTHENE	PPB	BDL	10
ACENAPHTHYLENE	PPB	BDL	10
ANTHRACENE	PPB	BDL	10
BENZIDINE	PPB	BDL	10
BENZO(A)ANTHRACENE	PPB	BDL	10
BENZO(A)PYRENE	PPB	BDL	10
BENZO(GHI)PERYLENE	PPB	BDL	10
BENZO(K)FLUORANTHANE	PPB	BDL	10
BIS(2-CHLOROETHOXY) METHANE	PPB	BDL	10
BIS(2-CHLOROETHYL)ETHER	PPB	BDL	10
BIS(2-CHLOROISOPROPYL)ETHER	PPB	BDL	10
BIS(2-ETHYLHEXYL)PHTHALATE	PPB	BDL	10
BUYTLBENZYL PHTHALATE	PPB	BDL	10
CHRYSENE	PPB	BDL	10
DIBENZO(A,H)ANTHRACENE	PPB	BDL	25
DIETHYLPHTHALATE	PPB	BDL	10
DIMETHYLPHTHALATE	PPB	BDL	10
DI-N-BUTYL PHTHALATE	PPB	BDL	10
DI-N-OCTYL-PHTHALATE	PPB	BDL	10
FLUORANTHENE	PPB	BDL	10
FLUORENE	PPB	BDL	10
HEXACHLOROBENZENE	PPB	BDL	10
HEXACHLOROBUTADIENE	PPB	BDL	10
HEXACHLOROCYCLOPENTADIENE	PPB	BDL	10
HEXACHLOROETHANE	PPB	BDL	10
INDENO(1,2,3-CD)PYRENE	PPB	BDL	10
ISOPHORONE	PPB	BDL	10
NAPHTHALENE	PPB	BDL	10
NITROBENZENE	PPB	BDL	10
N-NITROSODIMETHYLAMINE	PPB	BDL	10
N-NITROSODI-N-PROPYLAMINE	PPB	BDL	10
N-NITROSODIPHENYLAMINE	PPB	BDL	10
PHENANTHRENE	PPB	BDL	10
PYRENE	PPB	BDL	10
1,2,4-TRICHLOROBENZENE	PPB	BDL	10

Sample ID.: SB-3(1'-5')ICLP Test Parameters continued on next page

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL094 • FDER # EL020 • AL LAB ID # 40180 • MDSH # 32514001 • FL ENV # E81010

Pioneer LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-0869-2
Order Date: 08/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-3(1'-5')TCLP Sample Date: 08/14/88 Time: N/S

PP/ACID/SOIL PP ACID EXTRACTABLES

Parameter	Units	Result	Detection Limit
P-CHLORO-M-CRESOL	PPB	BDL	25
PENTACHLOROPHENOL	PPB	BDL	30
PHENOL	PPB	BDL	5
2,4,6-TRICHLOROPHENOL	PPB	BDL	20
2,4-DICHLOROPHENOL	PPB	BDL	10
2,4-DIMETHYLPHENOL	PPB	BDL	5
2,4-DINITROPHENOL	PPB	BDL	30
2-CHLOROPHENOL	PPB	BDL	15
2-NITROPHENOL	PPB	BDL	10
4,6-DINITRO-O-CRESOL	PPB	BDL	50
4-NITROPHENOL	PPB	BDL	20

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL094 • FDER # EL020 • AL LAB ID # 40150 • NIOSH # 32514-001 • FL ENV # E81010

Pioneer LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-0889-2
Order Date: 08/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-8(1'-5')TCLP Sample Date: 08/14/88 Time: N S

CP/PESTICIDE PRIORITY POLLUTANT PESTICIDES

Parameter	Units	Result	Detection Limit
A-BHC	PPB	BDL	0.01
A-ENDOSULFAN I	PPB	BDL	0.01
ALDRIN	PPB	BDL	0.01
B-BHC	PPB	BDL	0.01
B-ENDOSULFAN II	PPB	BDL	0.01
CHLORODANE	PPB	BDL	0.01
D-BHC	PPB	BDL	0.01
DIELDRIN	PPB	BDL	0.01
ENDOSULFAN SULFATE	PPB	BDL	0.01
ENDRIN	PPB	BDL	0.07
ENDRIN ALDEHYDE	PPB	BDL	0.07
G-BHC (LINDANE)	PPB	BDL	0.03
HEPTACHLOR	PPB	BDL	0.01
HEPTACHLOR EPOXIDE	PPB	BDL	0.01
PCB-1016	PPB	BDL	0.2
PCB-1221	PPB	BDL	0.2
PCB-1232	PPB	BDL	0.2
PCB-1242	PPB	BDL	0.2
PCB-1248	PPB	BDL	0.2
PCB-1254	PPB	BDL	0.2
PCB-1260	PPB	BDL	0.2
TOXAPHENE	PPB	BDL	1
4,4'-DDD	PPB	BDL	0.01
4,4'-DDE	PPB	BDL	0.01
4,4'-DDT	PPB	BDL	0.01

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL094 • FDER # EL020 • AL LAB ID # 40150 • NIOSH # 32514-001 • FL ENV # E81010

Pioneer
PL LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
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Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-0869-3
Order Date: 03/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-4(1'-5')TCLP Sample Date: 03/14/88 Time: N/S

TP/METALS PRIORITY POLLUTANTS-METALS ANALYSIS

Parameter	Units	Result	Detection Limit
SILVER	PPM	BDL	0.50
ARSENIC	PPM	BDL	0.50
BERYLLIUM	PPM	BDL	1.0
CADMIUM	PPM	BDL	0.10
CHROMIUM	PPM	BDL	0.50
COPPER	PPM	BDL	0.10
MERCURY	PPM	BDL	0.01
NICKEL	PPM	BDL	0.50
LEAD	PPM	BDL	0.50
ANTIMONY	PPM	BDL	0.50
SELENIUM	PPM	BDL	0.10
THALLIUM	PPM	BDL	0.50
ZINC	PPM	BDL	0.10

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL094 • FDER # EL020 • AL LAB ID # 40150 • NIOSH # 32514-001 • FL ENV # E81010

Pioneer LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-0869-3
Order Date: 03/15/88
Sampled By: M. O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-4(1'-5')SCLP Sample Date: 03/14/88 Time: N/A

P/VOLATILE PRIORITY POLLUTANT VOLATILES

Parameter	Units	Result	Detection Limit
ACROLEIN	PPB	BDL	100
ACRYLONITRILE	PPB	BDL	100
BENZENE	PPB	BDL	1
BIS(CHLOROMETHYL) ETHER	PPB	BDL	5
BROMOFORM	PPB	BDL	5
CARBON TETRACHLORIDE	PPB	BDL	3
CHLOROBENZENE	PPB	BDL	1
CHLORODIBROMOMETHANE	PPB	BDL	5
CHLOROETHANE	PPB	BDL	5
CHLOROFORM	PPB	BDL	5
DICHLOROBROMOMETHANE	PPB	BDL	5
DICHLORODIFLUOROMETHANE	PPB	BDL	5
ETHYLBENZENE	PPB	BDL	1
METHYL BROMIDE	PPB	BDL	5
METHYL CHLORIDE	PPB	BDL	5
METHYLENE CHLORIDE	PPB	BDL	5
TETRACHLOROETHENE	PPB	BDL	3
TOLUENE	PPB	BDL	1
TRICHLOROETHYLENE	PPB	BDL	1
TRICHLOROFLUOROMETHANE	PPB	BDL	5
VINYL CHLORIDE	PPB	BDL	1
1,1,1-TRICHLOROETHANE	PPB	BDL	5
1,1,2,2-TETRACHLOROETHANE	PPB	BDL	5
1,1,2-TRICHLOROETHANE	PPB	BDL	5
1,1-DICHLOROETHANE	PPB	BDL	5
1,1-DICHLOROETHENE	PPB	BDL	5
1,2-DICHLOROETHANE	PPB	BDL	3
1,2-DICHLOROPROPANE	PPB	BDL	5
1,2DICHLOROPROPYLENE	PPB	BDL	5
1,2TRANSDICHLOROETHYLENE	PPB	BDL	5
2-CHLOROETHYLVINYL ETHER	PPB	BDL	5

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL094 • FDER # EL020 • AL LAB ID # 40150 • NIOSH # 32514-001 • FL ENV # E81010

Pioneer
PLI LABORATORY, INC
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-0868-3
Order Date: 08/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-4(4'-5')TCLP Sample Date: 08/14/88 Time: N/S

P/BASE/SOIL PP BASE/NEUTRAL EXTRACTABLES

Parameter	Units	Result	Detection Limit
1,2-DICHLOROBENZENE	PPB	BDL	10
1,2-DIPHENYLHYDRAZINE	PPB	BDL	10
1,3-DICHLOROBENZENE	PPB	BDL	10
1,4-DICHLOROBENZENE	PPB	BDL	10
2,4-DINITROTOLUENE	PPB	BDL	10
2,6DINITROTOLUENE	PPB	BDL	10
2-CHLORONAPHTHALENE	PPB	BDL	10
3,3-DICHLOROBENZIDINE	PPB	BDL	10
3,4-BENZOFLUORANTHENE	PPB	BDL	10
4-BROMOPHENYL PHENYL ETHER	PPB	BDL	10
4-CHLOROPHENYL PHENYL ETHER	PPB	BDL	10

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL094 • FDER # EL020 • AL LAB ID # 40150 • NIOSH # 3251-4001 • FL ENV # E81010

Pioneer LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
CT001

Lab I.D.#: 86-0869-3
Order Date: 06/18/86
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-4(1'-5')TCLP Sample Date: 06/14/86 Time: N/S

P/BASE/SOIL PP BASE/NEUTRAL EXTRACTABLES

Parameter	Units	Result	Detection Limit
ACENAPHTHENE	PPB	BDL	10
ACENAPHTHYLENE	PPB	BDL	10
ANTHRACENE	PPB	BDL	10
BENZIDINE	PPB	BDL	10
BENZO(A)ANTHRACENE	PPB	BDL	10
BENZO(A)PYRENE	PPB	BDL	10
BENZO(GHI)PERYLENE	PPB	BDL	10
BENZO(K)FLUORANTHANE	PPB	BDL	10
BIS(2-CHLOROETHOXY) METHANE	PPB	BDL	10
BIS(2-CHLOROETHYL)ETHER	PPB	BDL	10
BIS(2-CHLOROISOPROPYL)ETHER	PPB	BDL	10
BIS(2-ETHYLHEXYL)PHTHALATE	PPB	BDL	10
BUTYLBENZYL PHTHALATE	PPB	BDL	10
CHRYSENE	PPB	BDL	10
DIBENZO(A,H)ANTHRACENE	PPB	BDL	25
DIETHYLPHTHALATE	PPB	BDL	10
DIMETHYLPHTHALATE	PPB	BDL	10
DI-N-BUTYL PHTHALATE	PPB	BDL	10
DI-N-OCTYL-PHTHALATE	PPB	BDL	10
FLUORANTHENE	PPB	BDL	10
FLUORENE	PPB	BDL	10
HEXACHLOROBENZENE	PPB	BDL	10
HEXACHLOROBUTADIENE	PPB	BDL	10
HEXACHLOROCYCLOPENTADIENE	PPB	BDL	10
HEXACHLOROETHANE	PPB	BDL	10
INDENO(1,2,3-CD)PYRENE	PPB	BDL	10
ISOPHORONE	PPB	BDL	10
NAPHTHALENE	PPB	BDL	10
NITROBENZENE	PPB	BDL	10
N-NITROSODIMETHYLAMINE	PPB	BDL	10
N-NITROSODI-N-PROPYLAMINE	PPB	BDL	10
N-NITROSODIPHENYLAMINE	PPB	BDL	10
PHENANTHRENE	PPB	BDL	10
PYRENE	PPB	BDL	10
1,2,4-TRICHLOROBENZENE	PPB	BDL	10

Sample ID.: SB-4(1'-5')TCLP Test Parameters continued on next page

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL094 • FDER # EL020 • AL LAB ID # 40150 • NIOSH # 3251-A001 • FL ENV # E81010

Pioneer LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
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Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-0869-9
Order Date: 09/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-4(1'-5')TCLP Sample Date: 09/14/88 Time: N/S

PP/ACID/SOIL PP ACID EXTRACTABLES

Parameter	Units	Result	Detection Limit
P-CHLORO-M-CRESOL	PPB	BDL	15
PENTACHLOROPHENOL	PPB	BDL	30
PHENOL	PPB	BDL	5
2,4,6-TRICHLOROPHENOL	PPB	BDL	20
2,4-DICHLOROPHENOL	PPB	BDL	10
2,4-DIMETHYLPHENOL	PPB	BDL	5
2,4-DINITROPHENOL	PPB	BDL	30
2-CHLOROPHENOL	PPB	BDL	15
2-NITROPHENOL	PPB	BDL	10
4,6-DINITRO-O-CRESOL	PPB	BDL	50
4-NITROPHENOL	PPB	BDL	20

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL094 • FDER # EL020 • ALLAB ID # 40150 • NIOSH # 32514-001 • FL ENV # E81010

Pioneer LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-0866-[illegible]
Order Date: 08/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-4(1'-5')TCLP Sample Date: 08/14/88 Time: [illegible]

TCLP/PESTICIDE PRIORITY POLLUTANT PESTICIDES

Parameter	Units	Result	Detection Limit
A-BHC	PPB	BDL	0.01
A-ENDOSULFAN I	PPB	BDL	0.01
ALDRIN	PPB	BDL	0.01
B-BHC	PPB	BDL	0.01
B-ENDOSULFAN II	PPB	BDL	0.01
CHLORODANE	PPB	BDL	0.01
D-BHC	PPB	BDL	0.01
DIELDRIN	PPB	BDL	0.01
ENDOSULFAN SULFATE	PPB	BDL	0.01
ENDRIN	PPB	BDL	0.07
ENDRIN ALDEHYDE	PPB	BDL	0.08
G-BHC (LINDANE)	PPB	BDL	0.01
HEPTACHLOR	PPB	BDL	0.01
HEPTACHLOR EPOXIDE	PPB	BDL	0.01
PCB-1016	PPB	BDL	0.2
PCB-1221	PPB	BDL	0.2
PCB-1232	PPB	BDL	0.2
PCB-1242	PPB	BDL	0.2
PCB-1248	PPB	BDL	0.2
PCB-1254	PPB	BDL	0.2
PCB-1260	PPB	BDL	0.2
TOXAPHENE	PPB	BDL	1
4,4'-DDD	PPB	BDL	0.01
4,4'-DDE	PPB	BDL	0.01
4,4'-DDT	PPB	BDL	0.01

CERTIFICATION NUMBERS: FL LAB ID # E[illegible]142 • EPA # FL094 • FDER # EL020 • AL LAB ID # 40150 • NIOSH # 32514-001 • FL ENV # E81010

Pioneer
PLI LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
07001

Lab I.D.#: 06-0469-1
Order Date: 06/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-1(1'-5') Sample Date: 06/14/88 Time: N/S

'P/METALS PRIORITY POLLUTANTS-METALS ANALYSES

Parameter	Units	Result	Detection Limit
SILVER	PPM	BDL	5
ARSENIC	PPM	BDL	10
BERYLLIUM	PPM	BDL	1
CADMIUM	PPM	BDL	1
CHROMIUM	PPM	6	1
COPPER	PPM	7	1
MERCURY	PPM	0.35	0.02
NICKEL	PPM	BDL	5
LEAD	PPM	13	5
ANTIMONY	PPM	BDL	5
SELENIUM	PPM	BDL	15
THALLIUM	PPM	BDL	30
ZINC	PPM	4	1

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL094 • FDER # EL020 • AL LAB ID # 40150 • NIOSH # 32514-001 • FL ENV # E81010

Pioneer LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-0869-1
Order Date: 03/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-1(1'-5') Sample Date: 03/14/88 Time: N/S

P/VOLATILE PRIORITY POLLUTANT VOLATILES

Parameter	Units	Result	Detection Limit
ACROLEIN	PPB	BDL	100
ACRYLONITRILE	PPB	BDL	100
BENZENE	PPB	BDL	1
BIS(CHLOROMETHYL) ETHER	PPB	BDL	5
BROMOFORM	PPB	BDL	5
CARBON TETRACHLORIDE	PPB	BDL	3
CHLOROBENZENE	PPB	BDL	1
CHLORODIBROMOMETHANE	PPB	BDL	5
CHLOROETHANE	PPB	BDL	5
CHLOROFORM	PPB	BDL	5
DICHLOROBROMOMETHANE	PPB	BDL	5
DICHLORODIFLUOROMETHANE	PPB	BDL	5
ETHYLBENZENE	PPB	BDL	1
METHYL BROMIDE	PPB	BDL	5
METHYL CHLORIDE	PPB	BDL	5
METHYLENE CHLORIDE	PPB	BDL	5
TETRACHLOROETHENE	PPB	BDL	3
TOLUENE	PPB	BDL	1
TRICHLOROETHYLENE	PPB	BDL	1
TRICHLOROFLUOROMETHANE	PPB	BDL	5
VINYL CHLORIDE	PPB	BDL	1
1,1,1-TRICHLOROETHANE	PPB	BDL	5
1,1,2,2-TETRACHLOROETHANE	PPB	BDL	5
1,1,2-TRICHLOROETHANE	PPB	BDL	5
1,1-DICHLOROETHANE	PPB	BDL	5
1,1-DICHLOROETHENE	PPB	BDL	5
1,2-DICHLOROETHANE	PPB	BDL	3
1,2-DICHLOROPROPANE	PPB	BDL	5
1,2DICHLOROPROPYLENE	PPB	BDL	5
1,2TRANSDICHLOROETHYLENE	PPB	BDL	5
2-CHLOROETHYLVINYL ETHER	PPB	BDL	5

CERTIFICATION NUMBERS: FL LAB ID = 81142 • EPA = FL094 • FDER = EL020 • AL LAB ID = 40150 • NIOSH = 32514-001 • FL ENV = E91010

Pioneer LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-0888-1
Order Date: 08/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-1(1'-5') Sample Date: 08/14/88 Time: N/S

TP/BASE/SOIL PP BASE/NEUTRAL EXTRACTABLES

Parameter	Units	Result	Detection Limit
ACENAPHTHENE	PPM	BDL	1
ACENAPHTHYLENE	PPM	BDL	1
ANTHRACENE	PPM	BDL	1
BENZIDINE	PPM	BDL	1
BENZO(A)ANTHRACENE	PPM	BDL	1
BENZO(A)PYRENE	PPM	BDL	1
BENZO(GHI)PERYLENE	PPM	BDL	1
BENZO(K)FLUORANTHANE	PPM	BDL	1
BIS(2-CHLOROETHOXY) METHANE	PPM	BDL	1
BIS(2-CHLOROETHYL)ETHER	PPM	BDL	1
BIS(2-CHLOROISOPROPYL)ETHER	PPM	BDL	1
BIS(2-ETHYLHEXYL)PHTHALATE	PPM	BDL	1
BUTYLBENZYL PHTHALATE	PPM	BDL	1
CHRYSENE	PPM	BDL	1
DIBENZO(A,H)ANTHRACENE	PPM	BDL	3
DIETHYLPHTHALATE	PPM	BDL	1
DIMETHYLPHTHALATE	PPM	BDL	1
DI-N-BUTYL PHTHALATE	PPM	BDL	1
DI-N-OCTYL-PHTHALATE	PPM	BDL	1
FLUORANTHENE	PPM	BDL	1
FLUORENE	PPM	BDL	1
HEXACHLOROBENZENE	PPM	BDL	1
HEXACHLOROBUTADIENE	PPM	BDL	1
HEXACHLOROCYCLOPENTADIENE	PPM	BDL	1
HEXACHLOROETHANE	PPM	BDL	1
INDENO(1,2,3-CD)PYRENE	PPM	BDL	1
ISOPHORONE	PPM	BDL	1
NAPHTHALENE	PPM	BDL	1
NITROBENZENE	PPM	BDL	1
N-NITROSODIMETHYLAMINE	PPM	BDL	1
N-NITROSODI-N-PROPYLAMINE	PPM	BDL	1
N-NITROSODIPHENYLAMINE	PPM	BDL	1
PHENANTHRENE	PPM	BDL	1
PYRENE	PPM	BDL	1
1,2,4-TRICHLOROBENZENE	PPM	BDL	1

Sample ID.: SB-1(1'-5') Test Parameters continued on next page

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL094 • FDER # EL030 • AL LAB ID # 40150 • NIOSH # 32514-001 • FL ENV # 281010

Pioneer LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
07001

Lab I.D.#: 86-0869-1
Order Date: 06/15/86
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-1(1'-5') Sample Date: 06/14/86 Time: N/S

TP/BASE/SOIL PP BASE/NEUTRAL EXTRACTABLES

Parameter	Units	Result	Detection Limit
1,2-DICHLOROBENZENE	PPM	BDL	1
1,2-DIPHENYLHYDRAZINE	PPM	BDL	1
1,3-DICHLOROBENZENE	PPM	BDL	1
1,4-DICHLOROBENZENE	PPM	BDL	1
2,4-DINITROTOLUENE	PPM	BDL	1
2,6DINITROTOLUENE	PPM	BDL	1
2-CHLORONAPHTHALENE	PPM	BDL	1
3,3-DICHLOROBENZIDINE	PPM	BDL	1
3,4-BENZOFLUORANTHENE	PPM	BDL	1
4-BROMOPHENYL PHENYL ETHER	PPM	BDL	1
4-CHLOROPHENYL PHENYL ETHER	PPM	BDL	1

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL094 • FDER # EL020 • AL LAB ID # 40150 • NIOSH # 32514-001 • FL ENV # E81010

Pioneer LABORATORY, INC.

11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-0889-1
Order Date: 08/18/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-1(1'-5') Sample Date: 08/14/88 Time: N/S

PP/ACID/SOIL PP ACID EXTRACTABLES

Parameter	Units	Result	Detection Limit
P-CHLORO-M-CRESOL	PPM	BDL	8
PENTACHLOROPHENOL	PPM	BDL	8
PHENOL	PPM	BDL	1
2,4,6-TRICHLOROPHENOL	PPM	BDL	4
2,4-DICHLOROPHENOL	PPM	BDL	2
2,4-DIMETHYLPHENOL	PPM	BDL	1
2,4-DINITROPHENOL	PPM	BDL	8
2-CHLOROPHENOL	PPM	BDL	3
2-NITROPHENOL	PPM	BDL	2
4,6-DINITRO-O-CRESOL	PPM	BDL	10
4-NITROPHENOL	PPM	BDL	4

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL094 • FDER # EL030 • AL LAB ID # 40150 • NIOSH # 32514-001 • FL ENV. # E81010

Pioneer LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: SIRAGHTY & MILLER
17001

Lab I.D.#: 88-0069-[illegible]
Order Date: 09/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-1(1'-5') Sample Date: 08/14/88 Time: N/S

P/PESTICIDE PRIORITY POLLUTANT PESTICIDES

Parameter	Units	Result	Detection Limit
A-BHC	PPB	BDL	2.5
A-ENDOSULFAN I	PPB	BDL	2.5
ALDRIN	PPB	BDL	2.5
B-BHC	PPB	BDL	2.5
B-ENDOSULFAN II	PPB	BDL	2.5
CHLORODANE	PPB	BDL	2.5
D-BHC	PPB	BDL	2.5
DIELDRIN	PPB	BDL	2.5
ENDOSULFAN SULFATE	PPB	BDL	2.5
ENDRIN	PPB	BDL	17.5
ENDRIN ALDEHYDE	PPB	BDL	7.5
G-BHC (LINDANE)	PPB	BDL	2.5
HEPTACHLOR	PPB	BDL	2.5
HEPTACHLOR EPOXIDE	PPB	BDL	2.5
PCB-1016	PPB	BDL	50
PCB-1221	PPB	BDL	50
PCB-1232	PPB	BDL	50
PCB-1242	PPB	BDL	50
PCB-1248	PPB	BDL	50
PCB-1254	PPB	BDL	50
PCB-1260	PPB	BDL	50
TOXAPHENE	PPB	BDL	250
4,4'-DDD	PPB	BDL	2.5
4,4'-DDE	PPB	BDL	2.5
4,4'-DDT	PPB	BDL	2.5

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL094 • FDER # EL020 • AL LAB ID # 40150 • NIOSH # 3251 4001 • FL ENV # E81010

Pioneer LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
STUDY

Lab I.D.#: 9[illegible]-[illegible]-2
Order Date: [illegible]
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-8(1'-5') Sample Date: [illegible] Time: N/A

PP/METALS PRIORITY POLLUTANTS-METALS ANALYSES

Parameter	Units	Result	Detection Limit
SILVER	PPM	BDL	5
ARSENIC	PPM	BDL	10
BERYLLIUM	PPM	BDL	1
CADMIUM	PPM	BDL	1
CHROMIUM	PPM	2	1
COPPER	PPM	8	1
MERCURY	PPM	BDL	0.02
NICKEL	PPM	BDL	5
LEAD	PPM	8	5
ANTIMONY	PPM	BDL	5
SELENIUM	PPM	BDL	15
THALLIUM	PPM	BDL	50
ZINC	PPM	8	1

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL084 • FLDEP # EL020 • AL LAB ID # 40150 • NIOSH # 32514-001 • FL ENV # E81040

Pioneer LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-1450-2
Order Date: 08/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-8(1'-3') Sample Date: 08/14/88 Time: N/A

PP/VOLATILE PRIORITY POLLUTANT VOLATILES

Parameter	Units	Result	Detection Limit
ACROLEIN	PPB	BDL	100
ACRYLONITRILE	PPB	BDL	100
BENZENE	PPB	BDL	1
BIS(CHLOROMETHYL) ETHER	PPB	BDL	5
BROMOFORM	PPB	BDL	5
CARBON TETRACHLORIDE	PPB	BDL	5
CHLOROBENZENE	PPB	BDL	1
CHLORODIBROMOMETHANE	PPB	BDL	5
CHLOROETHANE	PPB	BDL	5
CHLOROFORM	PPB	BDL	5
DICHLOROBROMOMETHANE	PPB	BDL	5
DICHLORODIFLUOROMETHANE	PPB	BDL	5
ETHYLBENZENE	PPB	BDL	1
METHYL BROMIDE	PPB	BDL	5
METHYL CHLORIDE	PPB	BDL	5
METHYLENE CHLORIDE	PPB	BDL	5
TETRACHLOROETHENE	PPB	BDL	5
TOLUENE	PPB	BDL	1
TRICHLOROETHYLENE	PPB	BDL	1
TRICHLOROFLUOROMETHANE	PPB	BDL	5
VINYL CHLORIDE	PPB	BDL	1
1,1,1-TRICHLOROETHANE	PPB	BDL	5
1,1,2,2-TETRACHLOROETHANE	PPB	BDL	5
1,1,2-TRICHLOROETHANE	PPB	BDL	5
1,1-DICHLOROETHANE	PPB	BDL	5
1,1-DICHLOROETHENE	PPB	BDL	5
1,2-DICHLOROETHANE	PPB	BDL	5
1,2-DICHLOROPROPANE	PPB	BDL	5
1,2DICHLOROPROPYLENE	PPB	BDL	5
1,2TRANSDICHLOROETHYLENE	PPB	BDL	5
2-CHLOROETHYLVINYL ETHER	PPB	BDL	5

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL094 • FDER # EL020 • AL LAB ID # 40150 • NIOSH # 3251-4001 • FL ENV # E81010

Pioneer
PLI LABORATORY, INC
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: [illegible] & MILLER
[illegible]

Lab I.D.#. [illegible]-[illegible]-2
Order Date: [illegible]/15/88
Sampled By: M. [illegible]

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-3(1'-5') Sample Date: [illegible]/14/88 Time: [illegible]

PP/BASE/SOIL PP BASE/NEUTRAL EXTRACTABLES

Parameter	Units	Result	Detection Limit
ACENAPHTHENE	PPM	BDL	1
ACENAPHTHYLENE	PPM	BDL	1
ANTHRACENE	PPM	BDL	1
BENZIDINE	PPM	BDL	1
BENZO(A)ANTHRACENE	PPM	BDL	1
BENZO(A)PYRENE	PPM	BDL	1
BENZO(GHI)PERYLENE	PPM	BDL	1
BENZO(K)FLUORANTHANE	PPM	BDL	1
BIS(2-CHLOROETHOXY) METHANE	PPM	BDL	1
BIS(2-CHLOROETHYL)ETHER	PPM	BDL	1
BIS(2-CHLOROISOPROPYL)ETHER	PPM	BDL	1
BIS(2-ETHYLHEXYL)PHTHALATE	PPM	BDL	1
BUTYLBENZYL PHTHALATE	PPM	BDL	1
CHRYSENE	PPM	BDL	1
DIBENZO(A,H)ANTHRACENE	PPM	BDL	1
DIETHYLPHTHALATE	PPM	BDL	1
DIMETHYLPHTHALATE	PPM	BDL	1
DI-N-BUTYL PHTHALATE	PPM	BDL	1
DI-N-OCTYL-PHTHALATE	PPM	BDL	1
FLUORANTHENE	PPM	BDL	1
FLUORENE	PPM	BDL	1
HEXACHLOROBENZENE	PPM	BDL	1
HEXACHLOROBUTADIENE	PPM	BDL	1
HEXACHLOROCYCLOPENTADIENE	PPM	BDL	1
HEXACHLOROETHANE	PPM	BDL	1
INDENO(1,2,3-CD)PYRENE	PPM	BDL	1
ISOPHORONE	PPM	BDL	1
NAPHTHALENE	PPM	BDL	1
NITROBENZENE	PPM	BDL	1
N-NITROSODIMETHYLAMINE	PPM	BDL	1
N-NITROSODI-N-PROPYLAMINE	PPM	BDL	1
N-NITROSODIPHENYLAMINE	PPM	BDL	1
PHENANTHRENE	PPM	BDL	1
PYRENE	PPM	BDL	1
1,2,4-TRICHLOROBENZENE	PPM	BDL	1

Sample ID.: SB-3(1'-5')

Test Parameters continued on next page

CERTIFICATION NUMBERS: FL LAB ID # [illegible] • EPA # FL094 • FDER # [illegible] • AL LAB ID # [illegible] • NELAP # 32514-001 • FL ENV # [illegible]

Pioneer
PLI LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
07001

Lab I.D.#: 88-[illegible]
Order Date: 08/18/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-9(1'-3') Sample Date: 08/14/88 Time: N/S

PP, BASE/SOIL PP BASE/NEUTRAL EXTRACTABLES

Parameter	Units	Result	Detection Limit
1,2-DICHLOROBENZENE	PPM	BDL	1
1,2-DIPHENYLHYDRAZINE	PPM	BDL	1
1,3-DICHLOROBENZENE	PPM	BDL	1
1,4-DICHLOROBENZENE	PPM	BDL	1
2,4-DINITROTOLUENE	PPM	BDL	1
2,6DINITROTOLUENE	PPM	BDL	1
2-CHLORONAPHTHALENE	PPM	BDL	1
3,3-DICHLOROBENZIDINE	PPM	BDL	1
3,4-BENZOFLUORANTHENE	PPM	BDL	1
4-BROMOPHENYL PHENYL ETHER	PPM	BDL	1
4-CHLOROPHENYL PHENYL ETHER	PPM	BDL	1

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL094 • FDER # EL020 • AL LAB ID # 40150 • NIOSH # 3251-4001 • FL ENV # E81010

Pioneer
PLI LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
ATTN:

Lab I.D.#: [illegible]
Order Date: 07/18/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-3(1'-3') Sample Date: 06/14/88 Time: N/S

PP/ACID/SOIL PP ACID EXTRACTABLES

Parameter	Units	Result	Detection Limit
P-CHLORO-M-CRESOL	PPM	BDL	8
PENTACHLOROPHENOL	PPM	BDL	6
PHENOL	PPM	BDL	1
2,4,6-TRICHLOROPHENOL	PPM	BDL	4
2,4-DICHLOROPHENOL	PPM	BDL	2
2,4-DIMETHYLPHENOL	PPM	BDL	1
2,4-DINITROPHENOL	PPM	BDL	3
2-CHLOROPHENOL	PPM	BDL	3
2-NITROPHENOL	PPM	BDL	2
4,6-DINITRO-O-CRESOL	PPM	BDL	10
4-NITROPHENOL	PPM	BDL	4

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL094 • FDER # E1020 • AL LAB ID # 40150 • NIOSH # 32514-001 • FL ENV # E81010

Pioneer LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
[illegible]

Lab I.D.#: [illegible]
Order Date: 08/15/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-8(1'-5') Sample Date: 08/14/88 Time: [illegible]

OP/PESTICIDE PRIORITY POLLUTANT PESTICIDES

Parameter	Units	Result	Detection Limit
A-BHC	PPB	BDL	2.5
A-ENDOSULFAN I	PPB	BDL	2.5
ALDRIN	PPB	BDL	2.5
B-BHC	PPB	BDL	2.5
B-ENDOSULFAN II	PPB	BDL	2.5
CHLORODANE	PPB	BDL	2.5
D-BHC	PPB	BDL	2.5
DIELDRIN	PPB	BDL	2.5
ENDOSULFAN SULFATE	PPB	BDL	2.5
ENDRIN	PPB	BDL	17.5
ENDRIN ALDEHYDE	PPB	BDL	7.5
G-BHC (LINDANE)	PPB	BDL	2.5
HEPTACHLOR	PPB	BDL	2.5
HEPTACHLOR EPOXIDE	PPB	BDL	2.5
PCB-1016	PPB	BDL	50
PCB-1221	PPB	BDL	50
PCB-1232	PPB	BDL	50
PCB-1242	PPB	BDL	50
PCB-1248	PPB	BDL	50
PCB-1254	PPB	BDL	50
PCB-1260	PPB	BDL	50
TOXAPHENE	PPB	BDL	250
4,4'-DDD	PPB	BDL	2.5
4,4'-DDE	PPB	BDL	2.5
4,4'-DDT	PPB	BDL	2.5

CERTIFICATION NUMBERS: FL LAB ID = 81142 • EPA # FL094 • FDER # EL000 • AL LAB ID # 40150 • NIOSH # 32514001 • FL ENV # E81010

Pioneer
PL LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
OTUO

Lab I.D.#: 88-0881-1
Order Date: [illegible]
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-4(1'-3') Sample Date: 08/14/88 Time: N/S

P/METALS PRIORITY POLLUTANTS-METALS ANALYSIS

Parameter	Units	Result	Detection Limit
SILVER	PPM	BDL	5
ARSENIC	PPM	BDL	10
BERYLLIUM	PPM	BDL	1
CADMIUM	PPM	BDL	1
CHROMIUM	PPM	2	1
COPPER	PPM	BDL	1
MERCURY	PPM	0.15	0.02
NICKEL	PPM	BDL	5
LEAD	PPM	6	3
ANTIMONY	PPM	BDL	1
SELENIUM	PPM	BDL	15
THALLIUM	PPM	BDL	10
ZINC	PPM	4	1

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL094 • FDER # EL020 • AL LAB ID # 40150 • NIOSH # 3251-4001 • FL ENV # E81010

Pioneer
PL LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
67001

Lab I.D.#: [illegible]
Date: [illegible]
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-4(11'-3') Sample Date: [illegible] Time: [illegible]

'B. VOLATILE PRIORITY POLLUTANT VOLATILES

Parameter	Units	Result	Detection Limit
ACROLEIN	PPB	BDL	100
ACRYLONITRILE	PPB	BDL	100
BENZENE	PPB	BDL	1
BIS(CHLOROMETHYL) ETHER	PPB	BDL	5
BROMOFORM	PPB	BDL	5
CARBON TETRACHLORIDE	PPB	BDL	5
CHLOROBENZENE	PPB	BDL	1
CHLORODIBROMOMETHANE	PPB	BDL	5
CHLOROETHANE	PPB	BDL	5
CHLOROFORM	PPB	BDL	1
DICHLOROBROMOMETHANE	PPB	BDL	5
DICHLORODIFLUOROMETHANE	PPB	BDL	
ETHYLBENZENE	PPB	BDL	1
METHYL BROMIDE	PPB	BDL	5
METHYL CHLORIDE	PPB	BDL	5
METHYLENE CHLORIDE	PPB	BDL	5
TETRACHLOROETHENE	PPB	BDL	5
TOLUENE	PPB	BDL	1
TRICHLOROETHYLENE	PPB	BDL	1
TRICHLOROFLUOROMETHANE	PPB	BDL	5
VINYL CHLORIDE	PPB	BDL	1
1,1,1-TRICHLOROETHANE	PPB	BDL	5
1,1,2,2-TETRACHLOROETHANE	PPB	BDL	5
1,1,2-TRICHLOROETHANE	PPB	BDL	5
1,1-DICHLOROETHANE	PPB	BDL	1
1,1-DICHLOROETHENE	PPB	BDL	5
1,2-DICHLOROETHANE	PPB	BDL	5
1,2-DICHLOROPROPANE	PPB	BDL	5
1,2DICHLOROPROPYLENE	PPB	BDL	5
1,2TRANSDICHLOROETHYLENE	PPB	BDL	5
2-CHLOROETHYLVINYL ETHER	PPB	BDL	5

end of report

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL094 • FDER # EL020 • AL LAB ID # 40160 • NIOSH # 32514-001 • FL ENV # E81010

Pioneer
PL LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
OTCAL

Lab I.D.#: [illegible]
Order Date: 08/16/88
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-4(1'-5') Sample Date: 08/14/88 Time: N/S

PP/BASE/SOIL PP BASE/NEUTRAL EXTRACTABLES

Parameter	Units	Result	Detection Limit
ACENAPHTHENE	PPM	BDL	1
ACENAPHTHYLENE	PPM	BDL	1
ANTHRACENE	PPM	BDL	1
BENZIDINE	PPM	BDL	1
BENZO(A)ANTHRACENE	PPM	BDL	1
BENZO(A)PYRENE	PPM	BDL	1
BENZO(GHI)PERYLENE	PPM	BDL	1
BENZO(K)FLUORANTHANE	PPM	BDL	1
BIS(2-CHLOROETHOXY) METHANE	PPM	BDL	1
BIS(2-CHLOROETHYL)ETHER	PPM	BDL	1
BIS(2-CHLOROISOPROPYL)ETHER	PPM	BDL	1
BIS(2-ETHYLHEXYL)PHTHALATE	PPM	BDL	1
BUTYLBENZYL PHTHALATE	PPM	BDL	1
CHRYSENE	PPM	BDL	1
DIBENZO(A,H)ANTHRACENE	PPM	BDL	1
DIETHYLPHTHALATE	PPM	BDL	1
DIMETHYLPHTHALATE	PPM	BDL	1
DI-N-BUTYL PHTHALATE	PPM	BDL	1
DI-N-OCTYL-PHTHALATE	PPM	BDL	1
FLUORANTHENE	PPM	BDL	1
FLUORENE	PPM	BDL	1
HEXACHLOROBENZENE	PPM	BDL	1
HEXACHLOROBUTADIENE	PPM	BDL	1
HEXACHLOROCYCLOPENTADIENE	PPM	BDL	1
HEXACHLOROETHANE	PPM	BDL	1
INDENO(1,2,3-CD)PYRENE	PPM	BDL	1
ISOPHORONE	PPM	BDL	1
NAPHTHALENE	PPM	BDL	1
NITROBENZENE	PPM	BDL	1
N-NITROSODIMETHYLAMINE	PPM	BDL	1
N-NITROSODI-N-PROPYLAMINE	PPM	BDL	1
N-NITROSODIPHENYLAMINE	PPM	BDL	1
PHENANTHRENE	PPM	BDL	1
PYRENE	PPM	BDL	1
1,2,4-TRICHLOROBENZENE	PPM	BDL	1

Sample ID.: SB-4(1'-5')

Test Parameters continued on next page

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL084 • FDER # EL030 • AL LAB ID # 40180 • NIOSH # 32514-001 • FL ENV # 88101C

Pioneer
PL LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
07001

Lab I.D.#: [illegible]
Order Date: [illegible]
Sampled By: M. O'HARAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-4(1'-5') Sample Date: 06/14/88 Time: N/S

PP/BASE/SOIL PP BASE/NEUTRAL EXTRACTABLES

Parameter	Units	Result	Detection Limit
1,2-DICHLOROBENZENE	PPM	BDL	1
1,2-DIPHENYLHYDRAZINE	PPM	BDL	1
1,3-DICHLOROBENZENE	PPM	BDL	1
1,4-DICHLOROBENZENE	PPM	BDL	1
2,4-DINITROTOLUENE	PPM	BDL	1
2,6DINITROTOLUENE	PPM	BDL	1
2-CHLORONAPHTHALENE	PPM	BDL	1
3,3-DICHLOROBENZIDINE	PPM	BDL	1
3,4-BENZOFLUORANTHENE	PPM	BDL	1
4-BROMOPHENYL PHENYL ETHER	PPM	BDL	1
4-CHLOROPHENYL PHENYL ETHER	PPM	BDL	1

CERTIFICATION NUMBERS: FL LAB ID # 87142 • EPA # FL094 • FDER # EL020 • AL LAB ID # 40150 • NIOSH # 32514-001 • FL ENV # E87010

Pioneer
PLI LABORATORY, INC.
11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
[illegible]

Lab I.D.#: [illegible]
Order Date: [illegible]
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-4(1'-5') Sample Date: [illegible] Time: [illegible]

F. ACID/SOIL PP ACID EXTRACTABLES

Parameter	Units	Result	Detection Limit
P-CHLORO-M-CRESOL	PPM	BDL	5
PENTACHLOROPHENOL	PPM	BDL	6
PHENOL	PPM	BDL	1
2,4,6-TRICHLOROPHENOL	PPM	BDL	4
2,4-DICHLOROPHENOL	PPM	BDL	2
2,4-DIMETHYLPHENOL	PPM	BDL	1
2,4-DINITROPHENOL	PPM	BDL	[illegible]
2-CHLOROPHENOL	PPM	BDL	3
2-NITROPHENOL	PPM	BDL	[illegible]
4,6-DINITRO-O-CRESOL	PPM	BDL	[illegible]
4-NITROPHENOL	PPM	BDL	[illegible]

CERTIFICATION NUMBERS: FL LAB ID #[illegible] • EPA # FL094 • FDER # EL020 • AL LAB ID # 40180 • NIOSH # 325[illegible] • FL ENV # E81010

Pioneer LABORATORY, INC.

11 EAST OLIVE ROAD PENSACOLA, FLORIDA 32514
PHONE (904) 474-1001

Client: GERAGHTY & MILLER
37301

Lab I.D.#: 80-[illegible]-1
Order Date: 0[illegible]
Sampled By: M.O'HAGAN

Sample Site: NAS JACKSONVILLE
Sample Type: SOIL

Sample ID.: SB-4(1'-5') Sample Date: 10/14/86 Time: N/S

P/PESTICIDE PRIORITY POLLUTANT PESTICIDES

Parameter	Units	Result	Detection Limit
A-BHC	PPB	BDL	2.5
A-ENDOSULFAN I	PPB	BDL	2.5
ALDRIN	PPB	BDL	2.5
B-BHC	PPB	BDL	2.5
B-ENDOSULFAN II	PPB	BDL	2.5
CHLORDANE	PPB	BDL	2.5
D-BHC	PPB	BDL	2.5
DIELDRIN	PPB	6.8	2.5
ENDOSULFAN SULFATE	PPB	BDL	1.5
ENDRIN	PPB	BDL	17.5
ENDRIN ALDIHYDE	PPB	BDL	7.5
G-BHC (LINDANE)	PPB	BDL	1.5
HEPTACHLOR	PPB	BDL	2.5
HEPTACHLOR EPOXIDE	PPB	BDL	2.5
PCB-1016	PPB	BDL	50
PCB-1221	PPB	BDL	50
PCB-1232	PPB	BDL	50
PCB-1242	PPB	BDL	50
PCB-1254	PPB	BDL	70
PCB-1254	PPB	BDL	50
PCB-1260	PPB	BDL	50
TOXAPHENE	PPB	BDL	250
4,4'-DDD	PPB	BDL	1.5
4,4'-DDE	PPB	BDL	1.5
4,4'-DDT	PPB	2.9	2.5

CERTIFICATION NUMBERS: FL LAB ID # 81142 • EPA # FL094 • FDER # EL020 • AL LAB ID # 40150 • NIOSH # 3251-001 • FL ENV # E81010

CUNNINGHAM & MILLER, INC.
Ground-Water Consultants

CHAIN-OF-CUSTODY RECORD

Location: Sandy

Laboratory: Pioneer

Project/Number —

Shipping Container ID: Cooler

Sampler(s) M. O'Hagan

SAMPLE CONTAINER DESCRIPTION

SAMPLE IDENTITY	Date Sampled	VOC VIALS												Total	Remarks
SB-1 0'-1'	3-14-88	1												1	
1'-5'	" "	1												1	
5'-9'	" "	1		Analyze for VOCs										1	
10'-14'	" "	1												1	
14'-16'	" "	1												1	
SB-2 0'-1'	3-14-88	1												1	
1'-5'	" "	2												2	
SB-3 0'-1'	3-14-88	2												2	
1'-5'	" "	2												2	
SB-4 0'-1'	3-14-88	2												2	
1'-5'	" "	2												2	
SB-5 0'-1'	3-14-88	2												2	
1'-5'	" "	2												2	
SB-6 0'-1'	3-14-88	2												2	
1'-5'	" "	2												2	

Total No. of Containers 24

Relinquished by: M. O'Hagan Organization: C&M

Date: 3-14-88 Time: ~~2030~~ 2145 m o'hg.

Received by: _____ Organization: _____

Date: _____ Time: _____

Relinquished by: _____ Organization: _____

Date: _____ Time: _____

Received by: _____ Organization: _____

Date: _____ Time: _____

Relinquished by: _____ Organization: _____

Date: _____ Time: _____

Received by: _____ Organization: _____

Date: _____ Time: _____

Delivery Method: Fed Ex Airbill no. 3331948445 (attach shipping bill, if any)

1/86

(Use extra sheets, if necessary)

		No. of Containers
SB-1	0'-1'	1
" "	1'-5'	1
" "	5'-9'	1
" "	9-10'	1
" "	10-14'	1
	14'-16'	1
SB-2	0'-1'	1
" "	1'-5'	1
SB-3	0'-1'	1
" "	1'-5'	1
SB-4	0'-1'	1
	1'-5'	1
SB-5	0'-1'	1
	1'-5'	1
SB-6	0'-1'	1
	1'-5'	1
	1'-5' (Duplicate)	1
		17

Analyze for
EP Tox metals
Total CN-
Await phone call
for further infor-
mation.

Relinquished by M. O'Hagan
Geraghty & Miller
3-14-88
2145

GERAGHTY & MILLER, INC.
Ground-Water Consultants

SOIL/SEDIMENT SAMPLING LOG

Project No. TE0290GW09 Page 1 of 15

Site Location NAS-Jax

Sample ID No. SB-1 0'-1' Coded/Replicate No. ✓

Date 3-14-88 Time of Sampling: Begin 1230 End 1250

Weather clear windy

Site Description Building 795 addition

SAMPLING DATA

Collection Method split-spoon

Depth 0'-1' Moisture Content Dry

Color brown to yellow Odor none

Description sand, fine, silty, brown to yellow/orange

Analyses Required

total CN^-

Sulfide

EP TOX

Container Description

From Lab ✓ or G & M

32 oz glass & 40 ml VOC

Sample Monitoring (TIP, OVA, HNU, etc.)

TIP = 22 (ambient = 23)

Remarks Boring for well WP-1. Sample collected by driving split-spoon four times: (1 2 3 4) Four closely spaced subsamples were composited into a single sample using a stainless steel bowl & plastic spatula.

Sampler(s) M. O'Hagan

GERAGHTY & MILLER, INC.
Ground-Water Consultants

SOIL/SEDIMENT-SAMPLING LOG

Project No. TF02906-N09 Page 2 of 15

Site Location NAS-Jax

Sample ID No. SB-1 1'-5' Coded/Replicate No. ✓

Date 3-14-88 Time of Sampling: Begin 1300 End 1310

Weather sunny, clear, windy

Site Description building 795 addition

SAMPLING DATA

Collection Method split spoon

Depth 1-5' Moisture Content slightly moist

Color brown, red clay, 2.5' - 5.0' Odor ✓

Description sand grading into red clay

Analyses Required

Total CN^-

Sulfide

EP Tox (metals)

TCLP, Priority Pollutants

Container Description

From Lab ✓ or G & M

1 32 oz glass

~~1 4oz wide mouth~~

Sample Monitoring (TIP, OVA, HNU, etc.)

TIP = 28 (ambient = 27)

Remarks boring for well WP-1. Sample collected by driving split-spoon two times: (1)(2). The two closely spaced subsamples were composited into one single sample using a stainless steel bowl & plastic spatula.

Sampler(s) Mike O'Hagan

GERAGHTY & MILLER, INC.
Ground-Water Consultants

SOIL/SEDIMENT SAMPLING LOG

Project No. TF029NEN04 Page 3 of 15

Site Location

Sample ID No. SB-1 5'-9' Coded/Replicate No. ✓

Date 3-14-88 Time of Sampling: Begin 1320 End 1330

Weather sunny, clear, windy

Site Description building 795 addition

SAMPLING DATA

Collection Method split - spoon

Depth 5'-9' Moisture Content moist to wet

Color red Odor

Description clay, sandy, iron - stained

Analyses Required

total CN^-

sulfide

EP Tox (metals)

Priority Pollutants, TCLP

Container Description

From Lab ✓ or G & M

32 oz glass

40 ml VOC vial

Sample Monitoring (TIP, OVA, HNU, etc.)

TIP = 28.7 (ambient = 27)

Remarks boring for well WP-1. Composite sample (see p. 1)

Sampler(s) Mike O'Hagan

GERAGHTY & MILLER, INC.
Ground-Water Consultants

SOIL/SEDIMENT SAMPLING LOG

Project No. TF0290GW09 Page 4 of 15

Site Location NAS- Jacksonville

Sample ID No. SB-1 10'-14' Coded/Replicate No. /

Date 3-14-89 Time of Sampling: Begin 1350 End 1410

Weather sunny, clear, windy

Site Description Bldg. 795 addition

SAMPLING DATA

Collection Method Split Spoon

Depth 10'-14' Moisture Content moist

Color red Odor musty

Description red sandy clay grading with sand @ 12'-14'

Analyses Required

Total CN^-

Sulfide

EP toxicity (metals)

TCLP, Priority Pollutants

Container Description

From Lab ✓ or G & M

32 oz glass & 40-ml VOC vials

Sample Monitoring (TIP, OVA, HNU, etc.)

TIP = -0.04 (amb. air = -0.03)

Remarks Boring for well NP-1. Composite sample (see pg. 2)

Sampler(s) M. O'Hagan

GERAGHTY & MILLER, INC.
Ground-Water Consultants

SOIL/SEDIMENT SAMPLING LOG

Project No. TF0290GW09 Page 5 of 15

Site Location NMS-Jap

Sample ID No. SB-1 14'-16' Coded/Replicate No. /

Date 3-14-88 Time of Sampling: Begin 1420 End 1430

Weather sunny, clear

Site Description building 795 addition

SAMPLING DATA

Collection Method split spoon sampler

Depth 14'-16' Moisture Content saturated

Color tan/white Odor /

Description sand with some clay

Analyses Required

total CN^-

sulfide

EP tox (metals)

TCLP, Priority Pollutants

Container Description

From Lab ✓ or G & M

32 oz glass & 40 ml VOC vials

Sample Monitoring (TIP, OVA, HNU, etc.)

No TIP reading

Remarks well MP-1 set at 15'

Sampler(s) Mike O'Hagan

GERAGHTY & MILLER, INC.
Ground-Water Consultants

SOIL/SEDIMENT SAMPLING LOG

Project No. TF0290GN09 Page 6 of 15

Site Location NAS-Jax

Sample ID No. SB-2 0'-1' Coded/Replicate No. /

Date 3-14-88 Time of Sampling: Begin 1435 End 1440

Weather Sunny, windy

Site Description Building 795 addition

SAMPLING DATA

Collection Method split spoon sampler

Depth 0'-1' Moisture Content dry

Color brown to black Odor

Description sand, silts, with organics

Analyses Required

Total CN^-

sulfide

EP Tox (metals)

TCLP, Priority Pollutants

Container Description

From Lab ✓ or G & M

32 oz glass & 40 ml VOC vials

Sample Monitoring (TIP, OVA, HNU, etc.)

TIP = 21 (Ambient = 2.4)

Remarks composite sample

Sampler(s) Mike O'Hagan

D-66

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SOIL/SEDIMENT SAMPLING LOG

Project No. TF0290GW09 Page 7 of 15

Site Location NAS- Jax

Sample ID No. SB-2 1'-5' Coded/Replicate No. /

Date 3-14-88 Time of Sampling: Begin 1456 End 1510

Weather Sunny, clear

Site Description building 795 addition

SAMPLING DATA

Collection Method split-spoon sampler

Depth 1'-5' Moisture Content dry to moist

Color white to yellow Odor

Description sand silty grading into sand, clean white to yellow, moist

Analyses Required

total CN^-

sulfide

EP tox (metals)

TCLP, Priority Pollutants

Container Description

From Lab ✓ or G & M

32 oz glass & 40 ml VOC vials

Sample Monitoring (TIP, OVA, HNU, etc.)

TIP = 6.5 (moisture = 6.9)

Remarks composite sample (see p. 2)

Sampler(s) Mike O'Hagan

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SOIL/SEDIMENT SAMPLING LOG

Project No. TF02900W09 Page 8 of 15

Site Location NAS-Jax

Sample ID No. SB-3 0'-1' Coded/Replicate No. ✓

Date 3-14-88 Time of Sampling: Begin 1516 End 1532

Weather very windy, clear

Site Description building 793 addition

SAMPLING DATA

Collection Method split spoon sampler

Depth 0'-1' Moisture Content slightly moist

Color brown Odor –

Description sand silty, rotted brown

Analyses Required

total CN^-

sulfide

EP tox (metals)

TCLP, Priority Pollutants

Container Description

From Lab ✓ or G & M

32 oz glass & 40 ml VOC vials

Sample Monitoring (TIP, OVA, HNU, etc.)

TIP= 1.2 (ambient = 1.1)

Remarks composite sample (see p. 1)

Sampler(s) Mike O'Hagan

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SOIL/SEDIMENT SAMPLING LOG

Project No. TF0290EN84 Page 9 of 15

Site Location NTS-204

Sample ID No. SB-3 1'-5' Coded/Replicate No. /

Date 3-14-89 Time of Sampling: Begin 1540 End 1550

Weather sunny, clear

Site Description building, 795 addition

SAMPLING DATA

Collection Method split-spoon sampler

Depth 1'-5' Moisture Content /

Color brown to tan Odor /

Description Sand silty, with organics

Analyses Required

total CN^-

sulfide

EP tox (metals)

TCLP, Priority Pollutants

Container Description

From Lab ✓ or G & M

32 oz glass & 40 ml VOC vials

Sample Monitoring (TIP, OVA, HNU, etc.)

TIP = 3.2 (in bird = 3.2)

Remarks composite sample (see p. 2)

Sampler(s) Mike O'Hagan

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SOIL/SEDIMENT SAMPLING LOG

Project No. TF0270GW09 Page 10 of 15

Site Location NRS - Oak

Sample ID No. SB-4 0.1 Coded/Replicate No. —

Date 3-14-88 Time of Sampling: Begin 1605 End 1612

Weather sunny, clear

Site Description building 775 addition

SAMPLING DATA

Collection Method split - spoon sampler

Depth 0'-1' Moisture Content —

Color — Odor —

Description sand silty [illegible] organic [illegible] roots [illegible]

Analyses Required

total CN^-

sulfide

EP tox (metals)

TCLP, Priority Pollutants

Container Description

From Lab ✓ or G & M

52 oz glass & 40 ml VOCs

Sample Monitoring (TIP, OVA, HNU, etc.)

TIP = -0.04 (ambient = -0.01)

Remarks composite sample (see p. 1)

Sampler(s) Mike O'Brien

D-70

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SOIL/SEDIMENT SAMPLING LOG

Project No. TR2206W19 Page 11 of 15

Site Location [illegible]

Sample ID No. [illegible] 1'-5' Coded/Replicate No. /

Date 3-14-85 Time of Sampling: Begin 1625 End 1630

Weather [illegible] clear, windy

Site Description [illegible] addition

SAMPLING DATA

Collection Method [illegible]

Depth 1'-5' Moisture Content / pH /

Color [illegible] Odor /

Description [illegible] 1'-2' [illegible]

Analyses Required	Container
EP Tox Metals	32 oz glass & 40 ml VOC vials
Total CN	
Sulfide	
[illegible] Priority Pollutants	

Sample Monitoring (TIP, OVA, HNU, etc.)

TIP = 4 ([illegible] = 0.02)

Remarks composite grab ([illegible] 2)

Sampler(s) Miller Ottaway

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SOIL/SEDIMENT SAMPLING LOG

Project No. TFO 290-[illegible] Page 12 of 15

Site Location KHS - [illegible]

Sample ID No. SS-5 0'-1' Coded/Replicate No. /

Date 3-14-88 Time of Sampling: Begin 1642 End 1649

Weather [illegible]

Site Description bldg. 795 addition

SAMPLING DATA

Collection Method [illegible]

Depth 0'-1' Moisture Content [illegible] pH –

Color [illegible] Odor /

Description [illegible] at 0.5' [illegible] 0.5' [illegible] black

Analyses Required	Container
Total CN⁻	
Sulfide	
PCBs	32 oz glass & 40-ml VOC vial
EP tox (metals)	
TCLP, Pesticides, Herbicides	

Sample Monitoring (TIP, OVA, HNU, etc.)

TIP [illegible] -3.9 [illegible] -2.5)

Remarks composite sample (see 0.1)

Sampler(s) Mike O'[illegible]

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SOIL/SEDIMENT SAMPLING LOG

Project No. TF02906-079 Page 13 of 15

Site Location. NAS-JAX

Sample ID No. SB-1 11'-5' Coded/Replicate No. _____

Date 3-16-87 Time of Sampling: Begin ~1700 End 1711

Weather Sunny 5°C

Site Description Building 795 addition

SAMPLING DATA

Collection Method [illegible]

Depth 11'-5' Moisture Content ✓ pH ✓

Color tan Odor ✓

Description sand silty mottled tan

Analyses Required	Container
total CN⁻	32 oz glass, 40 ml VOC vials
sulfide	
EP Tox (metals)	
TCLP Pesticides, herbicides	

Sample Monitoring (TIP, OVA, HNU, etc.)

TIP = -4.5 (initial = -4.4)

Remarks composite sample (see p. 2).

Sampler(s) M. O'Hara

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SOIL/SEDIMENT SAMPLING LOG

Project No. TF0290GW07 Page 14 of 15

Site Location NAS - JAX

Sample ID No. SD-6 0'-1' Coded/Replicate No. —

Date 3-14-88 Time of Sampling: Begin 1720 End 1730

Weather [illegible]

Site Description Building 790 addition

SAMPLING DATA

Collection Method [illegible]

Depth 0'-1' Moisture Content — pH —

Color [illegible] Odor —

Description Sand silty [illegible]

Analyses Required	Container
Total OH-	
Sulfide	
PCBs	32-oz glass & 1/2-gal VOC vial
EP Tox metals	
TCLP, priority pollutants	

Sample Monitoring (TIP, OVA, HNU, etc.)

TIP = -10.7 ([illegible] -10.7)

Remarks composite sample

Sampler(s) M. O'Keefe

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SOIL/SEDIMENT SAMPLING LOG

Project No. TF0290GN04 Page 15 of 15

Site Location. NAS - Oak

Sample ID No. SB-6 1'-5' Coded/Replicate No. SB-6 1'-5' (Dup)

Date 3-14-92 Time of Sampling: Begin 1734 End 1740

Weather [illegible]

Site Description building 795.

SAMPLING DATA

Collection Method [illegible]

Depth 1'-5' Moisture Content _____ pH _____

Color brown Odor _____

Description [illegible] silty [illegible] at 2' with [illegible] rock rubble

Analyses Required	Container
total CN^-	
sulfide	
EP tox (metals)	32-oz glass & 40-ml VOC
TCLP, Priority Pollutants	

Sample Monitoring (TIP, OVA, HNU, etc.)

TIP = 0.0 (or [illegible] = 0.0)

Remarks composite sample (see p. 2)

Sampler(s) M. Oldham