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NAS WHITING FIELD
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FINAL REMEDIAL INVESTIGATION AND FEASIBILITY STUDY AND TECHNICAL MEMORANDUM 3 SOILS ASSESSMENT NAS WHITING FIELD FL

5/1/1992

ABB ENVIRONMENTAL

FINAL

REMEDIAL INVESTIGATION AND FEASIBILITY STUDY

TECHNICAL MEMORANDUM NO. 3
SOILS ASSESSMENT

NAVAL AIR STATION
WHITING FIELD
MILTON, FLORIDA

MAY 1992

SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
CHARLESTON, SOUTH CAROLINA
29411-0068

ID 00226

REMEDIAL INVESTIGATION AND FEASIBILITY STUDY

PHASE I

NAVAL AIR STATION WHITING FIELD
MILTON, FLORIDA

Technical Memorandum No. 3
Soils Contamination Assessment

UIC: N60508

Contract No. N62467-88-C-0382

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May 1992

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GLOSSARY

ABB-ES	ABB Environmental Services, Inc.
AIMD	Aircraft Intermediate Maintenance Department
AVGAS	aviation gasoline
BEHP	bis(2-ethylhexyl)phthalate
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CLP	Contract Laboratory Program
DQOs	Data Quality Objectives
EP	Extraction Procedure
FDER	Florida Department of Environmental Regulation
GC/MS	gas chromatography/mass spectroscopy
HRS	Hazard Ranking System
IAS	Initial Assessment Study
IR	Installation Restoration
µg/kg	micrograms per kilogram
µg/ℓ	micrograms per liter
mg/kg	milligrams per kilogram
mg/ℓ	milligrams per liter
MS/MSD	matrix spike/matrix spike duplicate
NAS	Naval Air Station
NCP	National Contingency Plan
NEESA	Naval Energy and Environmental Support Activity
NPL	National Priorities List
PA	Preliminary Assessment
PAHs	polynuclear aromatic hydrocarbons
PCBs	polychlorinated biphenyls
QAPP	Quality Assurance Project Plan
QC	quality control
RCRA	Resource Conservation Recovery Act
RI/FS	Remedial Investigation and Feasibility Study
RSD	relative standard deviation
SARA	Superfund Amendments and Reauthorization Act
SI	Site Inspection
SOUTHNAVFACENGCOM	Southern Division, Naval Facilities Engineering Command
SVOCs	semivolatile organic compounds

GLOSSARY (continued)

TAL	target analyte list
TCL	target compound list
TCLP	Toxicity Characteristics Leaching Procedure
TRAWING FIVE	Training Air Wing Five
USEPA	U.S. Environmental Protection Agency
UST	underground storage tanks
VOCs	volatile organic compounds
WWTP	Waste Water Treatment Plant

1.0 INTRODUCTION

ABB Environmental Services, Inc. (ABB-ES), under contract to the Department of Navy, is submitting Technical Memorandum No. 1 for the Phase I Remedial Investigation and Feasibility Study (RI/FS) for Naval Air Station (NAS) Whiting Field located in Milton, Florida, to the Department of Navy, Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM). The RI/FS is being conducted under contract number N62467-88-C-0382.

Technical Memorandum No. 3, Geologic Assessment, is the first in a series of six technical memoranda that summarizes the results and transmits data gathered during the Phase I RI. The Phase I RI field program was carried out during the period December 1990 to May 1991. These technical memoranda form the supporting basis for scoping a Phase II RI Sampling and Analysis Plan for NAS Whiting Field.

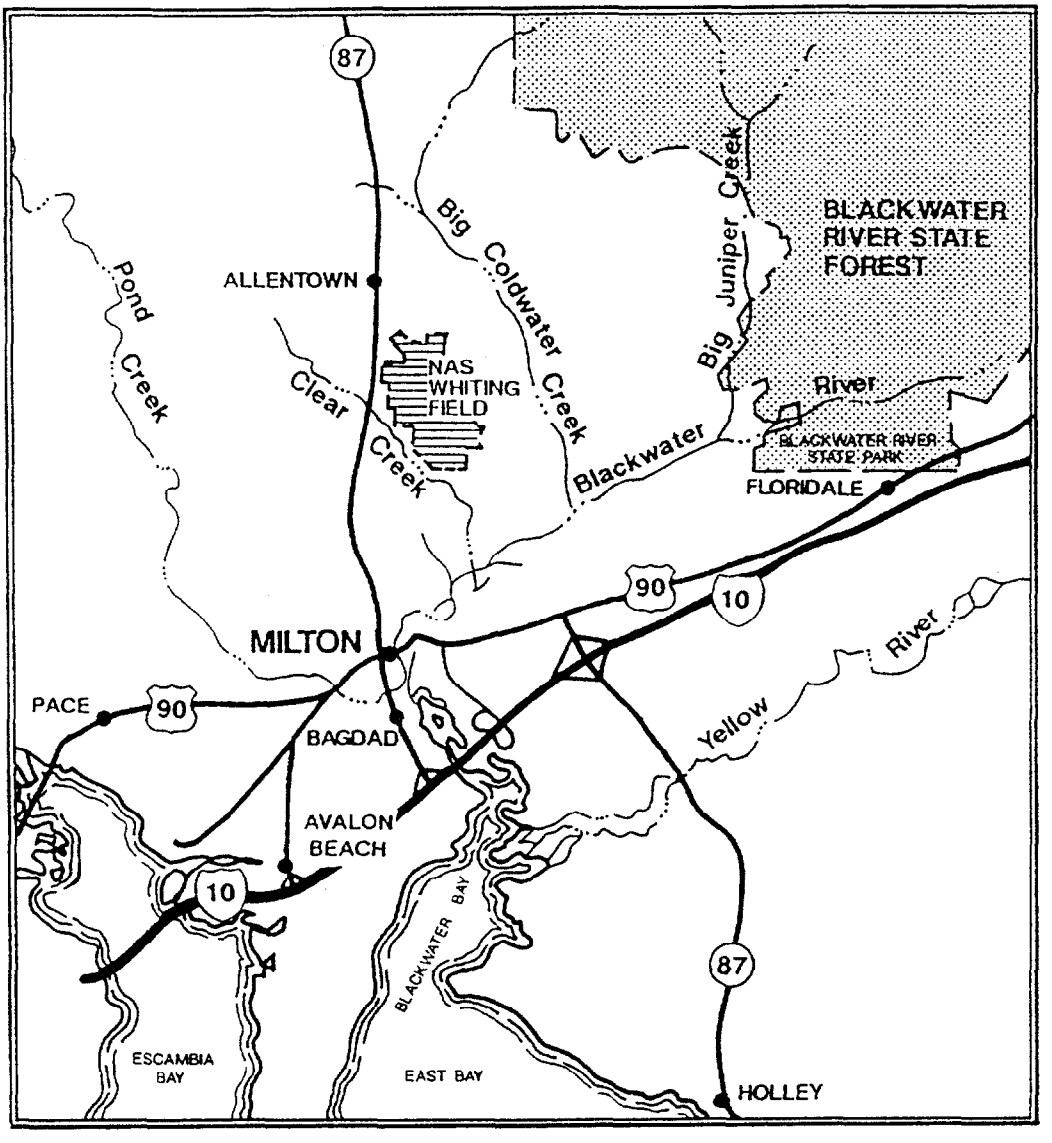
NAS Whiting Field is located in Florida's northwest coastal area approximately 7 miles north of Milton and 20 miles northeast of Pensacola (Figure 1-1). NAS Whiting Field presently consists of two air fields separated by an industrial area and covers approximately 2,560 acres in Santa Rosa County. Figure 1-2 presents the installation layout.

NAS Whiting Field, home of Training Air Wing Five (TRAWING FIVE), was constructed in the early 1940's. It was commissioned as the Naval Auxiliary Air Station Whiting Field in July 1943 and has served as a naval aviation training facility ever since. The field's mission has been to train student naval aviators in basic instruments, formation and tactic phases of fixed-wing, and propeller-driven aircraft, and in the basic and advanced portions of helicopter training.

NAS Whiting Field lies within the Western Highlands physiographic division of Santa Rosa County in the Coastal Plain Province. The Western Highlands are characterized by a well drained, southward sloping, plateau with numerous streams. Land surrounding NAS Whiting Field primarily consists of agricultural land to the northwest, residential and forested areas to the south and southwest, and forested land around the remaining boundaries. This land use distribution is shown in Figure 1-3.

Located on an upland area, elevations at Whiting Field range from 150 to 190 feet above sea level. The facility is bounded by low-lying receiving waters; Clear Creek to the west and south and Big Coldwater Creek to the east. These two streams are tributaries of the Blackwater River, which discharges to the estuarine waters of the East Bay of the Escambia Bay coastal system.

1.1 PURPOSE AND BACKGROUND. The purpose of the NAS Whiting Field RI/FS is to identify a range of remedial alternatives to address any identified risks to public health and the environment posed by toxic or hazardous chemicals present as a result of past waste disposal practices or spills. To achieve this objective, the RI must collect data sufficient to assess the nature and distribution of chemicals associated with each site. The data collected in the RI will be used in the FS to screen, evaluate, and select remedial alternatives to provide permanent, feasible solutions to environmental contamination problems at NAS Whiting Field.



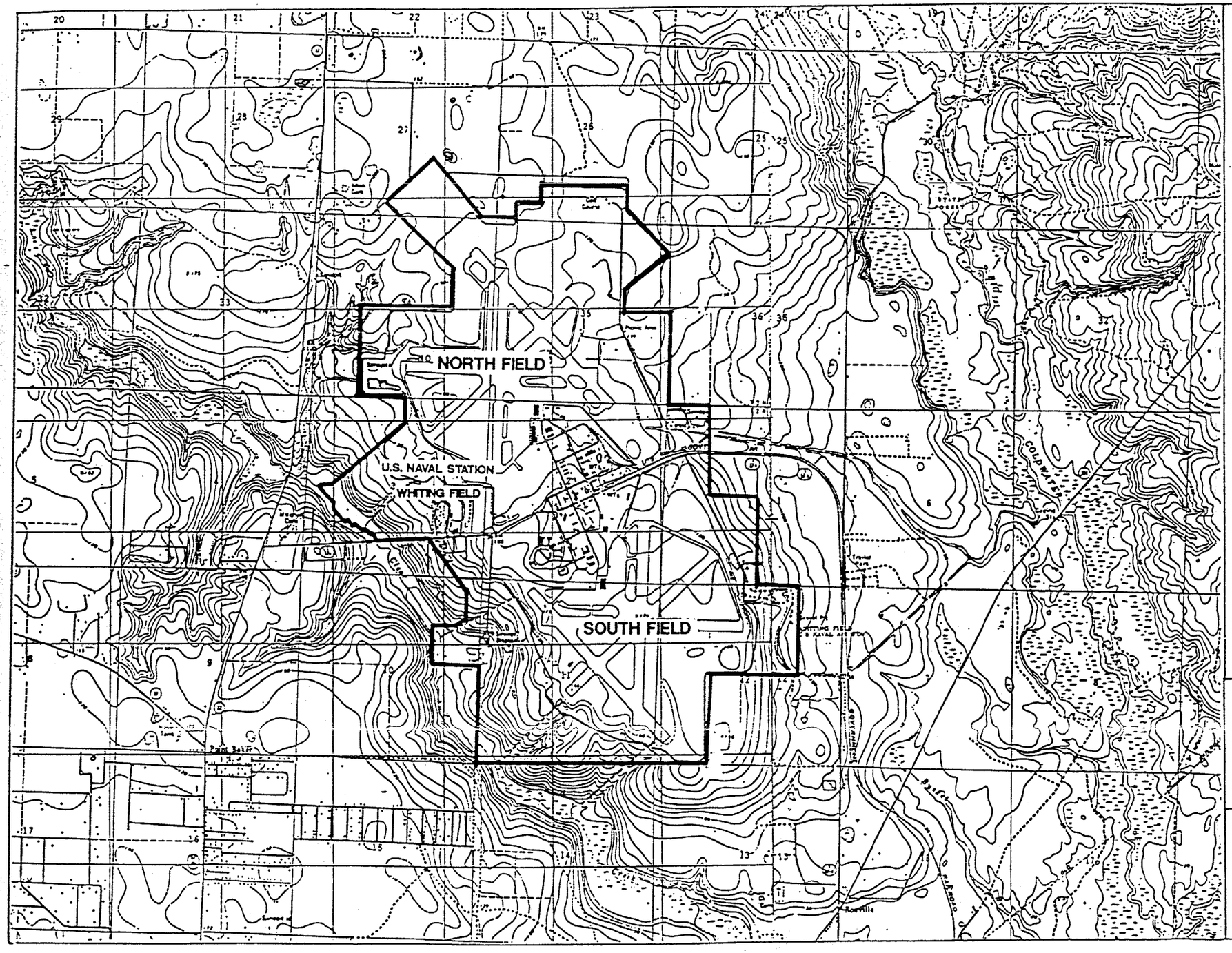
SOURCE: ABB ENVIRONMENTAL SERVICES, INC., 1991

FIGURE 1-1

FACILITY LOCATION MAP

RI/FS PROGRAM

NAS WHITING FIELD
MILTON, FLORIDA



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SCALE IN FEET

0 3000 6000

SOURCE:
USGS QUADRANGLE MILTON NORTH, FLORIDA
PHOTOREVISED 1987
AND USGS QUADRANGLE HAROLD, FLORIDA 1973.

FIGURE 1-2

NAS WHITING FIELD

RI/FS PROGRAM

NAS WHITING FIELD
MILTON, FLORIDA

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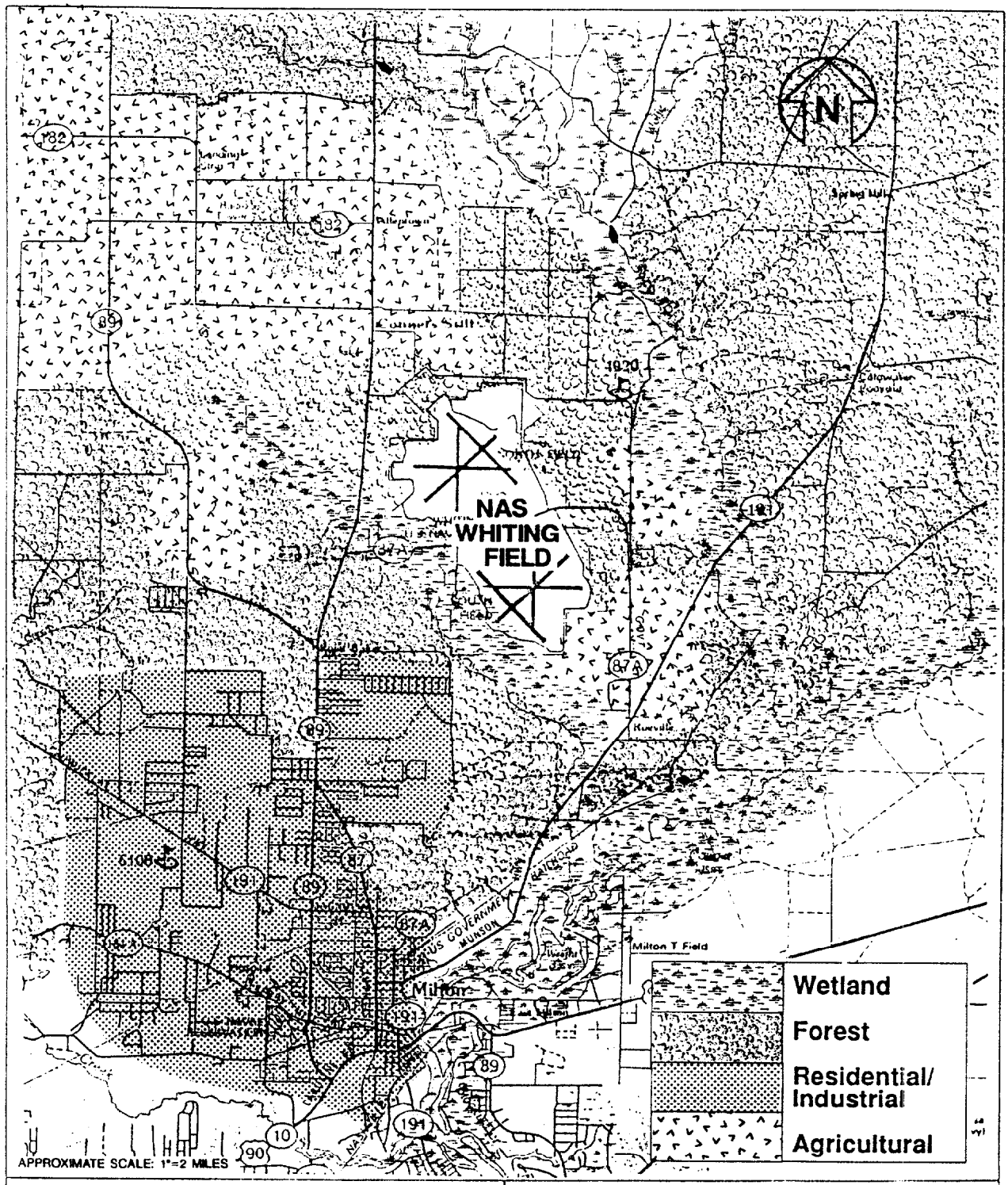


FIGURE 1-3

Land Use Distribution in the Vicinity of NAS Whiting Field

FLORIDA ATLAS & GAZETTEER, DeLORME MAPING COMPANY, 1987

RI/FS PROGRAM

NAS WHITING FIELD
MILTON, FLORIDA

The Navy Installation Restoration (IR) program was designed to identify and abate or control contaminant migration resulting from past operations at Naval installations. The IR program is the Navy response authority under Section 120 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986 and Executive Order 12580. CERCLA requires that Federal facilities comply with the act, both procedurally and substantively. SOUTHNAVFACENGCOM is the agency responsible for the Navy IR program in the Southeastern United States. Therefore, SOUTHNAVFACENGCOM has the responsibility to process NAS Whiting Field through Preliminary Assessment (PA), Site Inspection (SI), priority listing, RI/FS, and remedial response selection in compliance with the guidelines of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) [40 Code of Federal Regulations (CFR) 300].

Section 105(a)(8)(A) of SARA required the U.S. Environmental Protection Agency (USEPA) to develop criteria in order to set priorities for remedial action based on relative risk to public health and the environment. To meet this requirement, USEPA has established the Hazard Ranking System (HRS) as Appendix A to the NCP. The HRS is a scoring system designed to assess relative threat due to documented or potential releases at a site. First promulgated in 1982, the HRS was amended in December 1990, effective March 14, 1991 (55 Federal Register No. 241:51532-51667), to comply with requirements of Section 105(c)(1) of SARA to increase the accuracy of the assessment of relative risk. The newly promulgated HRS II has been substantially revised and is designed to prioritize sites after the SI phase of the CERCLA process. The SI or extended SI is used to present the required data to expeditiously perform an HRS II ranking. At NAS Whiting Field, the SI was conducted as a Contamination Study, Verification Phase.

The RI/FS conducted at NAS Whiting Field is a component of the Navy IR program. The preliminary HRS score for NAS Whiting Field indicates that it may qualify for the National Priorities List (NPL). As such, the RI/FS for NAS Whiting Field follows the requirements of the NCP, as amended by SARA, and guidance for conducting Remedial Investigations and Feasibility Studies under CERCLA (USEPA, October 1988).

Prior to the implementation of the Phase I RI/FS Program, a PA and two sampling and analysis programs had been conducted at NAS Whiting Field. The PA, conducted as an Initial Assessment Study (IAS), was performed by Envirodyne Engineers in 1984 and published in 1985 (Envirodyne Engineers, 1985). Based on historical data, aerial photographs, field inspections, and personnel interviews, 16 disposal or spill sites of potential contamination and/or contaminant migration were initially identified at NAS Whiting Field by the IAS team. These are sites where waste disposal or accidents have occurred in the past.

The May 1985 IAS concluded that 15 of the 16 sites warranted further investigation, under the Navy's IR Program, to assess potential long-term impacts. Only Site 2, the Northwest Open Disposal Area, was judged to not warrant further consideration. A Confirmation Study, including sampling and monitoring of the sites, was recommended to confirm or deny the existence of the suspected contamination and to quantify the extent of any problems that may exist. The results of the Confirmation-Verification Study would then be used to evaluate the necessity of conducting mitigating actions or cleanup operations.

In November 1985, Geraghty & Miller, Inc., prepared for the Navy a plan of action entitled *Naval Assessment and Control of Installation Pollutants, Verification Study, NAS Whiting Field*, which was subsequently submitted to the Florida Department of Environmental Regulation (FDER). This plan contained details of the proposed scope of work for the Verification Study. During discussion with FDER in December 1985, two additional sites (17 and 18) were added to the Verification Study. Both were active sites at that time where waste oils and fuels were burned in firefighting training exercises.

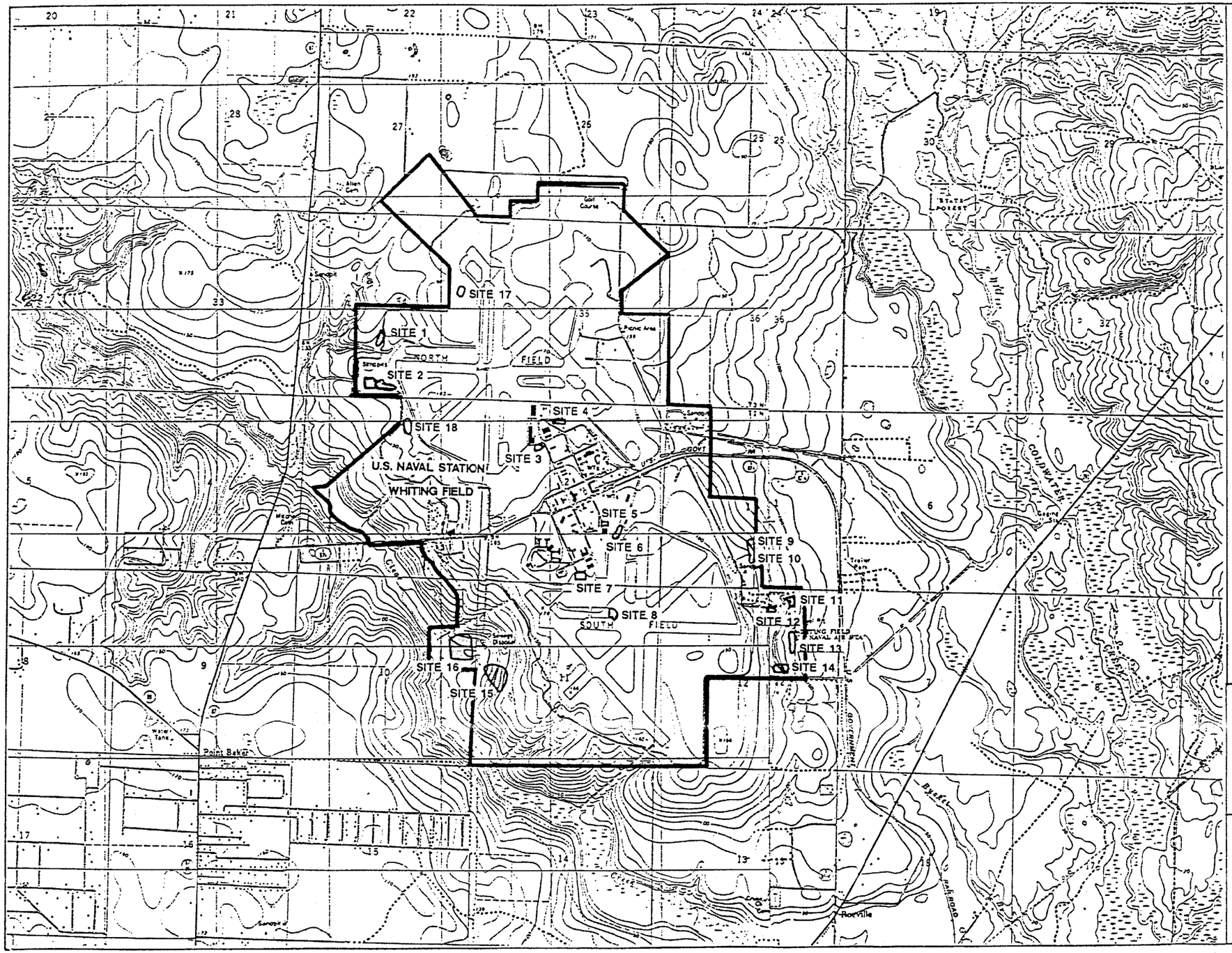
In addition, during 1985 one of the sites (Site 5, Battery Acid Seepage Pit) was investigated under a Consent Order with the FDER. Data from this investigation has been compiled in a report entitled *Detection and Monitoring Program, Battery Shop Site, NAS Whiting Field, Florida* (Geraghty & Miller, November 1985a).

The location of the 18 sites are shown in Figure 1-4. Each of the sites was evaluated with regard to contamination characteristics, migration pathways, and pollutant receptors. Table 1-1 summarizes the information collected on these sites.

Work conducted during the course of the Verification Study began with the collection and assimilation of existing data and literature pertinent to the project and included the findings from the IAS. The field work was performed in May and June of 1986. Sixteen monitor wells were installed at locations around the facility. One surface water, 16 groundwater, and 46 soil samples were then collected for chemical analyses.

Historical records indicate that throughout the years of operation, NAS Whiting Field has generated a variety of wastes related to pilot training, the operation and maintenance of aircraft along with ground support equipment, and the station's facility maintenance activities. Prior to the establishment of hazardous waste management programs and programs to recycle waste oil, most of the hazardous wastes were reportedly disposed of onsite. Waste materials were disposed either in dumpsters that were emptied into onsite disposal areas or they went into waste oil bowsers, which probably were used for firefighting training. Envirodyne Engineers (1985) estimated that thousands of gallons of wastes including waste paints, paint thinners, solvents, waste oils, waste gasoline, hydraulic fluids, aviation gasoline (AVGAS), tank bottom sludges, polychlorinated biphenyls (PCBs) transformer fluids, and paint stripping wastewater were potentially dumped into onsite disposal areas. These disposal areas consisted of natural or man-made depressions located within the confines of the air station. In addition to the waste materials routinely disposed of onsite in the disposal areas, additional materials were reportedly released onsite as the result of accidents or equipment failure.

The results of the Verification Study reported to SOUTHNAVFACENGCOM by Geraghty & Miller (*Verification Study: Assessment of Potential Ground-Water Pollution at Naval Air Station Whiting Field*, December 1986) provided an incomplete assessment of the physical as well as the chemical conditions currently existing at NAS Whiting Field. Groundwater contamination was detected at some sites and not at others. The study concluded that many of the monitoring wells were not located downgradient of the intended study site and that additional work was needed to characterize the hydrogeologic conditions and the chemical contamination condi-



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SCALE IN FEET

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SOURCE:
USGS QUADRANGLE MILTON NORTH, FLORIDA
PHOTOREVISED 1987
AND USGS QUADRANGLE HAROLD, FLORIDA 1973.

FIGURE 1-4

Location of Sites at NAS Whiting Field

RI/FS PROGRAM

NAS WHITING FIELD
MILTON, FLORIDA

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Table 1-1
Summary of Potential Disposal Sites

Technical Memorandum No. 3
NAS Whiting Field
Milton, Florida

Site No.	Site Name and Type	Location	Period of Operation	Types of Material Disposed	Comments
1	Northwest Disposal Area (landfill)	North Field, west side	1943-1965	Refuse, waste paints, thinners, solvents, waste oils, and hydraulic fluids.	Secondary disposal area during this period; site covers 5 acres.
2	Northwest Open Disposal Area (landfill)	North Field, west side	1976-1984	Construction and demolition debris, tires, and furniture.	Former borrow pit location, commonly referred to as the "Wood Dump."
3	Underground Waste Solvent Storage Area (tank)	North Field, south of Building 2941	1980-1984	Waste solvents, paint stripping residue, and 120-gallon spill.	Wastes generated by paint stripping operations.
4	North AVGAS Tank Sludge Disposal Area	North Field, north of Tow Lane	1943-1968	Tank bottom sludge containing tetraethyl lead.	Sludge disposal in shallow holes near tanks.
5	Battery Acid Seepage Pit (contaminated soil)	South Field, near Building 1478	1964-1984	Waste electrolyte solution containing heavy metals and waste battery acid.	Pits located 110 feet from potable supply well (W-S2).
6	South Transformer Oil Disposal Area (contaminated soil)	South Field, Building 1478	1940's-1960's	PCB-contaminated dielectric fluid.	Disposal in "0-2" drainage ditch.
7	South AVGAS Tank Sludge Disposal Area (landfill and tanks)	South Field, west of Building 1406	1943-1968	Tank bottom sludge containing tetraethyl lead.	Sludge disposed in shallow holes near tanks.
8	AVGAS Fuel Spill Area (contaminated soil)	South Field, south of Building 1406	Summer 1972	AVGAS containing tetraethyl lead.	Fuel spill of about 25,000 gallons on an area of about 2 acres.
9	Waste Fuel Disposal Pit (landfill)	South Field, east side	1950's-1960's	Waste AVGAS containing tetraethyl lead.	Fuel disposed in former borrow pit.
10	Southeast Open Disposal Area (A) (landfill)	South Field, southeast area	1965-1973	Construction and demolition debris, waste solvents, paint, oils, hydraulic fluid, PCBs, pesticides, and herbicides.	Secondary disposal area during this period; site covers about 4 acres.

See notes at end of table.

Table 1-1 (Continued)
Summary of Potential Disposal Sites

Technical Memorandum No. 3
NAS Whiting Field
Milton, Florida

Site No.	Site Name and Type	Location	Period of Operation	Types of Material Disposed	Comments
11	Southeast Open Disposal Area (B) (landfill)	South Field, southeast area	1943-1970	Construction and demolition debris, waste solvents, paint, oils, hydraulic fluid, and PCBs.	Secondary disposal area during this period; site covers about 3 acres.
12	Tetraethyl Lead Disposal Area (waste pile)	South Field, southeast area	May 1, 1968	Tank bottom sludge and fuel filters contaminated with tetraethyl lead.	Disposal area posted with warning; site consists of two earth covered mounds; 25 foot by 25 foot area.
13	Sanitary Landfill (landfill)	South Field, southeast area	1979-1984	Refuse, waste solvents, paint, hydraulic fluids, and asbestos.	Primary sanitary landfill, potentially received hazardous wastes the first year of operation.
14	Short-Term Sanitary Landfill (landfill)	South Field, southeast area	1978-1979	Refuse, waste solvents, oils, paint, and hydraulic fluids.	Primary sanitary landfill for brief period; relocated due to drainage problems.
15	Southwest Landfill (landfill)	South Field, southwest area	1965-1979	Refuse, waste paints, oils, solvents, thinners, asbestos, and hydraulic fluid.	Primary landfill for this time period; covers about 15 acres.
16	Open Disposal and Burning Area (landfill)	South Field, southwest area	1943-1965	Refuse, waste paints, oils, solvents, thinners, PCBs, and hydraulic fluid.	Primary disposal area for this time period; covers about 10 acres.
17	Crash Crew Training Area (contaminated soil)	North Field, west side	1951-Present	JP-4.	Waste fuels and some solvents ignited, then extinguished.
18	Crash Crew Training Area (contaminated soil)	North Field, west side	1951-Present	JP-4.	Waste fuels and some solvents ignited, then extinguished.

Notes: AVGAS = aviation gasoline.
PCB = polychlorinated biphenyls.

tions that exist at NAS Whiting Field. The Verification Study is the former IR program counterpart to the SI.

Of the 18 sites identified to date, 13 are scheduled for further study under the Navy's IR program. Due to the fact that it only received construction and demolition debris, Site 2, the Northwest Open Disposal Area, was judged to warrant no further consideration early in the IR program. Site 5, the Battery Acid Seepage Pit, was extensively studied in 1985 (Geraghty & Miller, 1985a) in response to an FDER Consent Order (84-0253). Results indicated no significant contamination resulting from past activities at the Battery Acid Shop and the Consent Order was recommended to be rescinded on April 15, 1987. However, the presence of benzene in the existing monitoring wells surrounding the seepage pit warrants further consideration. As such, the investigation of benzene contamination around Site 5 is coupled with the field and laboratory investigation proposed for production well W-S2. Sites 4, 7, and 8 are slated for investigation and remediation, if necessary, under the Navy's Underground Storage Tank (UST) program and, therefore, are not incorporated in the Navy's IR program. Table 1-2 presents a summary of past and projected investigative programs for the 18 sites within the RI/FS and UST programs.

The Jordan Phase I RI Workplan (June 1990) provides a summary of the regional and installation-specific environmental setting, current and historical industrial operations, and summary of the verification study and the Site 5, Battery Shop data, which will not be repeated in the technical memorandum. As appropriate, data from these sources will be incorporated into the assessment.

1.2 OBJECTIVES OF THE SOILS INVESTIGATION. Table 1-3 is a summary of the soils investigations and sampling results from the Verification Study and the Site 5 Battery Shop program. Forty-six soil samples were analyzed from seven sites during the verification; 26 samples were from 4 borings at Site 5 during the Battery Shop Investigation. Soil explorations were not conducted at 10 sites. During the Phase I RI, soils sampling was limited to source area sampling at four sites and sampling of soil in two stormwater drainage swales. Specific objectives of the Phase I program are as follows.

- Site 6, South Transformer Oil Disposal Area. Additional confirmatory samples were collected to evaluate whether PCBs from four dielectric fluid disposals exist in locations not sampled during the verification study including from beneath a concrete flume installed since 1964.

- Site 12, Tetraethyl Lead Disposal Area. Additional samples were collected to further evaluate lead contamination of the waste piles and to evaluate their Resource Conservation Recovery Act (RCRA) status relative to ignitability, corrosivity, and toxicity using the Toxicity Characteristics Leaching Procedure (TCLP). The latter tests were performed to support an interim removal action if necessary.

Table 1-2
Summary of Site Investigations

Technical Memorandum No. 3
NAS Whiting Field
Milton, Florida

Site Number	Site Name	Previous Studies			Ongoing RI/FS	Navy's UST Program
		IAS	Verification Study	Consent Order		
1	Northwest Disposal Area	*	*		*	
2	Northwest Open Disposal Area	*				
3	Underground Waste Solvent Storage Area	*	*		*	
4	North AVGAS Tank Sludge Disposal Area	*	*			*
5	Battery Acid Seepage Pit	*		*		
6	South Transformer Oil Disposal Area	*	*		*	
7	South AVGAS Tank Sludge Disposal Area	*	*			*
8	AVGAS Fuel Spill Area	*	*			*
9	Waste Fuel Disposal Pit	*	*		*	
10	Southeast Open Disposal Area (A)	*	*		*	
11	Southeast Open Disposal Area (B)	*	*		*	
12	Tetraethyl Lead Disposal Area	*	*		*	
13	Sanitary Landfill	*	*		*	
14	Short-Term Sanitary Landfill	*	*		*	
15	Southwest Landfill	*	*		*	
16	Open Disposal and Burning Area	*	*		*	
17	Crash Crew Training Area		*		*	
18	Crash Crew Training Area		*		*	

Notes: IAS = Initial Assessment Study.
RI/FS = Remedial Investigation/Feasibility Study.
UST = underground storage tank.
AVGAS = aviation gasoline.

Table 1-3
Summary of Available Data on Observed Hazardous Substances in Soils from the Verification Study

Technical Memorandum No. 3
NAS Whiting Field
Milton, Florida

Site Number	Site Name	Materials Disposed	Soil Chemical	Frequency of Detection[1]	Maximum Concentrations Detected (mg/kg)	Soil Sampling Program	
						Sampling Program	Analytes Tested
1	Northwest Disposal Area	Refuse, waste paints, paint thinners, solvents, waste oils, and hydraulic fluids.	NT			NT	
2	Northwest Open Disposal Area	Construction and demolition debris, tires, and furniture.	NT			NT	
3	Underground Waste Solvent Storage Area	Waste solvents, paint stripping residue, and 120-gallon spill.	Cadmium Chromium Mercury Silver Zinc Phenols	1/6 4/6 5/6 6/6 2/6 1/6	0.28 43 0.62 1.85 586 0.61	One boring 0 to 25 feet. Sampled at 5-foot intervals.	VOCs Fuel chemicals[2]
4	North AVGAS Tank Sludge Disposal Area	Tank bottom sludge with tetraethyl lead.	Lead	2/2	27	28 surface soil samples composited into 2 samples.	
5	Battery Acid Seepage Pit	Waste electrolyte solution containing heavy metals, and waste battery acid.	Arsenic Cadmium Lead Mercury Selenium	21/26 12/26 19/26 24/26 0/26	2.62 0.55 24 0.212 <0.02	Soil borings; 1 boring 0 to 85 feet, 17 samples; 3 borings 0 to 25 feet, 9 samples.	Arsenic Mercury Selenium Cadmium Lead
6	South Transformer Oil Disposal Area	PCB-contaminated dielectric fluid.	PCB	0/10	ND	10 surface soil samples.	PCBs only

See notes at end of table.

Table 1-3 (Continued)
Summary of Available Data on Observed Hazardous Substances in Soils from the Verification Study

Technical Memorandum No. 3
NAS Whiting Field
Milton, Florida

Site Number	Site Name	Materials Disposed	Soil Chemical	Frequency of Detection[1]	Maximum Concentrations Detected (mg/kg)	Soil Sampling Program	
						Sampling Program	Analytes Tested
7	South AVGAS Tank Sludge Disposal Area	Tank bottom sludge containing tetraethyl lead.	Lead	2/2	575	31 surface soil samples composited into 2 samples.	Lead TCLP lead
8	AVGAS Fuel Spill Area	AVGAS containing tetraethyl lead.	Lead	12/12	27	12 surface soil samples.	Lead and TCLP lead
9	Waste Fuel Disposal Area Pit	Waste AVGAS containing tetraethyl lead.	Lead	12/12	14	Six surface samples (0 to 2 feet); six 2-foot depth samples (2 to 4 feet).	Lead Fuel chemicals[2]
10	Southeast Open Disposal Area (A)	Construction and demolition debris, waste solvents, paints, oils, hydraulic fluids, PCBs, pesticides, and herbicides.	NT	--	--	NT	
11	Southeast Open Disposal Area (B)	Construction and demolition debris, waste solvents, paints, oils, hydraulic fluids, and PCBs.	NT	--	--	NT	
12	Tetraethyl Lead Disposal Area	Tank bottom sludge and fuel filters with tetraethyl lead.	Lead	2/2	11	Two soil samples from 2 feet to 3 feet in waste pile.	Lead TCLP lead Fuel chemical[2]
13	Sanitary Landfill	Refuse, waste solvents, paint, hydraulic fluid, and asbestos.	NT			NT	

See notes at end of table.

2.0 FIELD PROGRAM SUMMARY

The soil sampling program was conducted on December 3 and 4, 1991. Sampling procedures and locations were described in the Phase I Sampling and Analysis Plan (Volume II of the Workplan). That volume contains the field sampling plan that shows planned sampling locations and rationale and the Quality Assurance Project Plan (QAPP) that provides sampling and analysis procedure details and field quality control (QC) requirements. The sampling and analysis program is summarized in this section for each of the sites. With the exception of Site 12, all soil sample analyses were performed in accordance with Naval Energy and Environmental Support Activity (NEESA) Level C QC requirements. Ten percent of the samples, including all field duplicates as well as rinsate blanks, trip blanks, and matrix spike/matrix spike duplicates (MS/MSD), were analyzed at NEESA Level D, which requires full USEPA Contract Laboratory Program (CLP) validation of analytical data. Site 12, sampled primarily to characterize its RCRA status for removal planning, was analyzed in accordance with NEESA Level E QC requirements. Appendices A, B, and C contain summarized analytical results for sites 6 (Appendix A), 12 (Appendix B), 15, 16, and the two drainage swales (Appendix C). These appendices present the data and CLP qualifying flags. Data quality assessment is discussed in Section 2.5. The remainder of this section describes the site-specific sampling and analysis program for each site.

2.1 SITE 6, SOUTH TRANSFORMER OIL DISPOSAL AREA. Twelve surface soil samples were collected at the South Transformer Oil Disposal Area at the locations shown in Figure 2-1. According to historical information, transformers were reworked in what is now the Battery Shop (Building 1478). Waste transformer dielectric fluid was reportedly taken across the hardstand and disposed into the drainage ditch as shown in Figure 2-1. Surface to 0.5-foot depth interval soil samples were collected using a stainless-steel spoon and bowl at sample locations WHF-6-SL-01-01 and WHF-6-SL-02-01 at the sides of the ditch at the reported disposal location. Sample WHF-6-SL-09-01 was collected in native soil immediately below the concrete flume in the bottom of the ditch. This sample was collected by boring along the sloping sidewall of the flume to the bottom of the ditch using a stainless-steel hand auger. A sample was then collected from the bottom of the ditch after ensuring that no bedding or fill soil had been placed under the concrete.

Because of the potential that disposal also occurred in the ditch adjacent to the former rework shop, a sample (WHF-6-SL-07-01) was collected below this flume in a similar manner. The remaining Site 6 samples were collected from the surface soils of the ditch or its banks with the exception of WHF-6-SL-12-01, which was collected below the concrete flume downstream of the taxiway. Samples WHF-6-SL-06-01, WHF-6-SL-06-08, WHF-6-SL-06-10, and WHF-6-SL-06-11 were collected from the banks of the taxiway culvert because this taxiway reportedly was built after the dielectric fluid disposal partially using soils from the ditch. Surface soils at these locations were collected using a stainless-steel spoon and mixing bowl. All samples were analyzed for PCBs by USEPA Method 8080 as contained in SW-846, third edition (USEPA, 1986).

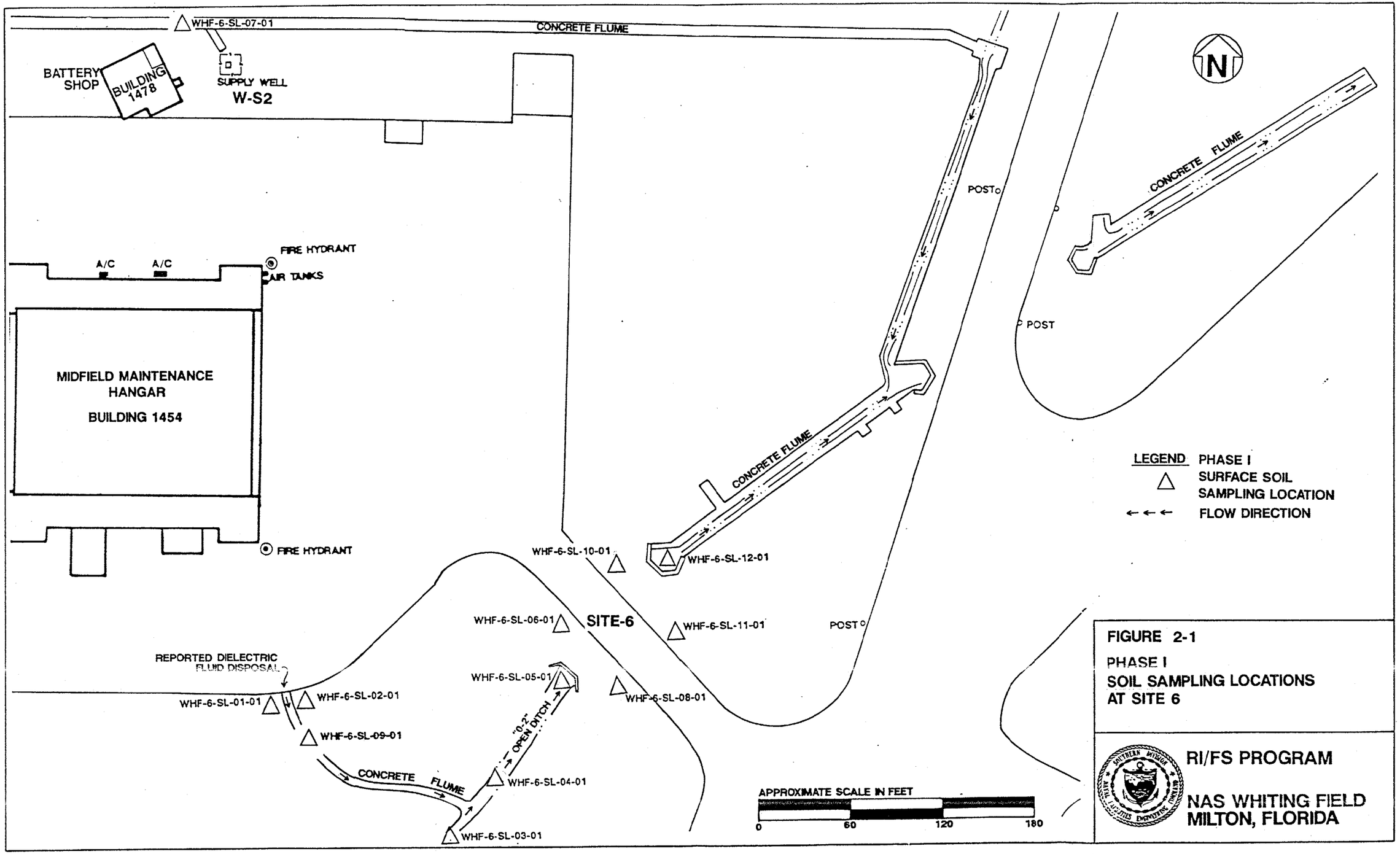


FIGURE 2-1

PHASE I

SOIL SAMPLING LOCATIONS AT SITE 6

RI/FS PROGRAM

NAS WHITING FIELD
MILTON, FLORIDA

00226I032

2.2 SITE 12, TETRAETHYL LEAD DISPOSAL AREA. Six soil samples were collected at depths approximately 1 to 2 feet into the waste piles at site 12 as shown in Figure 2-2.

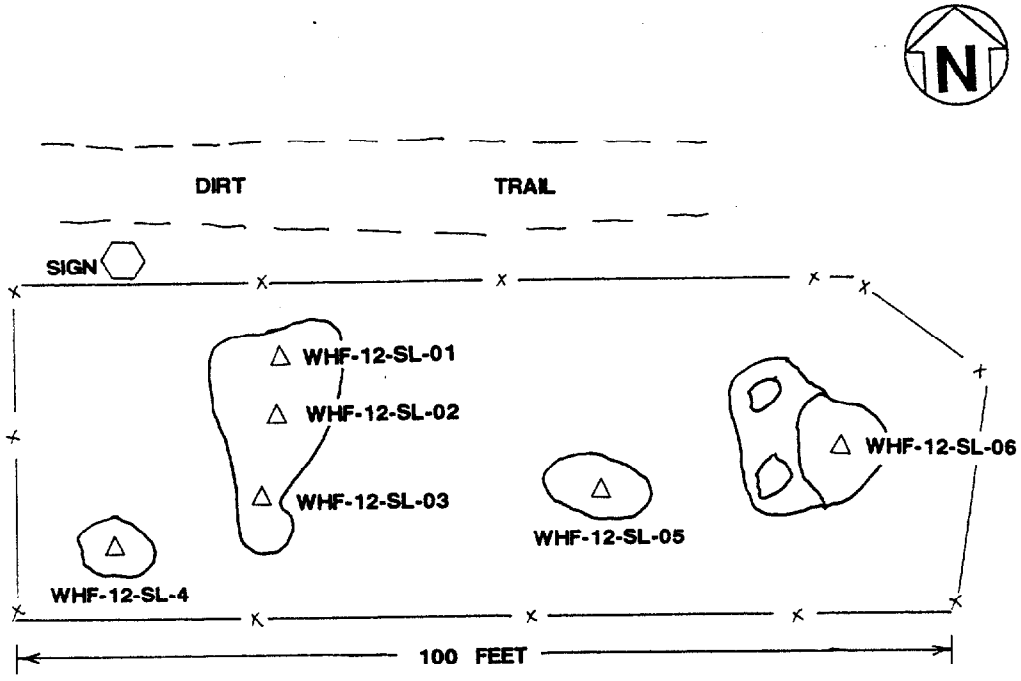
Samples were collected by boring into the piles using a stainless-steel hand auger. Sufficient sample was collected in a stainless-steel bowl and mixed using a stainless-steel spoon to perform corrosivity, flashpoint, TCLP, and total lead analyses in accordance with SW-846 (USEPA, 1986) Methods 9045, 1010, 1311, and 7421, respectively.

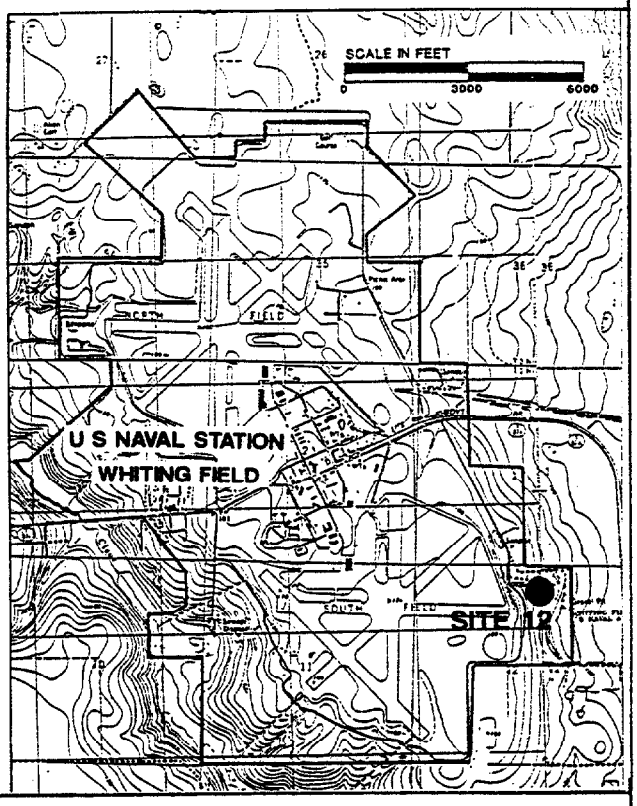
2.3 STORMWATER DRAINAGE SWALES. Three surface soil samples were collected in each of two stormwater drainage swales. These are the 'Y' ditch, which conveys stormwater from NAS Whiting Field toward Big Coldwater Creek, and "old 'A' Ditch," which conveyed stormwater from the southern part of the Base toward Clear Creek. The general location of these drainages is shown in Figure 2-3. Sample locations are shown in detail for the "old 'A' Ditch" in Figure 2-4 and for 'Y' ditch in Figure 2-5. Soil samples were collected in the same manner as described in Section 2.3 and analyzed for all target compound list (TCL) and target analyte list (TAL) organic and inorganic analytes.

In "Old 'A' ditch," the swale has slumped and is difficult to find without careful observation. Sample location WHF-15-SD-01(0-0.5)-01 was placed at the location of the turn of the former ditch, upslope from drainage from the former landfill. WHF-15-SD-02(1.0-2.0)-01 was collected downslope from the landfill. This sample was collected from 1.0 to 2.0 feet below the land surface because of the apparent depth of deposition of soil at this location. Location WHF-15-SD-03(0-0.5)-01 was placed downslope from where the ditch formerly flowed past Site 16. This sample location was at the outfall of the former drainage ditch to the floodplain of Clear Creek. Sample locations in "Y" ditch were placed upslope of sites 12 and 14 (WHF-2-SD-1), at the turn of the ditch downslope of sites 12 and 14 (WHF-12-SD-2), and near the point where the drainage exits NAS Whiting Field (WHF-12-SD-3).

2.4 SITES 15 AND 16, SOUTHWEST LANDFILL AND OPEN DISPOSAL AND BURNING AREA. Six surface soil samples were collected at these two sites at the locations shown in Figure 2-6. Three samples of surface soil from 0 to 0.5 foot below land surface were collected at each site. Figure 1-3 shows the general locations of these sites on the southwestern part of NAS Whiting Field. At each location, samples were collected using a stainless-steel spoon. Samples for volatile organic compounds (VOC) analysis were collected and placed in containers with minimal mixing and leaving no headspace. Samples for semivolatile organic chemicals (SVOCs), pesticides and PCBs, and inorganics TAL metals and total cyanide were prepared by thoroughly mixing sufficient soil in a stainless-steel bowl to fill all containers. To evaluate the nature of potential soil contaminations, the analytical program consisted of TCL VOCs, SVOCs, pesticides and PCBs, TAL metals, and total cyanide.

Soil samples at site 15 were selected at locations where evidence of former camping activities existed within the area presumed to be the former landfill. Bounds of the landfill to the north and south appeared to be distinguishable by the age of the planted pine trees and the boundary fence. Similarly, the footprint of Site 16 could be described by the size of trees, the road past the Waste Water Treatment Plant (WWTP), and the apparent route of the former storm





LEGEND

△ PHASE I SOIL SAMPLING LOCATIONS

WASTE PILES

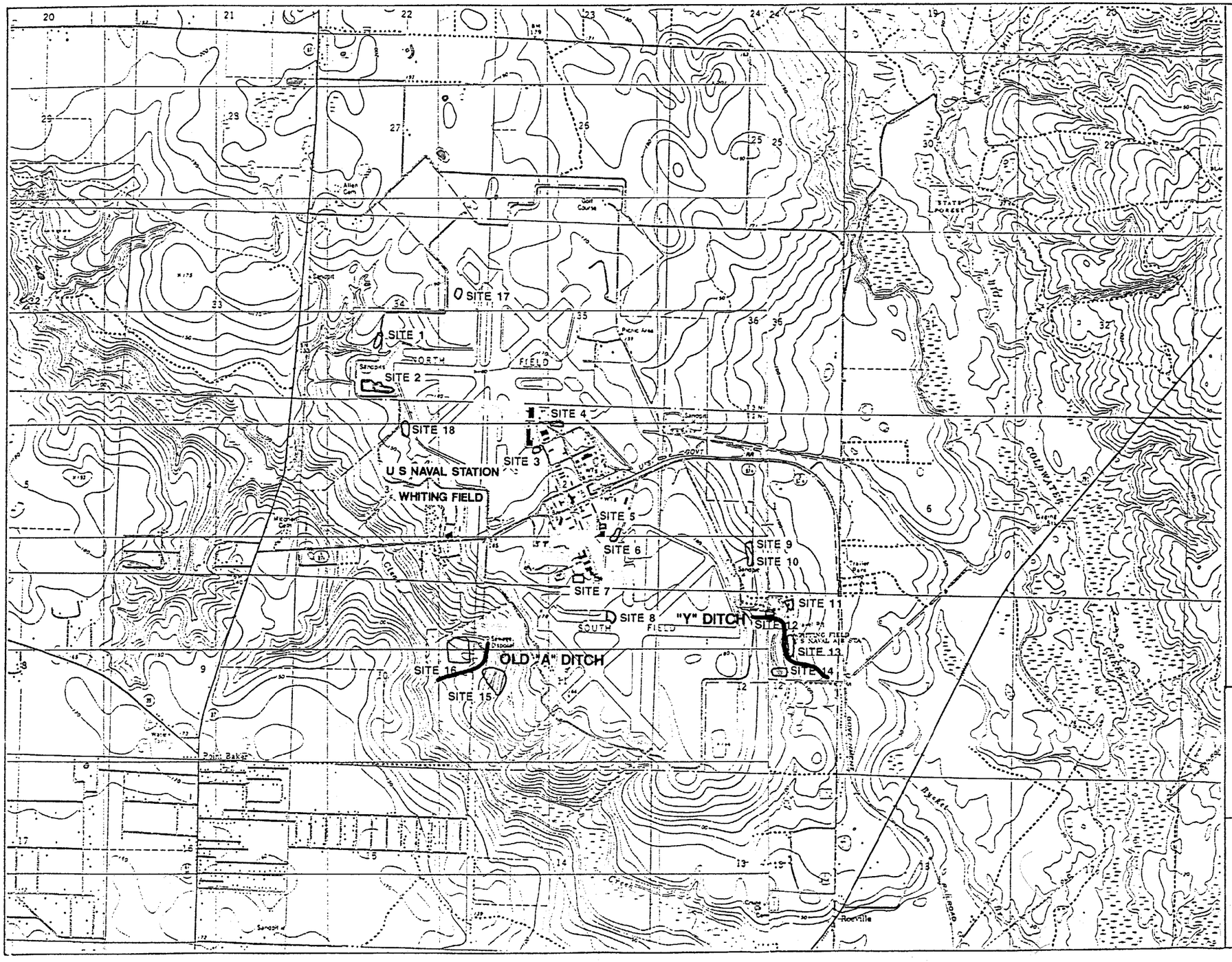
—x— FENCE

SOURCE: JORDAN, 1989

FIGURE 2-2
PHASE I
WASTE PILE SOIL SAMPLING
LOCATIONS AT SITE 12

RI/FS PROGRAM

NAS WHITING FIELD
MILTON, FLORIDA



N

SCALE IN FEET

0 3000 6000

SOURCE:
USGS QUADRANGLE MILTON NORTH, FLORIDA
PHOTOREVISED 1987
AND USGS QUADRANGLE HAROLD, FLORIDA 1973.

FIGURE 2-3
LOCATION OF DRAINAGE SWALES

RI/FS PROGRAM

NAS WHITING FIELD
MILTON, FLORIDA

00226I04Z

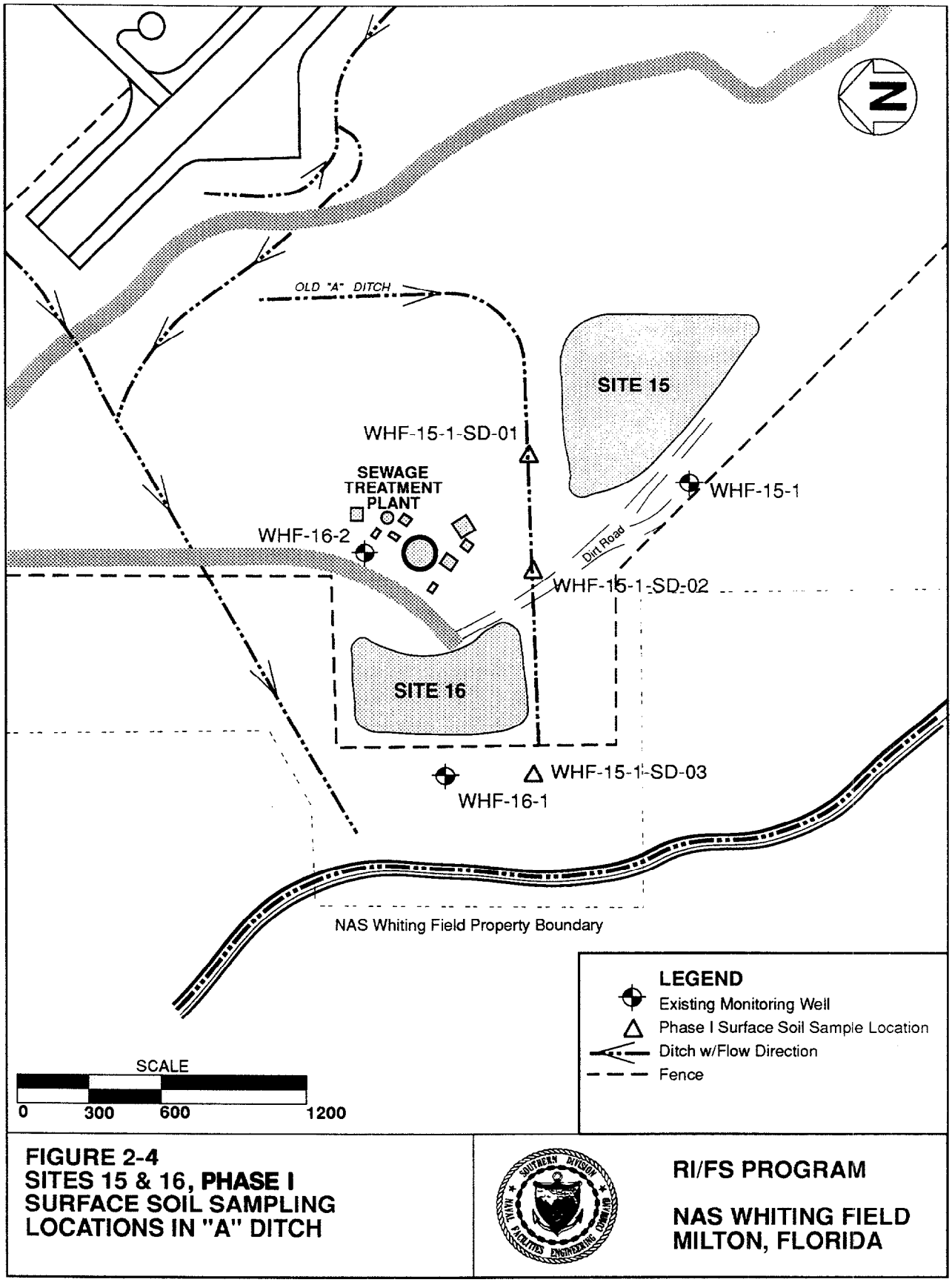


FIGURE 2-4
SITES 15 & 16, PHASE I
SURFACE SOIL SAMPLING
LOCATIONS IN "A" DITCH

RI/FS PROGRAM

NAS WHITING FIELD
MILTON, FLORIDA

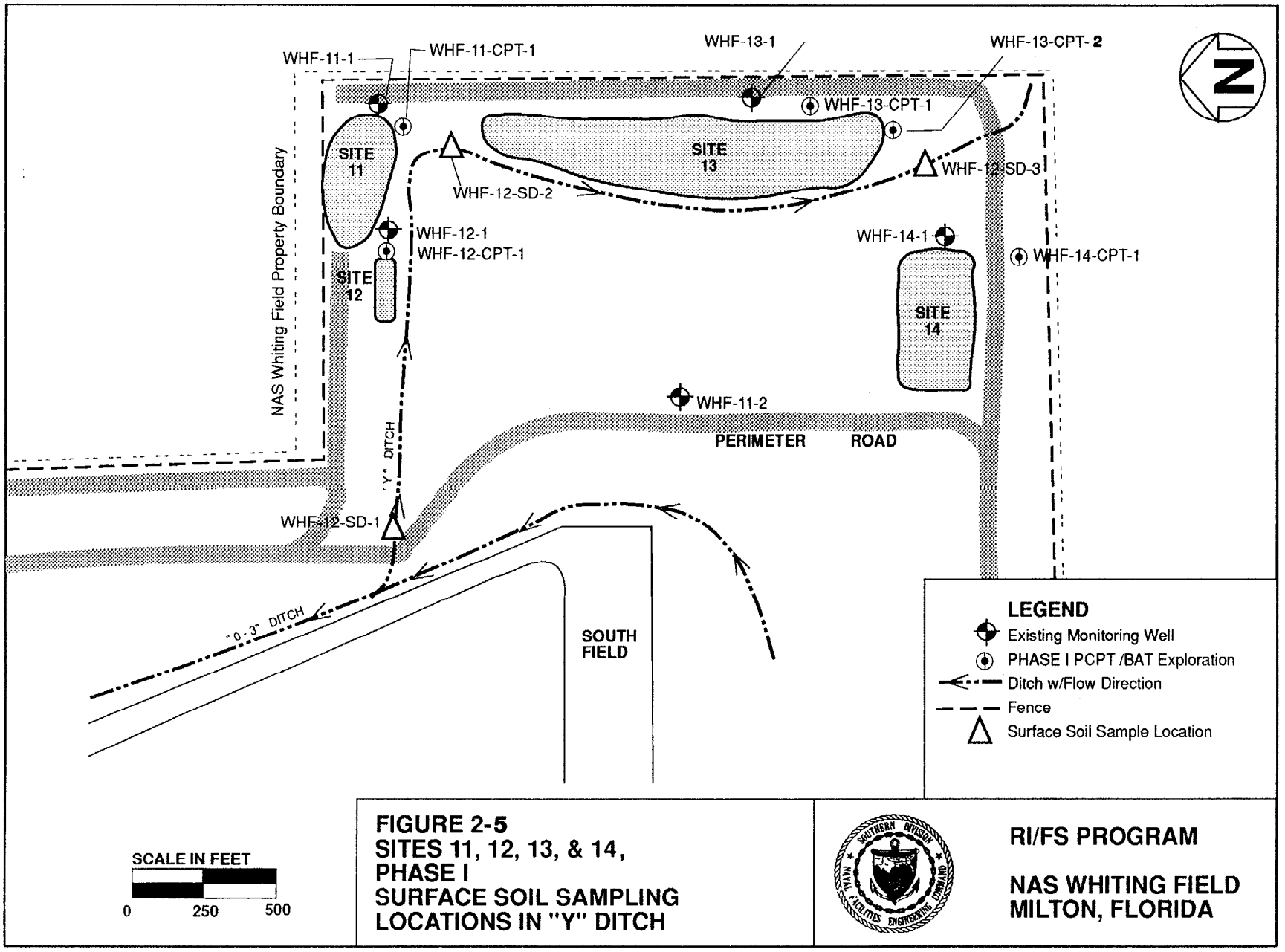


FIGURE 2-5
SITES 11, 12, 13, & 14,
PHASE I
SURFACE SOIL SAMPLING
LOCATIONS IN "Y" DITCH

RI/FS PROGRAM

NAS WHITING FIELD
MILTON, FLORIDA

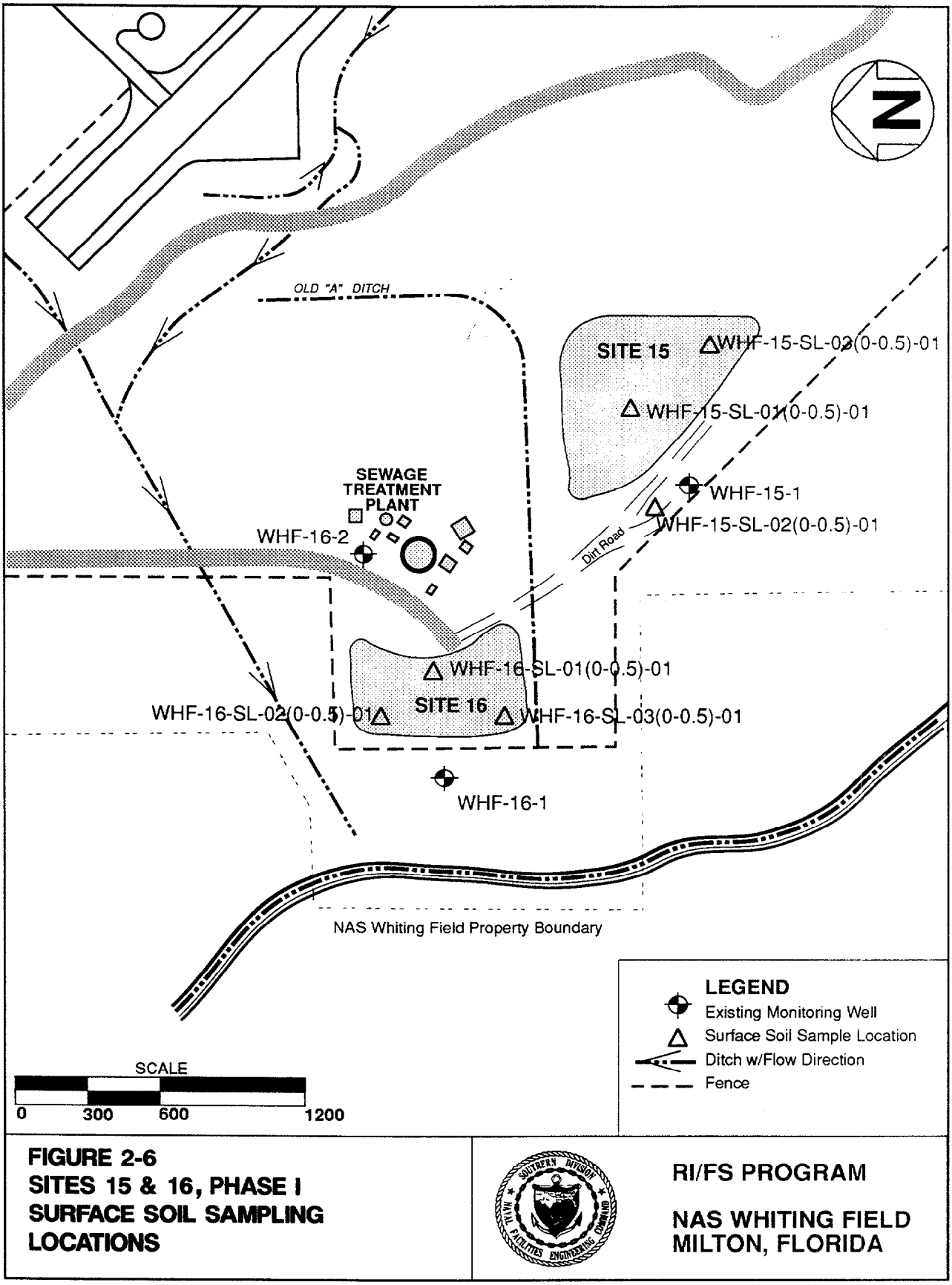


FIGURE 2-6
SITES 15 & 16, PHASE I
SURFACE SOIL SAMPLING LOCATIONS

RI/FS PROGRAM

NAS WHITING FIELD
MILTON, FLORIDA

drainage channel. At site 16, soil samples were collected on the upper part of the landfill and at each corner of the lower edge where surface water flow appeared to migrate during rain events.

2.5 QUALITY ASSURANCE PROGRAM AND DATA QUALITY ASSESSMENT.

2.5.1 Sample Handling, Delivery, and Chain of Custody Collection of surface soil and sediment samples was performed in accordance with the procedures outlined in the Site-Specific Quality Assurance Plan Addendum and Quality Assurance Plan Field Program of June 1990.

All samples were properly preserved, placed in coolers, and packed with bagged ice immediately after their collection and remained in the custody of the field operations leader until shipment to the laboratory. All samples were shipped, complete with chain-of-custody forms, to Savannah Laboratories and Environmental Services, Inc. (Savannah) in Tallahassee, Florida, for analysis. Upon arrival at Savannah, the chain-of-custody forms and preservation was checked with the contents of each cooler by Savannah personnel. After verification, the chain-of-custody form was signed by Savannah personnel and the samples were accepted for analysis.

Review of the field notebooks and chain-of-custody forms did not indicate any nonconformance relative to field instrument calibration or sample handling. Table 2-1 tabulates the field quality control samples collected for analysis. These include field duplicates, equipment rinsate blanks, and VOC trip blanks for each VOC sample shipment. All required field QC samples were collected in conformance with the requirements of the USEPA, NEESA, and FDER approved Jordan Quality Assurance Plans and the June 1988 NEESA *Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program* (NEESA, 1988). Review of the field duplicate results showed adequate agreement for soil and sediment inorganic compounds, VOCs, SVOCs, polynuclear aromatic hydrocarbons (PAHs), pesticides, and PCBs.

Methylene chloride (0.7 micrograms per liter [$\mu g/\ell$]) was detected in trip blank WHF-SL/SD-TB-01. Because of the overall presence of methylene chloride in the trip blank and the lack of presence in surface soil and sediment samples suggests that methylene chloride detected in the QC sample was due to an analytical artifact. Field QC samples and results are presented in Table 2-1.
Acetone was detected in trip blank WHF-SL/SD-TB2-01 at a concentration of 84 $\mu g/\ell$. Acetone was detected at relatively high concentrations sporadically in surface soil and sediment samples and appears to be an artifact of the decontamination procedure for soils and sediment. Acetone appears to be transformed from pesticide grade isopropanol after being transferred into non-colored Teflon™ containers.

2.5.2 Chemical Analysis Data Quality Assessment The analytical results presented in Appendices A through C were evaluated relative to meeting NEESA Level C and D QC criteria. These criteria are outlined in Table 2-2 and described in Section 7.3.2 of NEESA (1988) document 20.2-047B. Data review indicated that the laboratory met all analytical QC criteria for organic and inorganic analyses, pesticides, and PCBs, and SVOCs. Holding times were met for all sample lots.

Table 2-1
Field Quality Control Samples and Results

Technical Memorandum No. 3
NAS Whiting Field
Milton, Florida

Sampling Event	Control Sample	Results	
Surface Soil and Sediment	Field Blanks	Inorganics (µg/ℓ)	
	WHF-SL/SD-FB-01	Iron	114
		Magnesium	521
		Sodium	37,300
		Organics (µg/ℓ)	
		No SVOCs detected.	
		No VOCs detected.	
		No pesticides/PCBs detected.	
	WHF-6-PCB-FB-01	No PCBs detected.	
	WHF-12-SL-FB-01	No inorganics detected.	
	Rinsate Blanks	Inorganics (µg/ℓ)	
	WHF-SL/SD-RB-01	Barium	10.8
		Iron	3
		Sodium	655
		Organics (µg/ℓ)	
		No SVOCs detected.	
		No VOCs detected.	
		No pesticides/PCBs detected.	
	WHF-6-PCB-RB-01	No PCBs detected.	
	WHF-12-SL-RB-01	No inorganics detected.	
	Trip Blanks	Organics (µg/ℓ)	
	WHF-SL/SD-TB-01	Methylene chloride	0.7
	WHF-SL/SD-TB2-01	Acetone	84

See notes at end of table.

Table 2-1 (Continued)
Field Quality Control Samples and Results

Technical Memorandum No. 3
NAS Whiting Field
Milton, Florida

Sampling Event	Control Sample	Results	
	Field Duplicates	Inorganics (mg/kg)	
	WHF-15-SL-03(0-0.5)-01/01A	Aluminum	8,220/7,750
		Antimony	10.1/10.1
		Barium	4.5/8.8
		Chromium	9.5/4.7
		Cyanide	0.35/0.39
		Iron	4,870/4,110
		Lead	6/3.1
		Magnesium	ND/138
		Manganese	19.3/ND
		Vanadium	12.8/10.6
		Zinc	3.7/4.7
		Organics (µg/kg)	
		SVOCs: bis(2-ethylhexy)phthalate	53/83
		VOCs: Acetone	29/ND
	WHF-6-SL-01(0-0.5)-01/01A	No pesticide/PCBs detected.	
	WHF-6-SL-01(0-0.5)-12/12A	PCBs: Aroclor	1,260/25

See notes at end of table.

Table 2-1 (Continued)
Field Quality Control Samples and Results

Technical Memorandum No. 3
NAS Whiting Field
Milton, Florida

Sampling Event	Control Sample	Results	
	Matrix Spike and Matrix Spike Duplicate	Inorganics (mg/kg)	
	WHF-15-SL-03(0-0.5)-01MS/MSD	Aluminum	8,210/7,380
		Antimony	51.7/55.7
		Barium	422/418
		Arsenic	7/6.7
		Beryllium	9.3/9.4
		Cadmium	9.6/9.6
		Chromium	45.7/46
		Cobalt	103/105
		Copper	51.6/52
		Cyanide	2.4/2.2
		Iron	3,990/4,190
		Lead	7/7.8
		Magnesium	163/107
		Manganese	123/127
		Mercury	0.06/0.06
		Nickel	
		Potassium	
		Selenium	1.5/2.1
		Silver	9.4/9.5
		Thallium	9.4/9.1
		Vanadium	113/114
		Zinc	105/104
		Organics (µg/kg)	
		SVOCs: bis(2-ethylhexyl)phthalate	40/41
		No VOCs detected.	
		No pesticides/PCBs detected.	
	WHF-6-SL-12(0-0.5)-MS/MSD	No PCBs detected.	

Notes: µg/ℓ = micrograms per liter.
SVOCs = semivolatile organic compounds.
PCBs = polychlorinated biphenyls.
VOCs = volatile organic compounds.
ND = not detected.
mg/kg = milligrams per kilogram.
/ = indicates sample versus duplicate results.
MS = matrix spike.
MSD = matrix spike duplicate.
µg/kg = micrograms per kilogram.

Table 2-2
Laboratory Quality Control Criteria

Technical Memorandum No. 3
NAS Whiting Field
Milton, Florida

Analytes	Quality Control Criteria
Organic analytes	1. Surrogate recovery limits for VOCs, SVOCs, pesticides, and PCBs 2. Matrix spike/matrix spike duplicate (MS/MSD) 3. Method blanks and method blank spikes 4. GC/MS tuning results 5. Initial and continuing calibration 6. Internal standard area (VOCs and SVOCs) 7. Second column confirmation results for gas chromatography 8. Holding times
Metals and elements	1. Initial and continuing calibration 2. Blanks 3. Digestion method blanks 4. ICP interference checks 5. MS/MSD recovery and agreement 6. Post digestion spike recovery ICP 7. Post digestion spike recovery graphite furnace atomic absorption 8. Duplicate agreement 9. Method blanks spike recovery 10. Holding times
Cyanide	1. Blanks spike 2. Method blanks 3. MS/MSD 4. Calibration check percent RSD for initial and continuing calibration 5. Holding time

Notes: VOCs = volatile organic chemicals.
SVOCs = semivolatile organic chemicals.
PCBs = polychlorinated biphenyls.
MS/MSD = matrix spike/matrix spike duplicate.
GC/MS = gas chromatography/mass spectroscopy.
ICP = inductively coupled argon plasma.
RSD = relative standard deviation.

2.5.3 Data Quality Objectives Assessment The quality and completeness of the field sampling data generated during the field program met the established field QC criteria and were traceable to sample location. The data generated, therefore, meets the Level I field screening and Level C and D Data Quality Objectives (DQOs) established for the RI and is adequate for use in site characterization and evaluation.

No loss of analytical data due to rejection occurred in the RI analytical program. Detection of the VOC methylene chloride in one of the trip blanks suggests the presence of an analytical artifact. Detection of acetone in surface soil and sediment samples appears to be an artifact of the decontamination procedure. Based on the assessment of the analytical data, the data are acceptable for use in the RI characterization.

3.0 RESULTS AND INTERPRETATION

3.1 SITE 6, SOUTH TRANSFORMER OIL DISPOSAL AREA. As reported in the IAS (Envirodyne Engineers, 1985) during the period from the 1940's to 1964, building 1478 (see Figure 2-1) was used as an electrical shop where transformers were reworked. Dielectric fluid was reported to have been disposed into the "0-2" ditch at the location shown in Figure 2-1. This fluid potentially was PCB fluid or could have been contaminated with PCBs. During the verification program, 10 soil samples were collected at a depth of 0 to 2 feet below land surface along the paved flanks of the "0-2" ditch downstream of the reported disposal. No PCBs were detected at a detection limit of 0.2 milligram per kilogram (mg/kg) in any of these samples according to Geraghty & Miller (1986). During the phase I RI, a set of 12 samples were collected from the ditch and below the paved sections as described in Section 2.1. Results of analysis for PCBs in these samples are contained in Appendix A. The reported quantitation limit for PCB in soil was 160 micrograms per kilogram (0.16 μg/kg). Interpretation of the peaks on the chromatograms indicated trace amounts of Aroclor 1260 in 8 of the 12 samples. The locations and concentrations observed are shown in Figure 3-1 along with the approximate locations of the Geraghty & Miller explorations.

PCB was not detected in the upstream sample, WHF-6-SL-07-01, nor in two of the samples collected under the pavement (WHF-6-SL-09-01 and WHF-6-SL-01-01). Along and in the ditch leading from the disposal area to the culvert and on the shoulders of the culvert/roadway, eight samples contained the PCB Aroclor 1260™ at concentrations estimated at from 6.9 to 33 μg/kg. This includes sample location WHF-6-SL-12(0-0.5)-01, which was collected under the pavement of the 0-2 ditch at the culvert. The observed concentrations are less than 20 percent of the reported laboratory quantitation limit and is near the reported laboratory limit of resolution of the chromatogram peaks necessary to identify the substance Aroclor.

These data are interpreted to indicate that transformer oil, at least in limited quantities, was disposed as described. The extremely low concentrations suggest that either only a very small amount of PCB-contaminated material was disposed, or that reworking of the area has removed contamination to an unknown location. PCBs are extremely immobile and would not migrate downward in the soil columns with infiltrating water. Particulate transport down-ditch of PCB-contaminated soil could occur. In addition, PCBs are soluble in oils and in chlorinated solvents. Codisposal of these materials or disposal of solvents or oils after the PCBs had been disposed could carry them down the soil column. Reworking of the ditch by grading may also have disturbed the stratigraphy in which the highest concentrations would be found at the top of the soil column.

As described in Technical Memorandum No. 5, Groundwater Quality Assessment, exploratory sampling has indicated a substantial concentration of trichloroethylene in the aquifer near the "0-2" ditch. This may indicate past solvent disposal to the ditch from past aircraft maintenance activities at the Hanger (Building 1454). The Phase I RI soil sampling program was performed to verify the absence or confirm existence of the PCB disposal. Additional soil sampling deeper in the soil column and further down-ditch are required to completely define the extent of PCB contamination. This is presented in the summary Technical Memorandum (Memorandum No. 6) and in the Phase II Sampling and Analysis Plan.

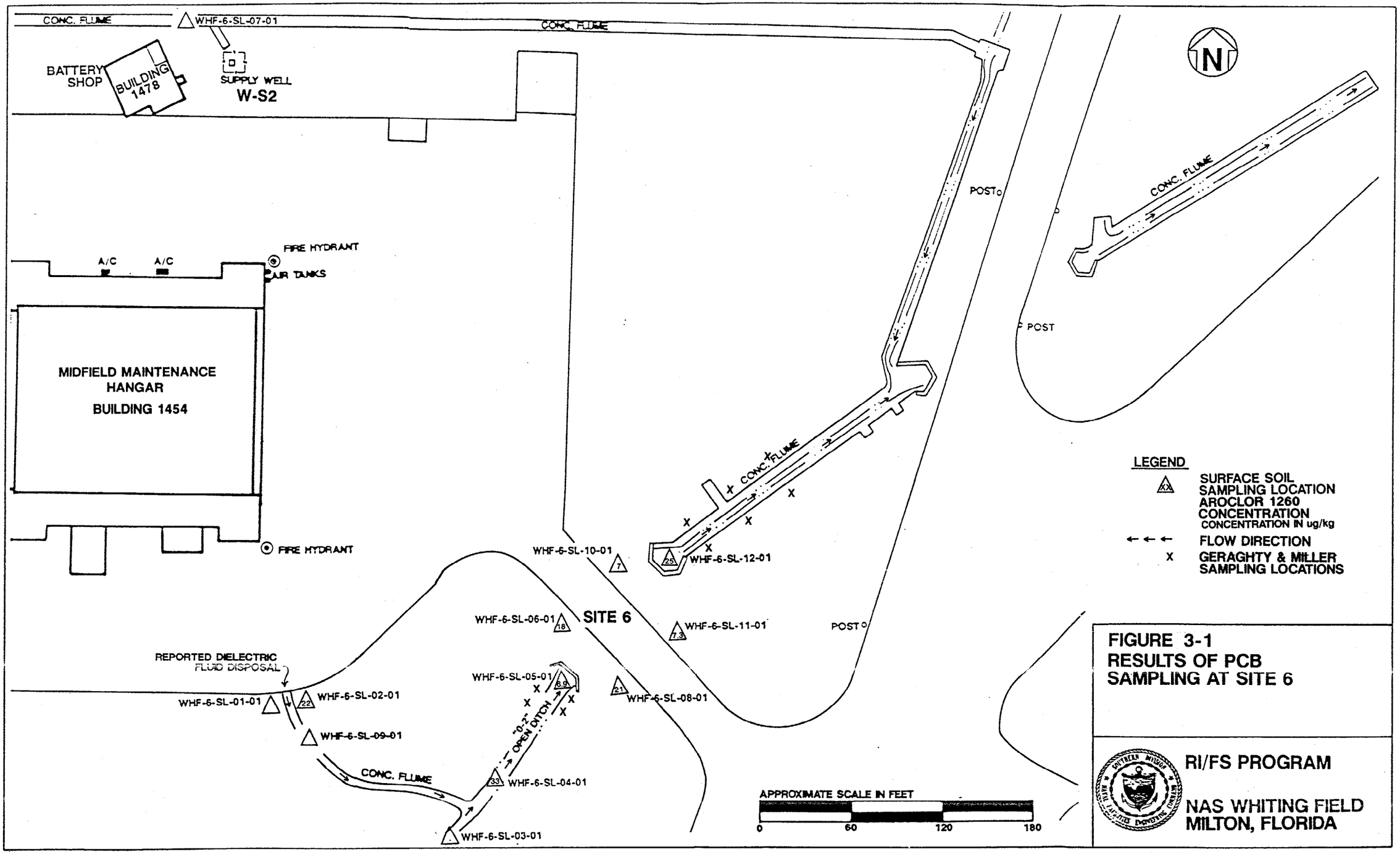


FIGURE 3-1
RESULTS OF PCB SAMPLING AT SITE 6

RI/FS PROGRAM

NAS WHITING FIELD
MILTON, FLORIDA

00226I05Z

3.2 SITE 12, TETRAETHYL LEAD DISPOSAL AREA. Reportedly, tank bottom sludge from the North and South Aquafarm Fuel System along with fuel filters were disposed of at Site 12 in May 1968 (Envirodyne Engineers, 1985). This material was reported to be contaminated by tetraethyl lead, a component of AVGAS. Site 12 is located in the pine woodland near the eastern base boundary. Currently, the site consists of four mounds oriented as shown in Figure 2-2 and covered by brush. During the Verification Study, two composite samples from the mounds were collected and analyzed for lead and USEPA Extraction Procedure (EP) toxicity test extractable lead. Lead concentrations of 4 and 11 mg/kg were detected in the samples. EP toxicity tests did not detect lead at a detection limit of 0.01 mg/ℓ in the extract.

During the Phase I RI, six samples from the center of the waste piles were collected as described in section 2.2 and analyzed for total lead and for RCRA corrosivity, ignitability, and toxicity. Complete results of these tests are included in Appendix B. No evidence of ignitability or corrosivity was present. Samples appeared to be fine- to medium-grained sands with no visible evidence of staining or odor. Soil pH ranged from 6.0 to 6.71, which is typical for soils in the area of NAS Whiting Field. None of the 37 TCLP organic or inorganic compounds were detected in any of the TCLP extracts tested with the exception of traces of barium (0.14 to 0.41 mg/ℓ). The RCRA regulatory limit for TCLP barium in TCLP extracts is 100 mg/ℓ. No extractable lead was detected in the extract at a detection limit of 0.1 mg/ℓ.

Each of the soil samples contained detectable total lead. Concentrations observed ranged from 9.7 to 30 mg/kg. This concentration range is similar to the Verification Study results and in the range of lead background for soils of the type observed and generally found in the vicinity of NAS Whiting Field. According to Kabata-Pendias and Pendias (1984), lead concentrations in uncontaminated sandy soils and clay soils range from <10 to 70 mg/kg with mean concentrations in the range of 17 and 22 mg/kg, respectively. Soil metals content for soil typical for NAS Whiting Filed are presented in Section 3.3. No site-specific background surface soil was analyzed as a part of the Phase I RI program. Soil lead concentrations for surface soils in the drainage swales and surface soils at sites 15 and 16 ranged from 3.1 to 43.7 mg/kg, as described in Sections 3.3 and 3.4. These soils were not selected as background locations; however, no substantial evidence of other contamination of these soils was detected. Based on the physical observations and chemical analysis, the mounds at Site 12 are not interpreted to be significantly contaminated by lead and show no evidence of oil or fuel sludge.

3.3 STORMWATER DRAINAGE SWALES. Complete summarized results with qualifiers for the analysis of TCL and TAL organics and inorganics in the two drainage swales tested are presented in Appendix C. No evidence of substantial surface soil contamination by VOCs, SVOCs, pesticides, PCBs, TAL metals, or cyanide was detected. The locations of these swales and sample locations are shown in Figures 2-4, 2-5, and 2-6. No VOCs were detected in the soil in either swale with the exception of acetone. As indicated in Section 2.5, acetone appears to be a transformation product of the pesticide grade isopropanol due to exposure to air and light. Existence of high levels of acetone in surface soils far from a strong current source of the chemical is not plausible from a chemical fate perspective. Acetone detected in soil VOC analysis is interpreted as a sampling

artifact in this program and not interpreted as representing environmental contamination. Acetone was reported in the following drainage swale samples.

Sample Location	Acetone Concentration (μg/kg)
WHF-12-SD-01(0-0.5)-01	1,700/870
WHF-12-SD-02(0-0.5)-01	4,700/3,400
WHF-12-SD-03(0-0.5)-01	1,500
WHF-15-SD-02(1.0-2.0)-01	530/240

Note: Results with a / represent duplicate analysis of the sample for confirmation.

The phthalate ester bis-(2-ethylhexyl)phthalate (BEHP) was the only SVOC observed. The quantitation limit for BEHP in soils is 350 μg/kg. All concentrations observed were below this level and are estimated. BEHP was also the only SVOC detected in all surface soil samples from the landfill sites (Sites 15 and 16).

BEHP is a common industrial plasticizer and is therefore one of the most common artifacts of sampling and analysis for organic chemicals. BEHP was detected in one sampler or rinsate blank and in one laboratory method blank. The method blank was not associated with the surface soil or drainage swale data set. It was observed in the matrix spike and duplicate analyses. Presence of BEHP in soil samples remote from any sources is not readily attributable to environmental contamination although that cannot be absolutely ruled out. BEHP concentrations detected in the swale samples are as follows.

Sample Location	BEHP Concentration (μg/kg)
WHF-12-SD-03(0.5-1.0)-01	65 J
WHF-15-SD-02(1.0-2.0)-01	52 J
WHF-15-SD-03(0.5-1.0)-01	59 J

Notes: Results with a "J" represent estimated value.

Table 3-1 summarizes the concentration of metals in soils of the drainage swales. Levels of metals are within the range of typical background for soils of the type found at NAS Whiting Field as reported in the literature. Data for soils of the Eastern United States, the Gulf Coast of Alabama and Florida, and for clays, sandy, or alluvial soils in the United States has been summarized in Table 3-2 for comparison.

Concentrations observed in the swale soils do not exceed mean values for any of the soil groupings except for lead detected at 23 mg/kg in two samples. Mean values for lead in sandy alluvial and clay soils range from 17 to 22 mg/kg. The database for the tabulation in Table 3-2 includes more than 1,000 samples collected and analyzed by the U.S. Geological Survey.

Table 3-1
Inorganic Chemicals in Surface Soils at NAS Whiting Field

Technical Memorandum No. 3
NAS Whiting Field
Milton, Florida

Parameter	Drainage Swales Sample Location						Landfills Soil Sample Location					
	12-01	12-02	12-03	15-01	15-02	15-03	15-01	15-02	15-03	16-01	16-02	16-03
Aluminum	5,990	10,500	4,240	10,400	4,590	1,170	7,660	9,000	8,220	9,900	10,400	16,100
Antimony	11.1J	9.1J	9.3J	7.9J	8.4J	8.9J	8.4J	9.1J	10.1J	10J	<9.5	8.8J
Arsenic	<2.2	1.7J	1.8J	3.2J	<1.7	2.1	<1.7	<1.9	<1.9	<2	3	5
Barium	8.68J	10J	7.8J	13.8J	5.2J	14.9J	5.3J	4.5J	8.8J	14.8J	19.2J	26.2J
Beryllium	<1.1	<0.92	<0.93	<0.79	<0.84	<0.89	<0.84	<0.92	<1	<1	<0.95	<0.88
Cadmium	<1.1	<0.92	<0.93	<0.79	<0.84	<0.89	<0.84	<0.92	<1	<1	<0.95	<0.88
Calcium	3,750	<92.2	137	2,240	<83.5	<88.5	<83.9	<92.4	<102	300	233	355
Chromium	6.7	7	2.7	8.6	3.4	6.9	4.8	9.5	4.7	7.5	8.6	12.1
Cobalt	<2.2	<1.8	<1.9	<1.6	<1.7	<1.8	<1.7	<1.8	<2	<2	<1.9	<1.8
Copper	<5.5	<4.5	4.8	7.9	4.4	<4.4	<4.2	<4.5	<5	5.3	7.2	10.8
Cyanide	<0.31	0.27J	0.28J	0.62J	0.29J	0.48J	0.32J	0.35J	0.39J	0.29J	0.29J	0.29J
Iron	3,140	3,340	2,790	4,990	2,770	6,340	3,810	4,870	4,110	4,800	4,840	7,440
Lead	5.5	8.6	23.1	23.3	12.9	6.5	2.4J	6J	3.1J	14J	46.5J	43.7
Magnesium	864	144	93.2	365	83.5	166J	92.2J	<92.4	138J	147J	169J	272
Manganese	52.2	92.7	51.1	72	19.5	144	32.4	19.3	<20.2	76.2	83.8	141J
Mercury	<0.01	0.01	0.01	0.04	0.05	0.02	<0.01	<0.01	<0.01	0.01	0.02	0.08
Nickel	<8.9	<7.4	<7.5	<6.3	<6.7	<7	<6.7	<7.4	<8.1	<8	<7.5	<7.0
Selenium	<1.1	<0.87	<0.89	<0.89	<0.84	<0.95	<0.83	<0.93	<0.93	<1	<0.89	<0.95
Silver	<2.2	<1.8	<1.9	<1.6	<1.7	<1.8	<1.7	<1.8	<2	<2	<1.9	<1.8
Sodium	<111	<92.2	<93.2	<79	<83.5	<88.5	<83.9	<92.4	<102	<99.5	<94.7	<88.0
Vanadium	9.8J	13.6	5.2J	15	6J	15.6	10.1	12.8	10.6	13.9	14.6	22.7
Zinc	<4.4	6.4	14.8	15.5	10.8	7.2	<3.4	3.7	4.7	16.3	29.4	35.6

Note: All concentrations are in micrograms per kilogram (µg/kg). J = estimated value.

Table 3-2
Background Concentration Range for Elements in Soils

Technical Memorandum No. 3
NAS Whiting Field
Milton, Florida

Element	Eastern United States[1]		Gulf Coast[2] (FL and AL)	United States Clay and Clay Loam[3]		United States Alluvial Soils[3]		United States Sandy Soils[3]	
	Geometric Mean	Range	Range	Arithmetic Mean	Range	Arithmetic Mean	Range	Arithmetic Mean	Range
Aluminum	3.3%	0.7 - >10%	0.07 - 3%	No data		No data		No data	
Antimony	0.10	<0.08 - 0.31	<1 - 10	--	0.25 - 0.6	No data		No data	
Arsenic	4.8	<0.1 - 73	<0.1 - 100	7.7	1.7 - 27.0	8.2	21 - 22.0	5.1	<0.01 - 300
Barium	31	<20 - 150	10 - 200	535	150 - 1,500	6.60	200 - 1,500	400	20 - 1,500
Beryllium	0.55	<1 - 7	<1	1.9	<1 - 15	1.6	1 - 3	1.9	<1 - 3
Cadmium	No data		No data	--	0.4 - 0.57	No data		No data	
Calcium	0.34%	0.01 - 28%	0.013 - 0.23%	No data		No data		No data	
Chromium	33	1 - 1,000	1 - 2,000	55	20 - 100	55	15 - 100	40	3 - 200
Cobalt	5.9	<0.3 - 70	<3 - 7	8.0	3 - 30	9.0	3 - 20	3.5	0.4 - 20
Copper	13	<1 - 7,000	<10 - 700	29	7 - 70	27	5 - 50	14	1 - 70
Cyanide	No data		No data	No data		No data		No data	
Iron	2.87%	<0.01 - >10	0.01 - 1.5%	No data		No data		No data	
Lead	14	<10 - 300	<10 - 700	22	10 - 70	18	10 - 30	17	<10 - 70
Magnesium	0.21%	0.005 - 5%	0.005 - 0.15%	No data		No data		No data	
Manganese	260	<2 - 7,000	<2 - 7,000	580	50 - 2,000	405	150 - 1,500	345	7 - 2,000
Mercury	0.081	0.01 - 3.4	<0.01 - 5.1	0.13	0.01 - 0.90	0.05	0.02 - 0.15	0.08	<0.01 - 0.54
Nickel	11	<5 - 700	<5 - 15	20.5	5 - 50	19.0	7 - 50	13	<5 - 70
Selenium	0.30	<0.1 - 3.9	<0.01 - 5	0.5	<0.1 - 1.9	0.5	<0.1 - 2.0	0.5	<0.005 - 3.5

See notes at end of table.

Table 3-2
Background Concentration Range for Elements in Soils

Technical Memorandum No. 3
NAS Whiting Field
Milton, Florida

Element	Eastern United States[1]		Gulf Coast[2] (FL and AL)	United States Clay and Clay Loam[3]		United States Alluvial Soils[3]		United States Sandy Soils[3]	
	Geometric Mean	Range	Range	Arithmetic Mean	Range	Arithmetic Mean	Range	Arithmetic Mean	Range
Silver	No data		No data	No data		No data		No data	
Sodium	0.25%	<0.05 - 5%	<0.05 - 0.2%	No data		No data		No data	
Titanium	No data		No data	No data		No data		No data	
Vanadium	43	<7 - 300	<7 - 50	87	20 - 150	79	30 - 150	47	7 - 150
Zinc	40	<5 - 2,900	28 - 45	67	20 - 220	58.5	20 - 108	40	<5 - 164

[1]Shacklette and Boerngen (1984), Table 2, East of Longitude 96° West.
[2]Taken from Shacklette and Boerngen (1984) data display figures.
[3]Kabata-Pendias and Pendias (1984).

Notes: Concentrations are in milligrams per kilogram unless otherwise noted.

Based on the sampling performed in the Phase I RI, no evidence of residual surface soil contamination exists in the soils of the "Old 'A' Ditch" adjacent to former disposal Sites 15 and 16, or in the eastern storm drainage swale (Y ditch).

Surface soil results from the surfaces of Sites 15 and 16 are presented in Section 3.4 and indicate that these soils are not contaminated. Based on this factor and are the sampling performed, it has been concluded that contamination is not present in the former "A" ditch.

The "Y" ditch receives the drainage from the south field runways and Sites 12 and 14. No evidence of contamination exists in the drainage.

3.4 SITES 15 AND 16, SOUTHWEST LANDFILL AND OPEN DISPOSAL AND BURNING AREA.

3.4.1 Site 15, The Southwest Landfill Site 15, the Southwest Landfill is located southeast of the wastewater treatment plant on an area of approximately 15 acres. The location of the site is shown on Figures 2-4 and 2-5.

The site is located at the foot of the Western Highlands. The area has a surface slope of about 5 percent. The land slopes from east to west towards Clear Creek. Thus, surface runoff from the site is toward Clear Creek, which is approximately 1,200 feet west of the site. The IAS reported that much of the site is covered with small pine trees; however, there are numerous areas void of vegetation. Severe surface erosion, as a result of the surface slope, was evident at the site during the IAS survey. The IAS also reported that the erosion problem was compounded by the fact that vegetative cover has not been fully established at the site. As a result of the erosion, some of the buried wastes have been exposed, including paint cans, oil filters, and spark plugs. Berms have been created throughout the landfill area to reduce surface erosion. The site is surrounded by tall pine trees.

This area was operated as a landfill from 1965 to 1979, during which time it received the majority of wastes generated at NAS Whiting Field. Wastes disposed included primarily general refuse and other wastes associated with the operation and maintenance of aircraft (paint, paint thinner, solvents, waste oil, and hydraulic fluid). This included wastes from the Aircraft Intermediate Maintenance Department (AIMD) and the training squadrons. Bagged asbestos was also reportedly disposed at the site, as well as potentially PCB-contaminated dielectric fluid. The IAS estimated approximately 3,000 to 4,500 tons of waste were disposed at the site annually. The site was operated as a landfill, with the waste material being covered on a daily basis. No burning was conducted at the site.

As part of the Verification Study, monitoring well WHF-15-1 was installed to a depth of 72 feet below land surface along the west side of the site. Depth to the groundwater table was measured to be about 27 feet below land surface and based on the water elevations, groundwater is thought to flow west towards Clear Creek. A groundwater sample was collected during the investigation and analyzed for the USEPA's list of priority pollutants. Bis(2-ethylhexyl)phthalate (118 $\mu g/\ell$) was the only organic compound detected in the water sample from well WHF-15-1. Trace concentrations of lead (0.003 $\mu g/\ell$) and zinc (0.06 mg/l) were also detected in the water sample.

3.4.2 Site 16, Open Disposal and Burning Area Site 16, Open Burning and Disposal Area, is located just east of Clear Creek and west of the wastewater treatment plant. The site covers an area of approximately 10 acres. The location of the site is shown in Figures 2-4 and 2-5.

The waste disposal area is located on a small plateau west of Clear Creek at an elevation of approximately 50 feet above mean sea level. To the east of the site lies the Western Highlands of the coastal plain, and to the west, the land drops to Clear Creek at a slope of about 10 percent. Clear Creek is located approximately 200 feet west of the site. The majority of the site and surrounding area is covered with tall pine trees.

Due to its topographic setting, the site collects surface runoff from areas to the east. Surface runoff flows from the sites toward the west and Clear Creek. Due to the close proximity of the site to Clear Creek, surface runoff is quickly discharged to the creek. Groundwater flow in the area of the site is expected to follow that of surface water, flowing from east to west toward Clear Creek.

This site was used as an open disposal and burn area from the time NAS Whiting Field was established in 1943 until approximately 1965. During this period of time, the site reportedly received the majority of wastes generated at the air station. These wastes consisted of general refuse and wastes associated with the operation and maintenance of aircraft (paint, solvents, waste oil, and hydraulic fluid). This included wastes from AIMD and the training squadrons. The IAS also reported that PCB-contaminated dielectric fluid was probably disposed at the site. Approximately 3,000 to 4,500 tons of waste were disposed at the site annually. Reportedly, the majority of wastes disposed at the site were burned for volume reduction. Waste diesel fuel was added to the wastes to promote combustion.

As part of the Verification Study, monitoring well WHF-16-1 was installed west of the site. It was installed to a depth of 42 feet below land surface with the depth to groundwater table determined to be about 11 feet. A groundwater sample was collected and analyzed for the USEPA's list of priority pollutants. The laboratory analysis of the sample showed a concentration of bis(2-ethylhexyl)-phthalate at 36 $\mu g/\ell$ and trace amounts of lead and zinc that were well below the FDER's drinking water standard.

3.4.3 Assessment of Sites 15 and 16 The soil sampling field program confirmed the observations relative to the sandy nature of the surface soils at Sites 15 and 16. No exposed wastes were observed. During the exploratory groundwater sampling program described in Technical Memorandum No. 5, solid waste and garbage were detected in one borehole at this site confirming that buried waste is present at Site 15.

With the exception of acetone and BEHP, which are apparent artifacts of the sampling program, no organic contaminants were detected in surface soils at either Site 15 or Site 16. Interpretative rationale for these chemicals as artifacts was presented in Section 2.5 and Section 3.3. No VOCs, SVOCs, pesticides, or PCBs indicative of environmental contamination were detected in

the soil cover of these two disposal areas. The acetone and BEHP found are tabulated below. Sample locations were shown in Figure 2-5.

Acetone		BEHP	
Sample Location	Concentration (μg/kg)	Sample Location	Concentration (μg/kg)
WHF-15-SL-01(0-0.5)01	10,000/8,100	WHF-15-SL-01(0-0.5)01	81 J
WHF-15-SL-03(0-0.5)01	29	WHF-15-SL-02(0-0.5)01	77 J
WHF-16-SL-01(0-0.5)01	68	WHF-15-SL-03(0-0.5)01	53 J
WHF-16-SL-02(0-0.5)01	71,000	WHF-16-SL-01(0-0.5)01	130 J
		WHF-16-SL-02(0-0.5)01	790 J
		WHF-16-SL-03(0-0.5)01	72 J

Note: Results with / represent duplicate analysis of the sample for confirmation.
Results with a "J" indicate estimated value.

Inorganic results are tabulated for Sites 15 and 16 in Table 3-1. With the exception of sampling location WHF-16-SL-03(0-0.5)-01, the metals results are consistent with the other soils and sediments at NAS Whiting Field and are at or below concentrations in background soil (see Table 3-2). WHF-16-SL-03(0-0.5)-01 metals concentrations are approximately two times the other sample concentrations. In spite of this, only lead and mercury slightly exceeded mean values for any background soil types and these were less than a faction of two times above background. It is possible that the metals concentrations observed at this location are affected by past disposal. However, no NAS Whiting Field specific background data has been collected and the number of samples is not sufficient to interpret the concentration observed at WHF-16-SL-03(0.5-1.0)-01 as differing from background.

Based on the results of the Phase I surface soil sampling, no firm evidence exists for surface soil contamination at either Site 15 or Site 16. Further it is highly unlikely based on three samples from the camping areas that past camping activities resulted in human exposure. Data is sufficient to conclude that the camping areas do not contain surface soil contamination. Subsurface soil and groundwater sampling are required to evaluate the nature and extent of contamination from these sites. The exploratory screening groundwater program indicates that VOC contamination of groundwater is present at these sites. Based on the collection of two sets of three surface soil samples over several acres of potential sources, inadequate data are available to unequivocally conclude that no surface soil contamination exists. Surface samples collected in conjunction with soil borings should be collected in Phase II to confirm the tentative conclusion that no surface soil contamination is present.

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APPENDIX A

SUMMARIZED SOIL PCB RESULTS, SITE 6

Sample Delivery Group: T0002 QC Level C

Sample No.:	PBLK-W			PBLK-MS			PBLK-MSD			6PCB-FB			6PCB-RB			PBLK-S			6SL01		
Locator:	207416			2074RWS			2074RWSD			PCBFB01			6PCBRB01			207413			6SL01(0-0.5)01		
Date Sampled:	12-4-90			12-4-90			12-4-90			12-3-90			12-3-90			12-4-90			12-3-90		
Pesticide Organics	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units
alpha-BHC																					
beta-BHC																					
delta-BHC																					
gamma-BHC (Lindane)																					
Heptachlor																					
Aldrin																					
Heptachlor epoxide																					
Endosulfan I																					
Dieldrin																					
4,4'-DDE																					
Endrin																					
Endosulfan II																					
4,4'-DDD																					
Endosulfan sulfate																					
4,4'-DDT																					
Methoxychlor																					
Endrin ketone																					
alpha-Chlordane																					
gamma-Chlordane																					
Toxaphene																					
Aroclor-1016	0.50	U	µg/ℓ	0.50	U	µg/ℓ	0.50	U	µg/ℓ	0.50	U	µg/ℓ	0.50	U	µg/ℓ	81	U	µg/kg	87	U	µg/kg
Aroclor-1221	0.50	U	µg/ℓ	0.50	U	µg/ℓ	0.50	U	µg/ℓ	0.50	U	µg/ℓ	0.50	U	µg/ℓ	81	U	µg/kg	87	U	µg/kg
Aroclor-1232	0.50	U	µg/ℓ	0.50	U	µg/ℓ	0.50	U	µg/ℓ	0.50	U	µg/ℓ	0.50	U	µg/ℓ	81	U	µg/kg	87	U	µg/kg
Aroclor-1242	0.50	U	µg/ℓ	0.50	U	µg/ℓ	0.50	U	µg/ℓ	0.50	U	µg/ℓ	0.50	U	µg/ℓ	81	U	µg/kg	87	U	µg/kg
Aroclor-1248	0.50	U	µg/ℓ	0.50	U	µg/ℓ	0.50	U	µg/ℓ	0.50	U	µg/ℓ	0.50	U	µg/ℓ	81	U	µg/kg	87	U	µg/kg
Aroclor-1254	1.0	U	µg/ℓ	1.0	U	µg/ℓ	1.0	U	µg/ℓ	1.0	U	µg/ℓ	1.0	U	µg/ℓ	160	U	µg/kg	170	U	µg/kg
Aroclor-1260	1.0	U	µg/ℓ							1.0	U	µg/ℓ	1.0	U	µg/ℓ	160	U	µg/kg	170	U	µg/kg

Sample Delivery Group: T0002 QC Level C

Sample No.:	6SL02			6SL03			6SL03RE			6SL04			6SL05			6SL06			6SL07		
Locator:	6SL02(0-0.5)01			6SL03(0-0.5)01			6SL03(0-0.5)01			6SL04(0-0.5)01			6SL05(0-0.5)01			6SL06(0-0.5)01			6SL07(0-0.7)01		
Date Sampled:	12-3-90			12-3-90			12-3-90			12-3-90			12-3-90			12-3-90			12-3-90		
Pesticide Organics	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units
alpha-BHC																					
beta-BHC																					
delta-BHC																					
gamma-BHC (Lindane)																					
Heptachlor																					
Aldrin																					
Heptachlor epoxide																					
Endosulfan I																					
Dieldrin																					
4,4'-DDE																					
Endrin																					
Endosulfan II																					
4,4'-DDD																					
Endosulfan sulfate																					
4,4'-DDT																					
Methoxychlor																					
Endrin ketone																					
alpha-Chlordane																					
gamma-Chlordane																					
Toxaphene																					
Aroclor-1016	88	U	µg/kg	93	U	µg/kg	93	U	µg/kg	88	U	µg/kg	98	U	µg/kg	86	U	µg/kg	88	U	µg/kg
Aroclor-1221	88	U	µg/kg	93	U	µg/kg	93	U	µg/kg	88	U	µg/kg	98	U	µg/kg	86	U	µg/kg	88	U	µg/kg
Aroclor-1232	88	U	µg/kg	93	U	µg/kg	93	U	µg/kg	88	U	µg/kg	98	U	µg/kg	86	U	µg/kg	88	U	µg/kg
Aroclor-1242	88	U	µg/kg	93	U	µg/kg	93	U	µg/kg	88	U	µg/kg	98	U	µg/kg	86	U	µg/kg	88	U	µg/kg
Aroclor-1248	88	U	µg/kg	81	U	µg/kg	93	U	µg/kg	88	U	µg/kg	98	U	µg/kg	86	U	µg/kg	88	U	µg/kg
Aroclor-1254	180	U	µg/kg	160	U	µg/kg	190	U	µg/kg	180	U	µg/kg	200	U	µg/kg	170	U	µg/kg	180	U	µg/kg
Aroclor-1260	22	J	µg/kg	160	U	µg/kg	190	U	µg/kg	33	J	µg/kg	6.9	J	µg/kg	18	J	µg/kg	180	U	µg/kg

Sample Delivery Group: T0002 QC Level D

Sample No.:	6SL08			6SL09			6SL10			6SL11			6SL12			6SL12MS			6SL12MSD		
Locator:	6SL08(0-0.5)01			6SL09(0-0.5)01			6SL10(0-0.5)01			6SL11(0-0.5)01			6SL12(4-5)01			6SL12(4-5)MS			6SL12(4-5)MSD		
Date Sampled:	12-3-90			12-3-90			12-3-90			12-3-90			12-3-90			12-3-90			12-3-90		
Pesticide Organics	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units
alpha-BHC																					
beta-BHC																					
delta-BHC																					
gamma-BHC (Lindane)																					
Heptachlor																					
Aldrin																					
Heptachlor epoxide																					
Endosulfan I																					
Dieldrin																					
4,4'-DDE																					
Endrin																					
Endosulfan II																					
4,4'-DDD																					
Endosulfan sulfate																					
4,4'-DDT																					
Methoxychlor																					
Endrin ketone																					
alpha-Chlordane																					
gamma-Chlordane																					
Toxaphene																					
Aroclor-1016	83	U	µg/kg	88	U	µg/kg	86	U	µg/kg	87	U	µg/kg	93	U	µg/kg	93	U	µg/kg	93	U	µg/kg
Aroclor-1221	83	U	µg/kg	88	U	µg/kg	86	U	µg/kg	87	U	µg/kg	93	U	µg/kg	93	U	µg/kg	93	U	µg/kg
Aroclor-1232	83	U	µg/kg	88	U	µg/kg	86	U	µg/kg	87	U	µg/kg	93	U	µg/kg	93	U	µg/kg	93	U	µg/kg
Aroclor-1242	83	U	µg/kg	88	U	µg/kg	86	U	µg/kg	87	U	µg/kg	93	U	µg/kg	93	U	µg/kg	93	U	µg/kg
Aroclor-1248	83	U	µg/kg	88	U	µg/kg	86	U	µg/kg	87	U	µg/kg	93	U	µg/kg	93	U	µg/kg	93	U	µg/kg
Aroclor-1254	170	U	µg/kg	180	U	µg/kg	170	U	µg/kg	170	U	µg/kg	190	U	µg/kg	93	U	µg/kg	93	U	µg/kg
Aroclor-1260	21	J	µg/kg	180	U	µg/kg	7.0	J	µg/kg	7.8	J	µg/kg	25	J	µg/kg	190	U	µg/kg	190	U	µg/kg

APPENDIX B

TETRAETHYL LEAD DISPOSAL AREA (SITE 12) SOIL TESTING RESULTS

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive • Tallahassee, FL 32301 • (904) 878-3994 • Fax (904) 878-9504

LOG NO: T0-12076

Received: 04 DEC 90

Mr. Michael Keirn
ABB Environmental, Inc.
2571 Executive Center Cir., Suite 100
Tallahassee, Florida 32301

Project: Whiting Field NAS/6500-01

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	SAMPLED BY
12076-1	WHF-12-SL-01(1-2)-01	Client
12076-2	WHF-12-SL-02(1-2)-01	
12076-3	WHF-12-SL-03(1-2)-01	
12076-4	WHF-12-SL-04(1-2)-01	
12076-5	WHF-12-SL-05(1-2)-01	

PARAMETER	12076-1	12076-2	12076-3	12076-4	12076-5
Corrosivity-pH (EPA 9045), units	7.7	6.0	6.3	6.5	6.6
Ignitability-flash point, Degrees F	NF*	NF*	NF*	NF*	NF*
Lead, mg/kg dw	21	20	30	17	9.7

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive • Tallahassee, FL 32301 • (904) 878-3994 • Fax (904) 878-9504

LOG NO: T0-12076

Received: 04 DEC 90

Mr. Michael Keirn
ABB Environmental, Inc.
2571 Executive Center Cir., Suite 100
Tallahassee, Florida 32301

Project: Whiting Field NAS/6500-01

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	SAMPLED BY
12076-6	WHF-12-SL-06(1-2)-01	Client

PARAMETER	12076-6
Corrosivity-pH (EPA 9045), units	7.4
Ignitability-flash point, Degrees F	NF*
Lead, mg/kg dw	20

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive • Tallahassee, FL 32301 • (904) 878-3994 • Fax (904) 878-9504

LOG NO: T0-12076

Received: 04 DEC 90

Mr. Michael Keirn
ABB Environmental, Inc.
2571 Executive Center Cir., Suite 100
Tallahassee, Florida 32301

Project: Whiting Field NAS/6500-01

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	SAMPLED BY
12076-7	WHF-12-SL-01(1-2)-01 (corrected/anal)	Client
12076-8	WHF-12-SL-02(1-2)-01 (corrected/anal)	
12076-9	WHF-12-SL-03(1-2)-01 (corrected/anal)	
12076-10	WHF-12-SL-04(1-2)-01 (corrected/anal)	
12076-11	WHF-12-SL-05(1-2)-01 (corrected/anal)	

PARAMETER	12076-7	12076-8	12076-9	12076-10	12076-11
Volatiles in TCLP Extract					
Benzene (TCLP), mg/l	<0.020	<0.020	<0.020	<0.020	<0.020
Carbon tetrachloride (TCLP), mg/l	<0.020	<0.020	<0.020	<0.020	<0.020
Chlorobenzene (TCLP), mg/l	<0.020	<0.020	<0.020	<0.020	<0.020
Chloroform (TCLP), mg/l	<0.020	<0.020	<0.020	<0.020	<0.020
1,2-Dichloroethane (TCLP), mg/l	<0.020	<0.020	<0.020	<0.020	<0.020
1,1-Dichloroethylene (TCLP), mg/l	<0.020	<0.020	<0.020	<0.020	<0.020
Methyl ethyl ketone (TCLP), mg/l	<0.040	<0.040	<0.040	<0.040	<0.040
Tetrachloroethylene (TCLP), mg/l	<0.020	<0.020	<0.020	<0.020	<0.020
Trichloroethylene (TCLP), mg/l	<0.020	<0.020	<0.020	<0.020	<0.020
Vinyl chloride (TCLP), mg/l	<0.040	<0.040	<0.040	<0.040	<0.040
Pesticides in TCLP extract					
Chlordane (TCLP), mg/l	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Endrin (TCLP), mg/l	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Heptachlor (& hydroxide) (TCLP), mg/l	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Lindane (g-BHC) (TCLP), mg/l	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Methoxychlor (TCLP), mg/l	<0.025	<0.025	<0.025	<0.025	<0.025
Toxaphene (TCLP), mg/l	<0.050	<0.050	<0.050	<0.050	<0.050

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Received: 04 DEC 90

Mr. Michael Keirn
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Tallahassee, Florida 32301

Project: Whiting Field NAS/6500-01

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	SAMPLED BY
12076-7	WHF-12-SL-01(1-2)-01 (corrected/anal)	Client
12076-8	WHF-12-SL-02(1-2)-01 (corrected/anal)	
12076-9	WHF-12-SL-03(1-2)-01 (corrected/anal)	
12076-10	WHF-12-SL-04(1-2)-01 (corrected/anal)	
12076-11	WHF-12-SL-05(1-2)-01 (corrected/anal)	

PARAMETER	12076-7	12076-8	12076-9	12076-10	12076-11
Semivolatiles in TCLP Extract					
Cresol o,m,p (TCLP), mg/l	<0.050	<0.050	<0.050	<0.050	<0.050
1,4-Dichlorobenzene (TCLP), mg/l	<0.050	<0.050	<0.050	<0.050	<0.050
2,4-Dinitrotoluene (TCLP), mg/l	<0.050	<0.050	<0.050	<0.050	<0.050
Hexachlorobenzene (TCLP), mg/l	<0.050	<0.050	<0.050	<0.050	<0.050
Hexachlorobutadiene (TCLP), mg/l	<0.050	<0.050	<0.050	<0.050	<0.050
Hexachloroethane (TCLP), mg/l	<0.050	<0.050	<0.050	<0.050	<0.050
Nitrobenzene (TCLP), mg/l	<0.050	<0.050	<0.050	<0.050	<0.050
Pentachlorophenol (TCLP), mg/l	<0.25	<0.25	<0.25	<0.25	<0.25
2,4,5-Trichlorophenol (TCLP), mg/l	<0.050	<0.050	<0.050	<0.050	<0.050
2,4,6-Trichlorophenol (TCLP), mg/l	<0.050	<0.050	<0.050	<0.050	<0.050
Pyridine (TCLP), mg/l	<0.050	<0.050	<0.050	<0.050	<0.050
Herbicides in TCLP					
2,4-D (TCLP), mg/l	<0.050	<0.050	<0.050	<0.050	<0.050
2,4,5-TP Silvex (TCLP), mg/l	<0.010	<0.010	<0.010	<0.010	<0.010

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	SAMPLED BY
12076-7	WHF-12-SL-01(1-2)-01 (corrected/anal)	Client
12076-8	WHF-12-SL-02(1-2)-01 (corrected/anal)	
12076-9	WHF-12-SL-03(1-2)-01 (corrected/anal)	
12076-10	WHF-12-SL-04(1-2)-01 (corrected/anal)	
12076-11	WHF-12-SL-05(1-2)-01 (corrected/anal)	

PARAMETER	12076-7	12076-8	12076-9	12076-10	12076-11
Metals in TCLP					
Arsenic (TCLP), mg/l	<0.20	<0.20	<0.20	<0.20	<0.20
Barium (TCLP), mg/l	0.137/0.14	0.137/0.14	0.40/0.41	0.31/0.32	0.36/0.37
Cadmium (TCLP), mg/l	<0.010	<0.010	<0.010	<0.010	<0.010
Chromium (TCLP), mg/l	<0.050	<0.050	<0.050	<0.050	<0.050
Lead (TCLP), mg/l	<0.10	<0.10	<0.10	<0.10	<0.10
Selenium (TCLP), mg/l	<0.20	<0.20	<0.20	<0.20	<0.20
Silver (TCLP), mg/l	<0.010	<0.010	<0.010	<0.010	<0.010
Mercury (TCLP), mg/l	<0.020	<0.020	<0.020	<0.020	<0.020

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	SAMPLED BY
12076-12	WHF-12-SL-06(1-2)-01 (corrected/anal)	Client

PARAMETER	12076-12
Volatiles in TCLP Extract	
Benzene (TCLP), mg/l	<0.020
Carbon tetrachloride (TCLP), mg/l	<0.020
Chlorobenzene (TCLP), mg/l	<0.020
Chloroform (TCLP), mg/l	<0.020
1,2-Dichloroethane (TCLP), mg/l	<0.020
1,1-Dichloroethylene (TCLP), mg/l	<0.020
Methyl ethyl ketone (TCLP), mg/l	<0.040
Tetrachloroethylene (TCLP), mg/l	<0.020
Trichloroethylene (TCLP), mg/l	<0.020
Vinyl chloride (TCLP), mg/l	<0.040
Pesticides in TCLP extract	
Chlordane (TCLP), mg/l	<0.0050
Endrin (TCLP), mg/l	<0.0010
Heptachlor (& hydroxide) (TCLP), mg/l	<0.00050
Lindane (g-BHC) (TCLP), mg/l	<0.00050
Methoxychlor (TCLP), mg/l	<0.025
Toxaphene (TCLP), mg/l	<0.050

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	SAMPLED BY
12076-12	WHF-12-SL-06(1-2)-01 (corrected/anal)	Client

PARAMETER	12076-12
Semivolatiles in TCLP Extract	
Cresol o,m,p (TCLP), mg/l	<0.050
1,4-Dichlorobenzene (TCLP), mg/l	<0.050
2,4-Dinitrotoluene (TCLP), mg/l	<0.050
Hexachlorobenzene (TCLP), mg/l	<0.050
Hexachlorobutadiene (TCLP), mg/l	<0.050
Hexachloroethane (TCLP), mg/l	<0.050
Nitrobenzene (TCLP), mg/l	<0.050
Pentachlorophenol (TCLP), mg/l	<0.25
2,4,5-Trichlorophenol (TCLP), mg/l	<0.050
2,4,6-Trichlorophenol (TCLP), mg/l	<0.050
Pyridine (TCLP), mg/l	<0.050
Herbicides in TCLP	
2,4-D (TCLP), mg/l	<0.050
2,4,5-TP Silvex (TCLP), mg/l	<0.010
Metals in TCLP	
Arsenic (TCLP), mg/l	<0.20
Barium (TCLP), mg/l	0.157/0.16
Cadmium (TCLP), mg/l	<0.010
Chromium (TCLP), mg/l	<0.050
Lead (TCLP), mg/l	<0.10
Selenium (TCLP), mg/l	<0.20
Silver (TCLP), mg/l	<0.010
Mercury (TCLP), mg/l	<0.020

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	SAMPLED BY
12076-13	WHF-12-SL-06MS-01 Matrix Spike (% Rec)	Client

PARAMETER	12076-13
Volatiles in TCLP Extract	
Benzene (TCLP), % Rec	103 %
Carbon tetrachloride (TCLP), % Rec	94 %
Chlorobenzene (TCLP), % Rec	100 %
Chloroform (TCLP), % Rec	95 %
1,2-Dichloroethane (TCLP), % Rec	108 %
1,1-Dichloroethylene (TCLP), % Rec	73 %
Methyl ethyl ketone (TCLP), % Rec	30 %
Tetrachloroethylene (TCLP), % Rec	95 %
Trichloroethylene (TCLP), % Rec	91 %
Vinyl chloride (TCLP), % Rec	102 %
Pesticides in TCLP extract	
Endrin (TCLP), %	59 %
Heptachlor (& hydroxide) (TCLP), %	97 %
Lindane (g-BHC) (TCLP), %	64 %
Methoxychlor (TCLP), %	61 %

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	SAMPLED BY
12076-13	WHF-12-SL-06MS-01 Matrix Spike (% Rec)	Client

PARAMETER	12076-13
Semivolatiles in TCLP Extract	
Cresol o,m,p (TCLP), %	81 %
1,4-Dichlorobenzene (TCLP), %	65 %
2,4-Dinitrotoluene (TCLP), %	60 %
Hexachlorobenzene (TCLP), %	65 %
Hexachlorobutadiene (TCLP), %	63 %
Hexachloroethane (TCLP), %	68 %
Nitrobenzene (TCLP), %	81 %
Pentachlorophenol (TCLP), %	79 %
2,4,5-Trichlorophenol (TCLP), %	90 %
2,4,6-Trichlorophenol (TCLP), %	90 %
Pyridine (TCLP), %	62 %
Herbicides in TCLP	
2,4-D (TCLP), %	61 %
2,4,5-TP Silvex (TCLP), %	65 %
Metals in TCLP	
Arsenic (TCLP), %	100 %
Barium (TCLP), %	102 %
Cadmium (TCLP), %	88 %
Chromium (TCLP), %	80 %
Lead (TCLP), %	87 %
Selenium (TCLP), %	102 %
Silver (TCLP), %	98 %
Mercury (TCLP), %	96 %

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	SAMPLED BY
12076-14	WHF-12-SL-FB-01	Client
12076-15	WHF-12-SL-RB-01	

PARAMETER	12076-14	12076-15	
Corrosivity-pH (EPA Method 9040), units	6.0	6.6	
Ignitability-flash point, Degrees F	>140	>140	
Lead, mg/l	<0.0050	<0.0050	
Volatiles in TCLP Extract			
Benzene (TCLP), mg/l	<0.020	<0.020	
Carbon tetrachloride (TCLP), mg/l	<0.020	<0.020	
Chlorobenzene (TCLP), mg/l	<0.020	<0.020	
Chloroform (TCLP), mg/l	<0.020	<0.020	
1,2-Dichloroethane (TCLP), mg/l	<0.020	<0.020	
1,1-Dichloroethylene (TCLP), mg/l	<0.020	<0.020	
Methyl ethyl ketone (TCLP), mg/l	<0.040	<0.040	
Tetrachloroethylene (TCLP), mg/l	<0.020	<0.020	
Trichloroethylene (TCLP), mg/l	<0.020	<0.020	
Vinyl chloride (TCLP), mg/l	<0.040	<0.040	
Pesticides in TCLP extract			
Chlordane (TCLP), mg/l	<0.0050	<0.0050	
Endrin (TCLP), mg/l	<0.0010	<0.0010	
Heptachlor (& hydroxide) (TCLP), mg/l	<0.00050	<0.00050	
Lindane (g-BHC) (TCLP), mg/l	<0.00050	<0.00050	
Methoxychlor (TCLP), mg/l	<0.025	<0.025	
Toxaphene (TCLP), mg/l	<0.050	<0.050	

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	SAMPLED BY
12076-14	WHF-12-SL-FB-01	Client
12076-15	WHF-12-SL-RB-01	

PARAMETER	12076-14	12076-15
Semivolatiles in TCLP Extract		
Cresol o,m,p (TCLP), mg/l	<0.050	<0.050
1,4-Dichlorobenzene (TCLP), mg/l	<0.050	<0.050
2,4-Dinitrotoluene (TCLP), mg/l	<0.050	<0.050
Hexachlorobenzene (TCLP), mg/l	<0.050	<0.050
Hexachlorobutadiene (TCLP), mg/l	<0.050	<0.050
Hexachloroethane (TCLP), mg/l	<0.050	<0.050
Nitrobenzene (TCLP), mg/l	<0.050	<0.050
Pentachlorophenol (TCLP), mg/l	<0.25	<0.25
2,4,5-Trichlorophenol (TCLP), mg/l	<0.050	<0.050
2,4,6-Trichlorophenol (TCLP), mg/l	<0.050	<0.050
Pyridine (TCLP), mg/l	<0.050	<0.050
Herbicides in TCLP		
2,4-D (TCLP), mg/l	<0.050	<0.050
2,4,5-TP Silvex (TCLP), mg/l	<0.010	<0.010
Metals in TCLP		
Arsenic (TCLP), mg/l	<0.20	<0.20
Barium (TCLP), mg/l	<0.050	<0.050
Cadmium (TCLP), mg/l	<0.010	<0.010
Chromium (TCLP), mg/l	<0.050	<0.050
Lead (TCLP), mg/l	<0.10	<0.10
Selenium (TCLP), mg/l	<0.20	<0.20
Silver (TCLP), mg/l	<0.010	<0.010
Mercury (TCLP), mg/l	<0.020	<0.020

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	SAMPLED BY
12076-16	WHF-12-SL-TB-01	Client

PARAMETER	12076-16
Volatiles in TCLP Extract	
Benzene (TCLP), mg/l	<0.020
Carbon tetrachloride (TCLP), mg/l	<0.020
Chlorobenzene (TCLP), mg/l	<0.020
Chloroform (TCLP), mg/l	<0.020
1,2-Dichloroethane (TCLP), mg/l	<0.020
1,1-Dichloroethylene (TCLP), mg/l	<0.020
Methyl ethyl ketone (TCLP), mg/l	<0.040
Tetrachloroethylene (TCLP), mg/l	<0.020
Trichloroethylene (TCLP), mg/l	<0.020
Vinyl chloride (TCLP), mg/l	<0.040

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	SAMPLED BY
12076-17	Extraction Fluid Method Blank	Client

PARAMETER	12076-17
Volatiles in TCLP Extract	
Benzene (TCLP), mg/l	<0.020
Carbon tetrachloride (TCLP), mg/l	<0.020
Chlorobenzene (TCLP), mg/l	<0.020
Chloroform (TCLP), mg/l	<0.020
1,2-Dichloroethane (TCLP), mg/l	<0.020
1,1-Dichloroethylene (TCLP), mg/l	<0.020
Methyl ethyl ketone (TCLP), mg/l	<0.040
Tetrachloroethylene (TCLP), mg/l	<0.020
Trichloroethylene (TCLP), mg/l	<0.020
Vinyl chloride (TCLP), mg/l	<0.040
Pesticides in TCLP extract	
Chlordane (TCLP), mg/l	<0.0050
Endrin (TCLP), mg/l	<0.0010
Heptachlor (& hydroxide) (TCLP), mg/l	<0.00050
Lindane (g-BHC) (TCLP), mg/l	<0.00050
Methoxychlor (TCLP), mg/l	<0.025
Toxaphene (TCLP), mg/l	<0.050

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	SAMPLED BY
12076-17	Extraction Fluid Method Blank	Client

PARAMETER	12076-17
Semivolatiles in TCLP Extract	
Cresol o,m,p (TCLP), mg/l	<0.050
1,4-Dichlorobenzene (TCLP), mg/l	<0.050
2,4-Dinitrotoluene (TCLP), mg/l	<0.050
Hexachlorobenzene (TCLP), mg/l	<0.050
Hexachlorobutadiene (TCLP), mg/l	<0.050
Hexachloroethane (TCLP), mg/l	<0.050
Nitrobenzene (TCLP), mg/l	<0.050
Pentachlorophenol (TCLP), mg/l	<0.25
2,4,5-Trichlorophenol (TCLP), mg/l	<0.050
2,4,6-Trichlorophenol (TCLP), mg/l	<0.050
Pyridine (TCLP), mg/l	<0.050
Herbicides in TCLP	
2,4-D (TCLP), mg/l	<0.050
2,4,5-TP Silvex (TCLP), mg/l	<0.010
Metals in TCLP	
Arsenic (TCLP), mg/l	<0.20
Barium (TCLP), mg/l	<0.050
Cadmium (TCLP), mg/l	<0.010
Chromium (TCLP), mg/l	<0.050
Lead (TCLP), mg/l	<0.10
Selenium (TCLP), mg/l	<0.20
Silver (TCLP), mg/l	<0.010
Mercury (TCLP), mg/l	<0.020

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	SAMPLED BY
12076-18	WHF-12-SL-06MS-01	Client

PARAMETER	12076-18
Corrosivity-pH (EPA 9045), units	7.4
Ignitability-flash point, Degrees F	NF*
Lead, mg/kg dw	1.6

Method: EPA 40 CFR Part 136
Method: EPA SW-846
HRS Certification #'s:81291,87279,E81005,E87052
* = The physical characteristics (hard,semisolid) prohibited continual stirring required by the Pensky Martens Method. Therefore, the sample was heated without continual stirring to approximately 140 degrees F level and a test flame applied to the sample surface. No ignition of vapors was present.
NOTE: TCLP results have been corrected for analytical bias per instructions in Section 8.2.5 of Method 1311 (Federal Register - June 29, 1990).

See attached for blank spike control data.

Thomas L. Stephens, M.D.
Thomas L. Stephens

APPENDIX C

SUMMARIZED SURFACE SOIL SAMPLING RESULTS, STORMWATER DRAINAGE SWALES AND SITES 15 AND 16

Sample Delivery Group: T0003 QC Level D

Sample No.:	SLSDFB			SLSDRB			12SD01			12SD02			12SD03			15SD01			15SD02		
Locator:	FB-01			RB-01			12-SD-01(0.5-1.0)-01			12-SD-01(0.5-1.0)-01			12SD-03(0.5-1.0)-01			15SD-01(0-1.0)-01			15SD-02(1.0-2.0)-01		
Date Sampled:	12-4-90			12-4-90			12-4-90			12-4-90			12-4-90			12-4-90			12-4-90		
Inorganic	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units
Aluminum	200	U	µg/l	200	U	µg/l	5,990		mg/kg	10,500		mg/kg	4,240		mg/kg	10,400		mg/kg	4,590		mg/kg
Antimony	50	U	µg/l	50	U	µg/l	11.1	UJ	mg/kg	9.1	UJ	mg/kg	9.3	UJ	mg/kg	7.9	UJ	mg/kg	8.4	UJ	mg/kg
Barium	10	U	µg/l	10.9	J	µg/l	8.6	J	mg/kg	10	J	mg/kg	7.8	J	mg/kg	13.8	J	mg/kg	5.2	J	mg/kg
Arsenic	10	U	µg/l	10	U	µg/l	2.2	U	mg/kg	1.7	J	mg/kg	1.8	U	mg/kg	3.2	J	mg/kg	1.7	U	mg/kg
Beryllium	5	U	µg/l	5	U	µg/l	1.1	U	mg/kg	0.92	U	mg/kg	0.93	U	mg/kg	0.79	U	mg/kg	0.84	U	mg/kg
Cadmium	5	U	µg/l	5	U	µg/l	1.1	U	mg/kg	0.92	U	mg/kg	0.93	U	mg/kg	0.79	U	mg/kg	0.84	U	mg/kg
Calcium	500	U	µg/l	500	U	µg/l	3,750		mg/kg	92.2	U	mg/kg	137	J	mg/kg	2,240		mg/kg	83.5	U	mg/kg
Chromium	10	U	µg/l	10	U	µg/l	8.7		mg/kg	7		mg/kg	2.7		mg/kg	8.8		mg/kg	3.4		mg/kg
Cobalt	10	U	µg/l	10	U	µg/l	2.2	U	mg/kg	1.8	U	mg/kg	1.9	U	mg/kg	1.6	U	mg/kg	1.7	U	mg/kg
Copper	25	U	µg/l	25	U	µg/l	5.5	U	mg/kg	4.5	U	mg/kg	4.8		mg/kg	7.9		mg/kg	4.4		mg/kg
Cyanide	10	U	µg/l	60.2	U	µg/l	0.31	UJ	mg/kg	0.27	UJ	mg/kg	0.28	UJ	mg/kg	0.62	J	mg/kg	0.28	J	mg/kg
Iron	114		µg/l	3	J	µg/l	3,140		mg/kg	6,340	J	mg/kg	2,790		mg/kg	4,910		mg/kg	2,770		mg/kg
Lead	3	U	µg/l	500	U	µg/l	5.5	J	mg/kg	8.9		mg/kg	23.1		mg/kg	23.3	J	mg/kg	12.9	J	mg/kg
Magnesium	521	J	µg/l	10.0	U	µg/l	964	J	mg/kg	149	J	mg/kg	93.2	U	mg/kg	385	J	mg/kg	83.5	U	mg/kg
Manganese	10	U	µg/l	10	U	µg/l	52.2		mg/kg	92.7		mg/kg	51.1		mg/kg	72		mg/kg	18.5		mg/kg
Mercury	0.2	U	µg/l	0.2	U	µg/l	0.01	U	mg/kg	0.01		mg/kg	0.01		mg/kg	0.04		mg/kg	0.05		mg/kg
Nickel	40	U	µg/l	40	U	µg/l	8.9	U	mg/kg	7.4	U	mg/kg	7.5	U	mg/kg	6.3	U	mg/kg	6.7	U	mg/kg
Potassium	1,000	U	µg/l	1,000	U	µg/l	222	U	mg/kg	184	U	mg/kg	188	U	mg/kg	158	U	mg/kg	167	U	mg/kg
Selenium	5	U	µg/l	5	U	µg/l	1.1	U	mg/kg	0.87	U	mg/kg	0.89	UJ	mg/kg	0.89	U	mg/kg	0.84	U	mg/kg
Silver	10	U	µg/l	10	U	µg/l	2.2	U	mg/kg	1.8	U	mg/kg	1.9	U	mg/kg	1.8	U	mg/kg	1.7	U	mg/kg
Sodium	37,300		µg/l	655	J	µg/l	111	U	mg/kg	92.2	U	mg/kg	93.2	U	mg/kg	79	U	mg/kg	83.5	U	mg/kg
Thallium	10	U	µg/l	10	U	µg/l	2.2	U	mg/kg	1.7	U	mg/kg	1.8	U	mg/kg	1.8	U	mg/kg	1.7	U	mg/kg
Vanadium	10	U	µg/l	10	U	µg/l	9.8	J	mg/kg	13.6		mg/kg	5.2	J	mg/kg	15		mg/kg	8	J	mg/kg
Zinc	20	U	µg/l	20	U	µg/l	4.4	U	mg/kg	8.4		mg/kg	14.8		mg/kg	15.5		mg/kg	10.8		mg/kg

Sample Delivery Group: T0003 QC Level D

Sample No.:	15SD03			15SL01			15SL02			15SL03			16SL01			16SL02		
Locator:	15-SD-03(0.5-1.5)-01			15-SL-01(0-0.5)-01			15-SL-02(0-0.5)-01			15-SL-03(0-0.5)-01			16-SL-01(0-0.5)-01			16-SL-02(0-0.5)-01		
Date Sampled:	12-4-90			12-4-90			12-4-90			12-4-90			12-4-90			12-4-90		
Inorganic	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units
Aluminum	11,700		mg/kg	7,660		mg/kg	9,008		mg/kg	8,220		mg/kg	9,900		mg/kg	10,400		mg/kg
Antimony	9.9	UJ	mg/kg	8.4	UJ	mg/kg	9.1	UJ	mg/kg	10.1	UJ	mg/kg	10	UJ	mg/kg	9.5	U	mg/kg
Barium	14.9	J	mg/kg	5.3	J	mg/kg	4.5	J	mg/kg	8.8	J	mg/kg	14.8	J	mg/kg	19.2	J	mg/kg
Arsenic	2.1		mg/kg	1.7	U	mg/kg	1.9	U	mg/kg	1.9	UJ	mg/kg	2	U	mg/kg	3		mg/kg
Beryllium	0.89	U	mg/kg	0.84	U	mg/kg	0.92	U	mg/kg	1	U	mg/kg	1	U	mg/kg	0.95	J	mg/kg
Cadmium	0.89	U	mg/kg	0.84	U	mg/kg	0.92	U	mg/kg	1	U	mg/kg	1	U	mg/kg	0.95	U	mg/kg
Calcium	88.5	U	mg/kg	83.9	U	mg/kg	92.4	U	mg/kg	102	U	mg/kg	300	J	mg/kg	233	J	mg/kg
Chromium	8.9		mg/kg	4.8		mg/kg	9.5		mg/kg	4.7		mg/kg	7.5		mg/kg	8.6		mg/kg
Cobalt	1.8	U	mg/kg	1.7	U	mg/kg	1.8	U	mg/kg	2	U	mg/kg	2	U	mg/kg	1.9	U	mg/kg
Copper	4.4	U	mg/kg	4.2	U	mg/kg	4.5	U	mg/kg	5	U	mg/kg	5.3		mg/kg	7.2		mg/kg
Cyanide	0.48	J	mg/kg	0.32	J	mg/kg	0.35	J	mg/kg	0.39	J	mg/kg	0.29	J	mg/kg	0.29	J	mg/kg
Iron	8,340		mg/kg	3,810		mg/kg	4,870		mg/kg	4,110		mg/kg	4,800		mg/kg	4,840		mg/kg
Lead	9.5	J	mg/kg	2.4	J	mg/kg	9	UJ	mg/kg	3.1	J	mg/kg	14	J	mg/kg	16.5	J	mg/kg
Magnesium	186	J	mg/kg	92.2	J	mg/kg	92.4	U	mg/kg	138	J	mg/kg	147	J	mg/kg	189	J	mg/kg
Manganese	144		mg/kg	32.4		mg/kg	19.3		mg/kg	20.2	U	mg/kg	76.2		mg/kg	93.8		mg/kg
Mercury	0.02		mg/kg	0.01	U	mg/kg	0.01	U	mg/kg	0.01	U	mg/kg	0.01		mg/kg	0.02		mg/kg
Nickel	7	U	mg/kg	6.7	U	mg/kg	7.4	U	mg/kg	8.1	U	mg/kg	8	U	mg/kg	7.5	U	mg/kg
Potassium	177	U	mg/kg	168	U	mg/kg	185	U	mg/kg	203	U	mg/kg	199	U	mg/kg	189	U	mg/kg
Selenium	0.95	U	mg/kg	0.83	U	mg/kg	0.93	U	mg/kg	0.93	U	mg/kg	1	U	mg/kg	0.89	U	mg/kg
Silver	1.8	U	mg/kg	1.7	U	mg/kg	1.8	U	mg/kg	2	U	mg/kg	2	U	mg/kg	1.9	U	mg/kg
Sodium	88.5	U	mg/kg	83.9	U	mg/kg	92.4	U	mg/kg	102	U	mg/kg	99.5	U	mg/kg	94.7	U	mg/kg
Thallium	1.9	U	mg/kg	1.7	U	mg/kg	1.9	U	mg/kg	1.9	U	mg/kg	2	U	mg/kg	1.8	U	mg/kg
Vanadium	15.8		mg/kg	10.1		mg/kg	12.8		mg/kg	10.6		mg/kg	13.9		mg/kg	14.6		mg/kg
Zinc	7.2		mg/kg	3.4	U	mg/kg	3.7		mg/kg	4.7		mg/kg	18.3		mg/kg	29.5		mg/kg

...le Delivery Group: T0003

QC Level D

Sample No.:	15SL03A			15SL03ADL			15SL03ADL1			PBLK-S1		
Locator:	15-SL-03(0-.5)-01A			15-SL-03(0-.5)-01A			15-SL-03(0-.5)-01A					
Date Sampled:	1-4-91			1-5-91			1-5-91					
Pesticide Organics	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**
alpha-BHC				91	U	µg/kg	18	U	µg/kg	8.1	U	µg/kg
beta-BHC				91	U	µg/kg	18	U	µg/kg	8.1	U	µg/kg
delta-BHC				91	U	µg/kg	18	U	µg/kg	8.1	U	µg/kg
gamma-BHC (Lindane)				91	U	µg/kg	18	U	µg/kg	8.1	U	µg/kg
Heptachlor	9.1	U	µg/kg	91	U	µg/kg				8.1	U	µg/kg
Aldrin	9.1	U	µg/kg	91	U	µg/kg				8.1	U	µg/kg
Heptachlor epoxide	9.1	U	µg/kg	91	U	µg/kg				8.1	U	µg/kg
Endosulfan I	9.1	U	µg/kg	91	U	µg/kg				8.0	U	µg/kg
Dieldrin	18	U	µg/kg	180	U	µg/kg				16	U	µg/kg
4,4'-DDE	18	U	µg/kg	180	U	µg/kg				16	U	µg/kg
Endrin	18	U	µg/kg	180	U	µg/kg				16	U	µg/kg
Endosulfan II	18	U	µg/kg	180	U	µg/kg				16	U	µg/kg
4,4'-DDD	18	U	µg/kg	180	U	µg/kg				16	U	µg/kg
Endosulfan sulfate	18	U	µg/kg	180	U	µg/kg				16	U	µg/kg
4,4'-DDT	18	U	µg/kg	180	U	µg/kg				16	U	µg/kg
Methoxychlor	91	U	µg/kg	910	U	µg/kg				81	U	µg/kg
Endrin ketone	18	U	µg/kg	180	U	µg/kg				16	U	µg/kg
alpha-Chlordane	91	U	µg/kg	910	U	µg/kg				81	U	µg/kg
gamma-Chlordane	91	U	µg/kg	910	U	µg/kg				81	U	µg/kg
Toxaphene	180	U	µg/kg	1,800	U	µg/kg				160	U	µg/kg
Aroclor-1016	91	U	µg/kg	910	U	µg/kg				81	U	µg/kg
Aroclor-1221	91	U	µg/kg	910	U	µg/kg				81	U	µg/kg
Aroclor-1232	91	U	µg/kg	910	U	µg/kg				81	U	µg/kg
Aroclor-1242	91	U	µg/kg	910	U	µg/kg				81	U	µg/kg
Aroclor-1248	91	U	µg/kg	910	U	µg/kg				81	U	µg/kg
Aroclor-1254	180	U	µg/kg	1,800	U	µg/kg				160	U	µg/kg
Aroclor-1260	180	U	µg/kg	1,800	U	µg/kg				160	U	µg/kg

Sample Delivery Group: T0003

QC Level D

Sample No.:	16SL03			15SL03D/15SL03A			15SL0MS/15SL03AMS			15SL3SD/15SL03AMSD		
Locator:	16-SL-03(0-0.5)-01			15SL0301A			15SL0301MS			15SL0301MSD		
Date Sampled:	12-4-90			12-4-90			12-4-90			12-4-90		
Inorganic	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units
Aluminum	16,100		mg/kg	7,750		mg/kg	8,210		mg/kg	7,380		mg/kg
Antimony	9.8	UJ	mg/kg	10.1	U	mg/kg	51.7	J	mg/kg	55.7	J	mg/kg
Barium	26.2	J	mg/kg	8.3	J	mg/kg	422		mg/kg	418		mg/kg
Arsenic	5		mg/kg	1.9	U	mg/kg	7		mg/kg	6.7		mg/kg
Beryllium	0.88	U	mg/kg	1	U	mg/kg	9.3		mg/kg	9.4		mg/kg
Cadmium	0.88	U	mg/kg	1	U	mg/kg	9.6		mg/kg	9.6		mg/kg
Calcium	355	J	mg/kg	102	U	mg/kg	102	U	mg/kg	102	U	mg/kg
Chromium	12.1		mg/kg	4.3		mg/kg	45.7		mg/kg	46		mg/kg
Cobalt	1.8	U	mg/kg	2	U	mg/kg	103		mg/kg	105		mg/kg
Copper	10.8		mg/kg	5	U	mg/kg	51.6		mg/kg	52		mg/kg
Cyanide	0.29	UJ	mg/kg	0.28	UJ	mg/kg	2.4	J	mg/kg	2.2	J	mg/kg
Iron	7,440		mg/kg	3,960		mg/kg	3,990		mg/kg	4,190		mg/kg
Lead	43.7		mg/kg	3.2	J	mg/kg	7	J	mg/kg	7.8	J	mg/kg
Magnesium	272		mg/kg	148	J	mg/kg	163		mg/kg	107	J	mg/kg
Manganese	141	J	mg/kg	21.6		mg/kg	123		mg/kg	127		mg/kg
Mercury	0.08		mg/kg	0.01	U	mg/kg	0.08		mg/kg	0.08		mg/kg
Nickel	7	U	mg/kg	8.1	U	mg/kg	105		mg/kg	106	U	mg/kg
Potassium	176	U	mg/kg	203	U	mg/kg	203	U	mg/kg	203		mg/kg
Selenium	0.95	U	mg/kg	0.93	U	mg/kg	1.5	J	mg/kg	2.1	J	mg/kg
Silver	1.8	U	mg/kg	2	U	mg/kg	9.4		mg/kg	9.5		mg/kg
Sodium	88	U	mg/kg	102	U	mg/kg	102	U	mg/kg	102	U	mg/kg
Thallium	1.9	U	mg/kg	1.9	U	mg/kg	9.4		mg/kg	9.1		mg/kg
Vanadium	22.7		mg/kg	9.6	J	mg/kg	113		mg/kg	114		mg/kg
Zinc	35.6		mg/kg	5	U	mg/kg	105		mg/kg	104		mg/kg

Sample Delivery Group: T0803

QC Level C/D

Sample No.:	SLSDFB			SLSDRB			12SD01			12SD02			12SD03			15SD01			15SD02		
Locator:	SL/SDFB01			SL/SDRB01			12SD01(0.5-1.0)01			12SD02(0.5-1.0)01			12SD03(0.5-1.0)01			15SD01(0-1.0)01			15SD02(1.0-2.0)01		
Date Sampled:	12-4-90			12-4-90			12-4-90			12-4-90			12-4-90			12-4-90			12-4-90		
Semivolatile Organics	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**
Phenol	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
bis(2-Chloroethyl)ether	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
2-Chlorophenol	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
1,3-Dichlorobenzene	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
1,4-Dichlorobenzene	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
Benzyl alcohol	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
1,2-Dichlorobenzene	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
2-Methylphenol	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
bis(2-chloroisopropyl)ether	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
4-Methylphenol	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
N-Nitroso-Di-n-propylamine	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
Hexachloroethane	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
Nitrobenzene	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
Isophorone	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
2-Nitrophenol	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
2,4-Dimethylphenol	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
Benzoic acid	50	U	µg/l	50	U	µg/l	4,100	U	µg/kg	1,700	U	µg/kg	1,800	U	µg/kg	34,000	U	µg/kg	1,700	U	µg/kg
bis(2-Chloroethoxy)methane	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
2,4-Dichlorophenol	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
1,2,4-Trichlorobenzene	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
Naphthalene	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
4-Chloroaniline	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
Hexachlorobutadiene	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg

Sample Delivery Group: T0003

QC Level C/D

Sample No.:	SLSOFB			SLSORB			12SD01			12SD02			12SD03			15SD01			15SD02		
Locator:	SL/SOFB01			SL/SORB01			12SD01(0.5-1.0)01			12SD02(0.5-1.0)01			12SD03(0.5-1.0)01			15SD01(0-1.0)01			15SD02(1.0-2.0)01		
Date Sampled:	12-4-90			12-4-90			12-4-90			12-4-90			12-4-90			12-4-90			12-4-90		
Semivolatile Organics	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**
4-Chloro-3-methylphenol	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
2-Methylnaphthalene	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
Hexachlorocyclopentadiene	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
2,4,6-Trichlorophenol	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
2,4,5-Trichlorophenol	50	U	µg/l	50	U	µg/l	4,100	U	µg/kg	1,700	U	µg/kg	1,800	U	µg/kg	34,000	U	µg/kg	1,700	U	µg/kg
2-Chloronaphthalene	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
2-Nitroaniline	50	U	µg/l	50	U	µg/l	4,100	U	µg/kg	1,700	U	µg/kg	1,800	U	µg/kg	34,000	U	µg/kg	1,700	U	µg/kg
Dimethylphthalate	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
Acenaphthylene	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
2,6-Dinitrotoluene	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
3-Nitroaniline	50	U	µg/l	50	U	µg/l	4,100	U	µg/kg	1,700	U	µg/kg	1,800	U	µg/kg	34,000	U	µg/kg	1,700	U	µg/kg
Acenaphthene	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
2,4-Dinitrophenol	50	U	µg/l	50	U	µg/l	4,100	U	µg/kg	1,700	U	µg/kg	1,800	U	µg/kg	34,000	U	µg/kg	1,700	U	µg/kg
4-Nitrophenol	50	U	µg/l	50	U	µg/l	4,100	U	µg/kg	1,700	U	µg/kg	1,800	U	µg/kg	34,000	U	µg/kg	1,700	U	µg/kg
Dibenzofuran	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
2,4-Dinitrotoluene	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
Diethylphthalate	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
4-Chlorophenyl-phenylether	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
Fluorene	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
4-Nitroaniline	50	U	µg/l	50	U	µg/l	4,100	U	µg/kg	1,700	U	µg/kg	1,800	U	µg/kg	34,000	U	µg/kg	1,700	U	µg/kg
4,6-Dinitro-2-methylphenol	50	U	µg/l	50	U	µg/l	4,100	U	µg/kg	1,700	U	µg/kg	1,800	U	µg/kg	34,000	U	µg/kg	1,700	U	µg/kg
N-Nitrosodiphenylamine (1)	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
4-Bromophenyl-phenylether	10	U	µg/l	10	U	µg/l	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg

Sample Delivery Group: T0003

QC Level C/D

Sample No.:	SLSOFB			SLSORB			12SD01			12SD02			12SD03			15SD01			15SD02		
Locator:	SL/SOFB01			SL/SORB01			12SD01(0.5-1.0)01			12SD02(0.5-1.0)01			12SD03(0.5-1.0)01			15SD01(0-1.0)01			15SD02(1.0-2.0)01		
Date Sampled:	12-4-90			12-4-90			12-4-90			12-4-90			12-4-90			12-4-90			12-4-90		
Semivolatile Organics	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**
Hexachlorobenzene	10	U	µg/ℓ	10	U	µg/ℓ	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
Pentachlorophenol	50	U	µg/ℓ	50	U	µg/ℓ	4,100	U	µg/kg	1,700	U	µg/kg	1,800	U	µg/kg	34,000	U	µg/kg	1,700	U	µg/kg
Phenanthrene	10	U	µg/ℓ	10	U	µg/ℓ	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
Anthracene	10	U	µg/ℓ	10	U	µg/ℓ	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
Di-n-butylphthalate	10	U	µg/ℓ	10	U	µg/ℓ	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
Fluoranthene	10	U	µg/ℓ	10	U	µg/ℓ	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
Pyrene	10	U	µg/ℓ	10	U	µg/ℓ	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
Butylbenzylphthalate	10	U	µg/ℓ	10	U	µg/ℓ	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
3,3'-Dichlorobenzidine	20	U	µg/ℓ	20	U	µg/ℓ	1,700	U	µg/kg	710	U	µg/kg	740	U	µg/kg	14,000	U	µg/kg	690	U	µg/kg
Benzo(a)anthracene	10	U	µg/ℓ	10	U	µg/ℓ	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
Chrysene	10	U	µg/ℓ	10	U	µg/ℓ	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
bis(2-Ethylhexyl)phthalate	10	U	µg/ℓ	10	U	µg/ℓ	840	U	µg/kg	350	U	µg/kg	65	J	µg/kg	7,100	U	µg/kg	52	J	µg/kg
Di-n-octylphthalate	10	U	µg/ℓ	10	U	µg/ℓ	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
Benzo(b)fluoranthene	10	U	µg/ℓ	10	U	µg/ℓ	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
Benzo(k)fluoranthene	10	U	µg/ℓ	10	U	µg/ℓ	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
Benzo(a)pyrene	10	U	µg/ℓ	10	U	µg/ℓ	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
Indeno(1,2,3-cd)pyrene	10	U	µg/ℓ	10	U	µg/ℓ	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
Dibenz(a,h)anthracene	10	U	µg/ℓ	10	U	µg/ℓ	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg
Benzo(g,h,i)perylene	10	U	µg/ℓ	10	U	µg/ℓ	840	U	µg/kg	350	U	µg/kg	370	U	µg/kg	7,100	U	µg/kg	340	U	µg/kg

Sample Delivery Group: T0003

QC Level D

Sample No.:	15SD03			15SL01			15SL02			15SL03			16SL01			16SL02			16SL03		
Locator:	15SD03(0.5-1.5)01			15SL01(0-0.5)01			15SL02(0-0.5)01			15SL03(0-0.5)01			16SL01(0-0.5)01			16SL02(0-0.5)01			16SL03(0-0.5)01		
Date Sampled:	12-4-90			12-4-90			12-4-90			12-4-90			12-4-90			12-4-90			12-4-90		
Semivolatile Organics	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**
Phenol	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
bis(2-Chloroethyl)ether	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
2-Chlorophenol	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
1,3-Dichlorobenzene	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
1,4-Dichlorobenzene	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
Benzyl alcohol	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
1,2-Dichlorobenzene	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
2-Methylphenol	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
bis(2-chloroisopropyl)ether	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
4-Methylphenol	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
N-Nitroso-Di-n-propylamine	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
Hexachloroethane	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
Nitrobenzene	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
Isophorone	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
2-Nitrophenol	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
2,4-Dimethylphenol	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
Benzoic acid	1,900	U	µg/kg	1,700	U	µg/kg	1,700	U	µg/kg	1,800	U	µg/kg	1,900	U	µg/kg	3,800	U	µg/kg	1,800	U	µg/kg
bis(2-Chloroethoxy)methane	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
2,4-Dichlorophenol	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
1,2,4-Trichlorobenzene	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
Naphthalene	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
4-Chloroaniline	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
Hexachlorobutadiene	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg

Sample Delivery Group: T0003

QC Level D

Sample No.:	15SD03			15SL01			15SL02			15SL03			16SL01			16SL02			16SL03		
Locator:	15SD03(0.5-1.5)01			15SL01(0-0.5)01			15SL02(0-0.5)01			15SL03(0-0.5)01			16SL01(0-0.5)01			16SL02(0-0.5)01			16SL03(0-0.5)01		
Date Sampled:	12-4-90			12-4-90			12-4-90			12-4-90			12-4-90			12-4-90			12-4-90		
Semivolatile Organics	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units
4-Chloro-3-methylphenol	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
2-Methylnaphthalene	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
Hexachlorocyclopentadiene	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
2,4,6-Trichlorophenol	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
2,4,5-Trichlorophenol	1,900	U	µg/kg	1,700	U	µg/kg	1,700	U	µg/kg	1,800	U	µg/kg	1,900	U	µg/kg	3,800	U	µg/kg	1,80	U	µg/kg
2-Chloronaphthalene	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
2-Nitroaniline	1,900	U	µg/kg	1,700	U	µg/kg	1,700	U	µg/kg	1,800	U	µg/kg	1,900	U	µg/kg	3,800	U	µg/kg	1,800	U	µg/kg
Dimethylphthalate	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
Acenaphthylene	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
2,6-Dinitrotoluene	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
3-Nitroaniline	1,900	U	µg/kg	1,700	U	µg/kg	1,700	U	µg/kg	1,800	U	µg/kg	1,900	U	µg/kg	3,800	U	µg/kg	1,800	U	µg/kg
Acenaphthene	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
2,4-Dinitrophenol	1,900	U	µg/kg	1,700	U	µg/kg	1,700	U	µg/kg	1,800	U	µg/kg	1,900	U	µg/kg	3,800	U	µg/kg	1,800	U	µg/kg
4-Nitrophenol	1,900	U	µg/kg	1,700	U	µg/kg	1,700	U	µg/kg	1,800	U	µg/kg	1,900	U	µg/kg	3,800	U	µg/kg	1,800	U	µg/kg
Dibenzofuran	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
2,4-Dinitrotoluene	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
Diethylphthalate	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
4-Chlorophenyl-phenylether	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
Fluorene	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
4-Nitroaniline	1,900	U	µg/kg	1,700	U	µg/kg	1,700	U	µg/kg	1,800	U	µg/kg	1,900	U	µg/kg	3,800	U	µg/kg	1,800	U	µg/kg
4,6-Dinitro-2-methylphenol	1,900	U	µg/kg	1,700	U	µg/kg	1,700	U	µg/kg	1,800	U	µg/kg	1,900	U	µg/kg	3,800	U	µg/kg	1,800	U	µg/kg
N-Nitrosodiphenylamine (1)	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
4-Bromophenyl-phenylether	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg

Sample Delivery Group: T0003

QC Level D

Sample No.:	15SD03			15SL01			15SL02			15SL03			16SL01			16SL02			16SL03		
Locator:	15SD03(0.5-1.5)01			15SL01(0-0.5)01			15SL02(0-0.5)01			15SL03(0-0.5)01			16SL01(0-0.5)01			16SL02(0-0.5)01			16SL03(0-0.5)01		
Date Sampled:	12-4-90			12-4-90			12-4-90			12-4-90			12-4-90			12-4-90			12-4-90		
Semivolatile Organics	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**
Hexachlorobenzene	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
Pentachlorophenol	1,900	U	µg/kg	1,700	U	µg/kg	1,700	U	µg/kg	1,800	U	µg/kg	1,900	U	µg/kg	3,800	U	µg/kg	1,800	U	µg/kg
Phenanthrene	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
Anthracene	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
Di-n-butylphthalate	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	220	J	µg/kg	380	U	µg/kg
Fluoranthene	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
Pyrene	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
Butylbenzylphthalate	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
3,3'-Dichlorobenzidine	770	U	µg/kg	690	U	µg/kg	710	U	µg/kg	750	U	µg/kg	780	U	µg/kg	1,600	U	µg/kg	760	U	µg/kg
Benzo(a)anthracene	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
Chrysene	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
bis(2-Ethylhexyl)phthalate	59	J	µg/kg	81	J	µg/kg	77	J	µg/kg	53	J	µg/kg	130	J	µg/kg	790	J	µg/kg	72	J	µg/kg
Di-n-octylphthalate	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
Benzo(b)fluoranthene	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
Benzo(k)fluoranthene	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
Benzo(a)pyrene	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
Indeno(1,2,3-cd)pyrene	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
Dibenz(a,h)anthracene	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg
Benzo(g,h,i)perylene	380	U	µg/kg	350	U	µg/kg	350	U	µg/kg	380	U	µg/kg	390	U	µg/kg	790	U	µg/kg	380	U	µg/kg

Sample Delivery Group: T0003

QC Level 0

Sample No.:	SBLK02			SBLK03			SBLK02MS			SBLK02MSD			15SL03MS			15SL03MSD			15SL03A		
Locator:	425019			SBLK03			42501MS			42501MSD			42490MS			42490MSD			15SL03(0-0.5)01A		
Date Sampled:	12-8-90			12-10-90			12-8-90			12-8-90			12-4-90			12-4-90			12-4-90		
Semivolatile Organics	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units
Phenol	10	U	µg/l	330	U	µg/kg													380	U	µg/kg
bis(2-Chloroethyl)ether	10	U	µg/l	330	U	µg/kg	10	U	µg/l	10	U	µg/l	370	U	µg/l	370	U	µg/l	380	U	µg/kg
2-Chlorophenol	10	U	µg/l	330	U	µg/kg													380	U	µg/kg
1,3-Dichlorobenzene	10	U	µg/l	330	U	µg/kg	10	U	µg/l	10	U	µg/l	370	U	µg/l	370	U	µg/l	380	U	µg/kg
1,4-Dichlorobenzene	10	U	µg/l	330	U	µg/kg									µg/l			µg/l	380	U	µg/kg
Benzyl alcohol	10	U	µg/l	330	U	µg/kg	10	U	µg/l	10	U	µg/l	370	U	µg/l	370	U	µg/l	380	U	µg/kg
1,2-Dichlorobenzene	10	U	µg/l	330	U	µg/kg	10	U	µg/l	10	U	µg/l	370	U	µg/l	370	U	µg/l	380	U	µg/kg
2-Methylphenol	10	U	µg/l	330	U	µg/kg	10	U	µg/l	10	U	µg/l	370	U	µg/l	370	U	µg/l	380	U	µg/kg
bis(2-chloroisopropyl)ether	10	U	µg/l	330	U	µg/kg	10	U	µg/l	10	U	µg/l	370	U	µg/l	370	U	µg/l	380	U	µg/kg
4-Methylphenol	10	U	µg/l	330	U	µg/kg	10	U	µg/l	10	U	µg/l	370	U	µg/l	370	U	µg/l	380	U	µg/kg
N-Nitroso-Di-n-propylamine	10	U	µg/l	330	U	µg/kg													380	U	µg/kg
Hexachloroethane	10	U	µg/l	330	U	µg/kg	10	U	µg/l	10	U	µg/l	370	U	µg/l	370	U	µg/l	380	U	µg/kg
Nitrobenzene	10	U	µg/l	330	U	µg/kg	10	U	µg/l	10	U	µg/l	370	U	µg/l	370	U	µg/l	380	U	µg/kg
Isophorone	10	U	µg/l	330	U	µg/kg	10	U	µg/l	10	U	µg/l	370	U	µg/l	370	U	µg/l	380	U	µg/kg
2-Nitrophenol	10	U	µg/l	330	U	µg/kg	10	U	µg/l	10	U	µg/l	370	U	µg/l	370	U	µg/l	380	U	µg/kg
2,4-Dimethylphenol	10	U	µg/l	330	U	µg/kg	10	U	µg/l	10	U	µg/l	370	U	µg/l	370	U	µg/l	380	U	µg/kg
Benzoic acid	50	U	µg/l	1,800	U	µg/kg	50	U	µg/l	50	U	µg/l	1,800	U	µg/l	1,800	U	µg/l	1,900	U	µg/kg
bis(2-Chloroethoxy)methane	10	U	µg/l	330	U	µg/kg	10	U	µg/l	10	U	µg/l	370	U	µg/l	370	U	µg/l	380	U	µg/kg
2,4-Dichlorophenol	10	U	µg/l	330	U	µg/kg	10	U	µg/l	10	U	µg/l	370	U	µg/l	370	U	µg/l	380	U	µg/kg
1,2,4-Trichlorobenzene	10	U	µg/l	330	U	µg/kg													380	U	µg/kg
Naphthalene	10	U	µg/l	330	U	µg/kg	10	U	µg/l	10	U	µg/l	370	U	µg/l	370	U	µg/l	380	U	µg/kg
4-Chloroaniline	10	U	µg/l	330	U	µg/kg	10	U	µg/l	10	U	µg/l	370	U	µg/l	370	U	µg/l	380	U	µg/kg
Hexachlorobutadiene	10	U	µg/l	330	U	µg/kg	10	U	µg/l	10	U	µg/l	370	U	µg/l	370	U	µg/l	380	U	µg/kg

Sample Delivery Group: T0003

QC Level D

Sample No.:	SBLK02			SBLK03			SBLK02MS			SBLK02MSD			15SL03MS			15SL03MSD			15SL03A		
Locator:	425019			SBLK03			42501MS			42501MSD			42490MS			42490MSD			15SL03(0-0.5)01A		
Date Sampled:	12-8-90			12-10-90			12-8-90			12-8-90			12-4-90			12-4-90			12-4-90		
Semivolatile Organics	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units
4-Chloro-3-methylphenol	10	U	µg/ℓ	330	U	µg/kg													380	U	µg/kg
2-Methylnaphthalene	10	U	µg/ℓ	330	U	µg/kg	10	U	µg/ℓ	10	U	µg/ℓ	370	U	µg/ℓ	370	U	µg/ℓ	380	U	µg/kg
Hexachlorocyclopentadiene	10	U	µg/ℓ	330	U	µg/kg	10	U	µg/ℓ	10	U	µg/ℓ	370	U	µg/ℓ	370	U	µg/ℓ	380	U	µg/kg
2,4,6-Trichlorophenol	10	U	µg/ℓ	330	U	µg/kg	10	U	µg/ℓ	10	U	µg/ℓ	370	U	µg/ℓ	370	U	µg/ℓ	380	U	µg/kg
2,4,5-Trichlorophenol	50	U	µg/ℓ	1,600	U	µg/kg	50	U	µg/ℓ	50	U	µg/ℓ	1,800	U	µg/ℓ	1,800	U	µg/ℓ	1,800	U	µg/kg
2-Chloronaphthalene	10	U	µg/ℓ	330	U	µg/kg	10	U	µg/ℓ	10	U	µg/ℓ	370	U	µg/ℓ	370	U	µg/ℓ	380	U	µg/kg
2-Nitroaniline	50	U	µg/ℓ	1,300	U	µg/kg	50	U	µg/ℓ	50	U	µg/ℓ	1,800	U	µg/ℓ	1,800	U	µg/ℓ	1,800	U	µg/kg
Dimethylphthalate	10	U	µg/ℓ	330	U	µg/kg	10	U	µg/ℓ	10	U	µg/ℓ	370	U	µg/ℓ	370	U	µg/ℓ	380	U	µg/kg
Acenaphthylene	10	U	µg/ℓ	330	U	µg/kg	10	U	µg/ℓ	10	U	µg/ℓ	370	U	µg/ℓ	370	U	µg/ℓ	380	U	µg/kg
2,6-Dinitrotoluene	10	U	µg/ℓ	330	U	µg/kg	10	U	µg/ℓ	10	U	µg/ℓ	370	U	µg/ℓ	370	U	µg/ℓ	380	U	µg/kg
3-Nitroaniline	50	U	µg/ℓ	1,600	U	µg/kg	50	U	µg/ℓ	50	U	µg/ℓ	1,800	U	µg/ℓ	1,800	U	µg/ℓ	1,800	U	µg/kg
Acenaphthene	10	U	µg/ℓ	330	U	µg/kg		U	µg/ℓ										370	U	µg/kg
2,4-Dinitrophenol	50	U	µg/ℓ	1,600	U	µg/kg	50	U	µg/ℓ	50	U	µg/ℓ	1,800	U	µg/ℓ	1,800	U	µg/ℓ	1,800	U	µg/kg
4-Nitrophenol	50	U	µg/ℓ	1,600	U	µg/kg		U	µg/ℓ										1,800	U	µg/kg
Dibenzofuran	10	U	µg/ℓ	330	U	µg/kg	10	U	µg/ℓ	10	U	µg/ℓ	370	U	µg/ℓ	370	U	µg/ℓ	370	U	µg/kg
2,4-Dinitrotoluene	10	U	µg/ℓ	330	U	µg/kg		U	µg/ℓ										370	U	µg/kg
Diethylphthalate	10	U	µg/ℓ	330	U	µg/kg	10	U	µg/ℓ	10	U	µg/ℓ	370	U	µg/ℓ	370	U	µg/ℓ	370	U	µg/kg
4-Chlorophenyl-phenylether	10	U	µg/ℓ	330	U	µg/kg	10	U	µg/ℓ	10	U	µg/ℓ	370	U	µg/ℓ	370	U	µg/ℓ	370	U	µg/kg
Fluorene	10	U	µg/ℓ	330	U	µg/kg	10	U	µg/ℓ	10	U	µg/ℓ	370	U	µg/ℓ	370	U	µg/ℓ	370	U	µg/kg
4-Nitroaniline	50	U	µg/ℓ	1,600	U	µg/kg	50	U	µg/ℓ	50	U	µg/ℓ	1,800	U	µg/ℓ	1,800	U	µg/ℓ	1,800	U	µg/kg
4,6-Dinitro-2-methylphenol	50	U	µg/ℓ	1,600	U	µg/kg	50	U	µg/ℓ	50	U	µg/ℓ	1,800	U	µg/ℓ	1,800	U	µg/ℓ	1,800	U	µg/kg
N-Nitrosodiphenylamine (1)	10	U	µg/ℓ	330	U	µg/kg	10	U	µg/ℓ	10	U	µg/ℓ	370	U	µg/ℓ	370	U	µg/ℓ	370	U	µg/kg
4-Bromophenyl-phenylether	10	U	µg/ℓ	330	U	µg/kg	10	U	µg/ℓ	10	U	µg/ℓ	370	U	µg/ℓ	370	U	µg/ℓ	370	U	µg/kg

Sample Delivery Group: T0003

QC Level D

Sample No.:	SBLK02			SBLK03			SBLK02MS			SBLK02MSD			15SL03MS			15SL03MSD			15SL03A		
Locator:	425019			SBLK03			42501MS			42501MSD			42490MS			42490MSD			15SL03(0-0.5)01A		
Date Sampled:	12-8-90			12-10-90			12-8-90			12-8-90			12-4-90			12-4-90			12-4-90		
Semivolatile Organics	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units
Hexachlorobenzene	10	U	µg/l	330	U	µg/kg	10	U	µg/l	10	U	µg/l	370	U	µg/l	370	U	µg/l	370	U	µg/kg
Pentachlorophenol	50	U	µg/l	1,800	U	µg/kg		U	µg/l										1,800	U	µg/kg
Phenanthrene	10	U	µg/l	330	U	µg/kg	10	U	µg/l	10	U	µg/l	370	U	µg/l	370	U	µg/l	370	U	µg/kg
Anthracene	10	U	µg/l	330	U	µg/kg	10	U	µg/l	10	U	µg/l	370	U	µg/l	370	U	µg/l	370	U	µg/kg
Di-n-butylphthalate	10	U	µg/l	330	U	µg/kg	110	U	µg/l	110	U	µg/l	2,900	U	µg/l	2,900	U	µg/l	370	U	µg/kg
Fluoranthene	10	U	µg/l	330	U	µg/kg	10	U	µg/l	10	U	µg/l	370	U	µg/l	370	U	µg/l	370	U	µg/kg
Pyrene	10	U	µg/l	330	U	µg/kg		U	µg/l										370	U	µg/kg
Butylbenzylphthalate	10	U	µg/l	330	U	µg/kg	10	U	µg/l	10	U	µg/l	370	U	µg/l	370	U	µg/l	370	U	µg/kg
3,3'-Dichlorobenzidine	20	U	µg/l	670	U	µg/kg	20	U	µg/l	20	U	µg/l	750	U	µg/l	750	U	µg/l	750	U	µg/kg
Benzo(a)anthracene	10	U	µg/l	330	U	µg/kg	10	U	µg/l	10	U	µg/l	370	U	µg/l	370	U	µg/l	370	U	µg/kg
Chrysene	10	U	µg/l	330	U	µg/kg	10	U	µg/l	10	U	µg/l	370	U	µg/l	370	U	µg/l	370	U	µg/kg
bis(2-Ethylhexyl)phthalate	10	U	µg/l	49	J	µg/kg	10	J	µg/l	10	J	µg/l	40	J	µg/l	41	J	µg/l	83	J	µg/kg
Di-n-octylphthalate	10	U	µg/l	330	U	µg/kg	10	U	µg/l	10	U	µg/l	370	U	µg/l	370	U	µg/l	370	U	µg/kg
Benzo(b)fluoranthene	10	U	µg/l	330	U	µg/kg	10	U	µg/l	10	U	µg/l	370	U	µg/l	370	U	µg/l	370	U	µg/kg
Benzo(k)fluoranthene	10	U	µg/l	330	U	µg/kg	10	U	µg/l	10	U	µg/l	370	U	µg/l	370	U	µg/l	370	U	µg/kg
Benzo(a)pyrene	10	U	µg/l	330	U	µg/kg	10	U	µg/l	10	U	µg/l	370	U	µg/l	370	U	µg/l	370	U	µg/kg
Indeno(1,2,3-cd)pyrene	10	U	µg/l	330	U	µg/kg	10	U	µg/l	10	U	µg/l	370	U	µg/l	370	U	µg/l	370	U	µg/kg
Dibenz(a,h)anthracene	10	U	µg/l	330	U	µg/kg	10	U	µg/l	10	U	µg/l	370	U	µg/l	370	U	µg/l	370	U	µg/kg
Benzo(g,h,i)perylene	10	U	µg/l	330	U	µg/kg	10	U	µg/l	10	U	µg/l	370	U	µg/l	370	U	µg/l	370	U	µg/kg

Sample Delivery Group: T0003

QC Level D

Sample No.:	15SL03AMS			15SL03AMSD		
Locator:	15SL03(0-0.5)01MS			15SL03(0-0.5)01MSD		
Date Sampled:	12-4-90			12-4-90		
Semivolatile Organics	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**
Phenol	380	U	µg/kg	380	U	µg/kg
bis(2-Chloroethyl)ether						
2-Chlorophenol	380	U	µg/kg	380	U	µg/kg
1,3-Dichlorobenzene						
1,4-Dichlorobenzene	380	U	µg/kg	380	U	µg/kg
Benzyl alcohol	380	U	µg/kg	380	U	µg/kg
1,2-Dichlorobenzene	380	U	µg/kg	380	U	µg/kg
2-Methylphenol	380	U	µg/kg	380	U	µg/kg
bis(2-chloroisopropyl)ether	380	U	µg/kg	380	U	µg/kg
4-Methylphenol						
N-Nitroso-Di-n-propylamine	380	U	µg/kg	380	U	µg/kg
Hexachloroethane	380	U	µg/kg	380	U	µg/kg
Nitrobenzene	380	U	µg/kg	380	U	µg/kg
Isophorone	380	U	µg/kg	380	U	µg/kg
2-Nitrophenol	380	U	µg/kg	380	U	µg/kg
2,4-Dimethylphenol	380	U	µg/kg	380	U	µg/kg
Benzoic acid	1,800	U	µg/kg	1,800	U	µg/kg
bis(2-Chloroethoxy)methane	380	U	µg/kg	380	U	µg/kg
2,4-Dichlorophenol	380	U	µg/kg	380	U	µg/kg
1,2,4-Trichlorobenzene						
Naphthalene	380	U	µg/kg	380	U	µg/kg
4-Chloroaniline	380	U	µg/kg	380	U	µg/kg
Hexachlorobutadiene	380	U	µg/kg	380	U	µg/kg
4-Chloro-3-methylphenol						
2-Methylnaphthalene	380	U	µg/kg	380	U	µg/kg
Hexachlorocyclopentadiene	380	U	µg/kg	380	U	µg/kg
2,4,6-Trichlorophenol	380	U	µg/kg	380	U	µg/kg
2,4,6-Trichlorophenol	1,800	U	µg/kg	1,800	U	µg/kg
2-Chloronaphthalene	380	U	µg/kg	380	U	µg/kg
2-Nitroaniline	1,800	U	µg/kg	1,800	U	µg/kg
Dimethylphthalate	380	U	µg/kg	380	U	µg/kg
Acenaphthylene	380	U	µg/kg	380	U	µg/kg
2,6-Dinitrotoluene	380	U	µg/kg	380	U	µg/kg
3-Nitroaniline	1,800	U	µg/kg	1,800	U	µg/kg

Sample Delivery Group: T0003

QC Level D

Sample No.:	15SL03AMS			15SL03AMSD		
Locator:	15SL03(0-0.5)01MS			15SL03(0-0.5)01MSD		
Date Sampled:	12-4-90			12-4-90		
Semivolatile Organics	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**
Acenaphthene						
2,4-Dinitrophenol	1,800	U	µg/kg	1,800	U	µg/kg
4-Nitrophenol						
Dibenzofuran	380	U	µg/kg	380	U	µg/kg
2,4-Dinitrotoluene						
Diethylphthalate	380	U	µg/kg	380	U	µg/kg
4-Chlorophenyl-phenylether	380	U	µg/kg	380	U	µg/kg
Fluorene	380	U	µg/kg	380	U	µg/kg
4-Nitroaniline	1,800	U	µg/kg	1,800	U	µg/kg
4,6-Dinitro-2-methylphenol	1,800	U	µg/kg	1,800	U	µg/kg
N-Nitrosodiphenylamine (1)	380	U	µg/kg	380	U	µg/kg
4-Bromophenyl-phenylether	380	U	µg/kg	380	U	µg/kg
Hexachlorobenzene	380	U	µg/kg	380	U	µg/kg
Pentachlorophenol						
Phenanthrene	380	U	µg/kg	380	U	µg/kg
Anthracene	380	U	µg/kg	380	U	µg/kg
Di-n-butylphthalate	2,900	U	µg/kg	2,900	U	µg/kg
Fluoranthene	380	U	µg/kg	380	U	µg/kg
Pyrene						
Butylbenzylphthalate	380	U	µg/kg	380	U	µg/kg
3,3'-Dichlorobenzidine	750	U	µg/kg	750	U	µg/kg
Benzo(a)anthracene	380	U	µg/kg	380	U	µg/kg
Chrysene	380	U	µg/kg	380	U	µg/kg
bis(2-Ethylhexyl)phthalate	40	J	µg/kg	40	J	µg/kg
Di-n-octylphthalate	380	U	µg/kg	380	U	µg/kg
Benzo(b)fluoranthene	380	U	µg/kg	380	U	µg/kg
Benzo(k)fluoranthene	380	U	µg/kg	380	U	µg/kg
Benzo(a)pyrene	380	U	µg/kg	380	U	µg/kg
Indeno(1,2,3-cd)pyrene	380	U	µg/kg	380	U	µg/kg
Dibenz(a,h)anthracene	380	U	µg/kg	380	U	µg/kg
Benzo(g,h,i)perylene	380	U	µg/kg	380	U	µg/kg

Sample Delivery Group: T0003

QC Level C

Sample No.:	SLSDFB			SLSDRB			SLSDTB			SLSDTB2			12SD01			12SD02		
Locator:	SL/SD-FB-01			SL/SD-RB-01			SL/SD-TB-01			SL/SD-TB2-01			12-SD-01(0.5-1.0)-01			12-SD-02(0.5-1.0)-01		
Date Sampled:	12-4-90			12-4-90			12-4-90			12-4-90			12-4-90			12-4-90		
Volatile Organics	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units
Chloromethane	10	U	µg/l	10	U	µg/l	10	U	µg/l	10	U	µg/l	13	U	µg/kg	11	U	µg/kg
Bromomethane	10	U	µg/l	10	U	µg/l	10	U	µg/l	10	U	µg/l	13	U	µg/kg	11	U	µg/kg
Vinyl Chloride	10	U	µg/l	10	U	µg/l	10	U	µg/l	10	U	µg/l	13	U	µg/kg	11	U	µg/kg
Chloroethane	10	U	µg/l	10	U	µg/l	10	U	µg/l	10	U	µg/l	13	U	µg/kg	11	U	µg/kg
Methylene Chloride	5.0	U	µg/l	5.0	U	µg/l	.7	J	µg/l	5.0	U	µg/l	6.0	U	µg/kg	6.0	U	µg/kg
Acetone	10	U	µg/l	10	U	µg/l	10	U	µg/l	84		µg/l	870	D	µg/kg	3400	E	µg/kg
Carbon Disulfide	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/l	6.0	U	µg/kg	6.0	U	µg/kg
1,1-Dichloroethene	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/l	6.0	U	µg/kg	6.0	U	µg/kg
1,1-Dichloroethane	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/l	6.0	U	µg/kg	6.0	U	µg/kg
1,2-Dichloroethene (total)	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/l	6.0	U	µg/kg	6.0	U	µg/kg
Chloroform	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/l	6.0	U	µg/kg	6.0	U	µg/kg
1,2-Dichloroethane	5.0	U	µg/l	10	U	µg/l	10	U	µg/l	5.0	U	µg/l	6.0	U	µg/kg	6.0	U	µg/kg
2-Butanone	10	U	µg/l	5.0	U	µg/l	5.0	U	µg/l	10	U	µg/l	13	U	µg/kg	11	U	µg/kg
1,1,1-Trichloroethane	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/l	6.0	U	µg/kg	6.0	U	µg/kg
Carbon Tetrachloride	5.0	U	µg/l	10	U	µg/l	10	U	µg/l	5.0	U	µg/l	6.0	U	µg/kg	6.0	U	µg/kg
Vinyl Acetate	10	U	µg/l	5.0	U	µg/l	5.0	U	µg/l	10	U	µg/l	13	U	µg/kg	11	U	µg/kg
Bromodichloromethane	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/l	6.0	U	µg/kg	6.0	U	µg/kg
1,2-Dichloropropane	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/l	6.0	U	µg/kg	6.0	U	µg/kg
cis-1,3-Dichloropropene	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/l	6.0	U	µg/kg	6.0	U	µg/kg
Trichloroethene	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/l	6.0	U	µg/kg	6.0	U	µg/kg
Dibromochloromethane	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/l	6.0	U	µg/kg	6.0	U	µg/kg
1,12-Trichloroethane	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/l	6.0	U	µg/kg	6.0	U	µg/kg
Benzene	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/l	6.0	U	µg/kg	6.0	U	µg/kg

Sample Delivery Group: T0003

QC Level C

Sample No.:	SLSDFB			SLSDRB			SLSDTB			SLSDTB2			12SD01			12SD02		
Locator:	SL/SD-FB-01			SL/SD-RB-01			SL/SD-TB-01			SL/SD-TB2-01			12-SD-01(0.5-1.0)-01			12-SD-02(0.5-1.0)-01		
Date Sampled:	12-4-90			12-4-90			12-4-90			12-4-90			12-4-90			12-4-90		
Volatile Organics	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units
trans-1,3-Dichloropropene	5.0	U	µg/ℓ	5.0	U	µg/ℓ	5.0	U	µg/ℓ	5.0	U	µg/ℓ	6.0	U	µg/kg	6.0	U	µg/kg
Bromoform	5.0	U	µg/ℓ	5.0	U	µg/ℓ	5.0	U	µg/ℓ	5.0	U	µg/ℓ	6.0	U	µg/kg	6.0	U	µg/kg
4-Methyl-2-Pentanone	10	U	µg/ℓ	10	U	µg/ℓ	10	U	µg/ℓ	10	U	µg/ℓ	13	U	µg/kg	11	U	µg/kg
2-Hexanone	10	U	µg/ℓ	10	U	µg/ℓ	10	U	µg/ℓ	10	U	µg/ℓ	13	U	µg/kg	11	U	µg/kg
Tetrachloroethene	5.0	U	µg/ℓ	5.0	U	µg/ℓ	5.0	U	µg/ℓ	5.0	U	µg/ℓ	6.0	U	µg/kg	6.0	U	µg/kg
1,1,2,2-Tetrachloroethane	5.0	U	µg/ℓ	5.0	U	µg/ℓ	5.0	U	µg/ℓ	5.0	U	µg/ℓ	6.0	U	µg/kg	6.0	U	µg/kg
Toluene	5.0	U	µg/ℓ	5.0	U	µg/ℓ	5.0	U	µg/ℓ	5.0	U	µg/ℓ	6.0	U	µg/kg	6.0	U	µg/kg
Chlorobenzene	5.0	U	µg/ℓ	5.0	U	µg/ℓ	5.0	U	µg/ℓ	5.0	U	µg/ℓ	6.0	U	µg/kg	6.0	U	µg/kg
Ethylbenzene	5.0	U	µg/ℓ	5.0	U	µg/ℓ	5.0	U	µg/ℓ	5.0	U	µg/ℓ	6.0	U	µg/kg	6.0	U	µg/kg
Styrene	5.0	U	µg/ℓ	5.0	U	µg/ℓ	5.0	U	µg/ℓ	5.0	U	µg/ℓ	6.0	U	µg/kg	6.0	U	µg/kg
Xylene (total)	5.0	U	µg/ℓ	5.0	U	µg/ℓ	5.0	U	µg/ℓ	5.0	U	µg/ℓ	6.0	U	µg/kg	6.0	U	µg/kg

Sample Delivery Group:
T0003

QC Level C

Sample No.:	12SD03			15SD01			15SD02			15SD03		
Locator:	12-SD-03(0.5-1.0)-01			15-SD-01(0-1.0)-01			15-SD-02(1.0-2.0)-01			15-SD-03(0.5-1.5)-01		
Date Sampled:	12-4-90			12-4-90			12-4-90			12-4-90		
Volatile Organics	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units
Chloromethane	230	U	µg/kg	11	U	µg/kg	11	U	µg/kg	11	U	µg/kg
Bromomethane	230	U	µg/kg	11	U	µg/kg	11	U	µg/kg	11	U	µg/kg
Vinyl Chloride	230	U	µg/kg	11	U	µg/kg	11	U	µg/kg	11	U	µg/kg
Chloroethane	230	U	µg/kg	11	U	µg/kg	11	U	µg/kg	11	U	µg/kg
Methylene Chloride	140	U	µg/kg	5.0	J	µg/kg	6.0	U	µg/kg	6.0	U	µg/kg
Acetone	1,500		µg/kg	11	U	µg/kg	240		µg/kg	11	U	µg/kg
Carbon Disulfide	140	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	6.0	U	µg/kg
1,1-Dichloroethene	140	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	6.0	U	µg/kg
1,1-Dichloroethane	140	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	6.0	U	µg/kg
1,2-Dichloroethene (total)	140	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	6.0	U	µg/kg
Chloroform	140	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	6.0	U	µg/kg
1,2-Dichloroethane	140	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	6.0	U	µg/kg
2-Butanone	230	U	µg/kg	11	U	µg/kg	11	U	µg/kg	11	U	µg/kg
1,1,1-Trichloroethane	140	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	6.0	U	µg/kg
Carbon Tetrachloride	140	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	6.0	U	µg/kg
Vinyl Acetate	230	U	µg/kg	11	U	µg/kg	11	U	µg/kg	11	U	µg/kg
Bromodichloromethane	140	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	6.0	U	µg/kg
1,2-Dichloropropane	140	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	6.0	U	µg/kg
cis-1,3-Dichloropropene	140	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	6.0	U	µg/kg
Trichloroethene	140	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	6.0	U	µg/kg
Dibromochloromethane	140	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	6.0	U	µg/kg
1,1,2-Trichloroethane	140	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	6.0	U	µg/kg
Benzene	140	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	6.0	U	µg/kg

Sample Delivery Group:
T0003

QC Level C

Sample No.:	12SD03			15SD01			15SD02			15SD03		
Locator:	12-SD-03(0.5-1.0)-01			15-SD-01(0-1.0)-01			15-SD-02(1.0-2.0)-01			15-SD-03(0.5-1.5)-01		
Date Sampled:	12-4-90			12-4-90			12-4-90			12-4-90		
Volatile Organics	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**
trans-1,3-Dichloropropene	140	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	6.0	U	µg/kg
Bromoform	140	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	6.0	U	µg/kg
4-Methyl-2-Pentanone	280	U	µg/kg	11	U	µg/kg	11	U	µg/kg	11	U	µg/kg
2-Hexanone	280	U	µg/kg	11	U	µg/kg	11	U	µg/kg	11	U	µg/kg
Tetrachloroethene	140	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	6.0	U	µg/kg
1,1,2,2-Tetrachloroethane	140	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	6.0	U	µg/kg
Toluene	140	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	6.0	U	µg/kg
Chlorobenzene	140	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	6.0	U	µg/kg
Ethylbenzene	140	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	6.0	U	µg/kg
Styrene	140	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	6.0	U	µg/kg
Xylene (total)	140	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	6.0	U	µg/kg

Sample Delivery Group: T0003

QC Level C

Sample No.:	15SL01			15SL02			15SL03			16SL01			16SL02			16SL03		
Locator:	15-SL-01(0-.5)-01			15-SL-02(0-.5)-01			15-SL-03(0-.5)-01			16-SL-01(0-.5)-01			16-SL-01(0-.5)-01			16-SL-01(0-.5)-01		
Date Sampled:	12-4-90			12-4-90			12-4-90			12-4-90			12-4-90			12-4-9-		
Volatile Organics	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units
Chloromethane	11	U	µg/kg	11	U	µg/kg	10	U	µg/kg	12	U	µg/kg	4,800	U	µg/kg	12	U	µg/kg
Bromomethane	11	U	µg/kg	11	U	µg/kg	10	U	µg/kg	12	U	µg/kg	4,800	U	µg/kg	12	U	µg/kg
Vinyl Chloride	11	U	µg/kg	11	U	µg/kg	10	U	µg/kg	12	U	µg/kg	4,800	U	µg/kg	12	U	µg/kg
Chloroethane	11	U	µg/kg	11	U	µg/kg	10	U	µg/kg	12	U	µg/kg	4,800	U	µg/kg	12	U	µg/kg
Methylene Chloride	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	2,400	U	µg/kg	6.0	U	µg/kg
Acetone	8100	E	µg/kg	11	U	µg/kg	29		µg/kg	88		µg/kg	71,000		µg/kg	12	U	µg/kg
Carbon Disulfide	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	2,400	U	µg/kg	6.0	U	µg/kg
1,1-Dichloroethene	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	2,400	U	µg/kg	6.0	U	µg/kg
1,1-Dichloroethane	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	2,400	U	µg/kg	6.0	U	µg/kg
1,2-Dichloroethene (total)	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	2,400	U	µg/kg	6.0	U	µg/kg
Chloroform	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	2,400	U	µg/kg	6.0	U	µg/kg
1,2-Dichloroethane	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	2,400	U	µg/kg	6.0	U	µg/kg
2-Butanone	11	U	µg/kg	11	U	µg/kg	10	U	µg/kg	12	U	µg/kg	4,800	U	µg/kg	12	U	µg/kg
1,1,1-Trichloroethane	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	2,400	U	µg/kg	6.0	U	µg/kg
Carbon Tetrachloride	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	2,400	U	µg/kg	6.0	U	µg/kg
Vinyl Acetate	11	U	µg/kg	11	U	µg/kg	10	U	µg/kg	12	U	µg/kg	4,800	U	µg/kg	12	U	µg/kg
Bromodichloromethane	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	2,400	U	µg/kg	6.0	U	µg/kg
1,2-Dichloropropane	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	2,400	U	µg/kg	6.0	U	µg/kg
cis-1,3-Dichloropropene	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	2,400	U	µg/kg	6.0	U	µg/kg
Trichloroethene	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	2,400	U	µg/kg	6.0	U	µg/kg
Dibromochloromethane	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	2,400	U	µg/kg	6.0	U	µg/kg
1,12-Trichloroethane	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	2,400	U	µg/kg	6.0	U	µg/kg
Benzene	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	2,400	U	µg/kg	6.0	U	µg/kg

Sample Delivery Group: T0003

QC Level C

Sample No.:	15SL01			15SL02			15SL03			16SL01			16SL02			16SL03		
Locator:	15-SL-01(0-.5)-01			15-SL-02(0-.5)-01			15-SL-03(0-.5)-01			16-SL-01(0-.5)-01			16-SL-01(0-.5)-01			16-SL-01(0-.5)-01		
Date Sampled:	12-4-90			12-4-90			12-4-90			12-4-90			12-4-90			12-4-9-		
Volatile Organics	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units
trans-1,3-Dichloropropene	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	2,400	U	µg/kg	6.0	U	µg/kg
Bromoform	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	12	U	µg/kg	2,400	U	µg/kg	6.0	U	µg/kg
4-Methyl-2-Pentanone	11	U	µg/kg	11	U	µg/kg	10	U	µg/kg	12	U	µg/kg	4,800	U	µg/kg	12	U	µg/kg
2-Hexanone	11	U	µg/kg	11	U	µg/kg	10	U	µg/kg	6.0	U	µg/kg	4,800	U	µg/kg	12	U	µg/kg
Tetrachloroethene	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	2,400	U	µg/kg	6.0	U	µg/kg
1,1,2,2-Tetrachloroethane	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	2,400	U	µg/kg	6.0	U	µg/kg
Toluene	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	2,400	U	µg/kg	6.0	U	µg/kg
Chlorobenzene	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	2,400	U	µg/kg	6.0	U	µg/kg
Ethylbenzene	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	2,400	U	µg/kg	6.0	U	µg/kg
Styrene	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	2,400	U	µg/kg	6.0	U	µg/kg
Xylene (total)	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	6.0	U	µg/kg	2,400	U	µg/kg	6.0	U	µg/kg

Sample Delivery Group: T0003

QC Level C

Sample No.:	VBLK-W1			VBLK-W2			VBLK-S1			VBLK-S3			VBLK-S5			VBLK-S6			VBLK-S2		
Locator:	425719			VBLK-W2			425013			VBLK-S3			VBLK-S5			VBLK-S6			VBLK-S2		
Date Sampled:																					
Volatile Organics	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**	**Conc.**	**Qual.**	**Units**
Chloromethane	10	U	µg/l	10	U	µg/l	11	U	µg/kg	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg	1,300	U	µg/kg
Bromomethane	10	U	µg/l	10	U	µg/l	11	U	µg/kg	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg	1,300	U	µg/kg
Vinyl Chloride	10	U	µg/l	10	U	µg/l	11	U	µg/kg	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg	1,300	U	µg/kg
Chloroethane	10	U	µg/l	10	U	µg/l	11	U	µg/kg	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg	1,300	U	µg/kg
Methylene Chloride	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	660	U	µg/kg
Acetone	10	U	µg/l	10	U	µg/l	11	U	µg/kg	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg	1,300	U	µg/kg
Carbon Disulfide	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	660	U	µg/kg
1,1-Dichloroethene	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	660	U	µg/kg
1,1-Dichloroethane	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	660	U	µg/kg
1,2-Dichloroethene (total)	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	660	U	µg/kg
Chloroform	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	660	U	µg/kg
1,2-Dichloroethane	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	660	U	µg/kg
2-Butanone	10	U	µg/l	10	U	µg/l	11	U	µg/kg	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg	1,300	U	µg/kg
1,1,1-Trichloroethane	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	660	U	µg/kg
Carbon Tetrachloride	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	660	U	µg/kg
Vinyl Acetate	10	U	µg/l	10	U	µg/l	11	U	µg/kg	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg	1,300	U	µg/kg
Bromodichloromethane	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	660	U	µg/kg
1,2-Dichloropropane	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	660	U	µg/kg
cis-1,3-Dichloropropene	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	660	U	µg/kg
Trichloroethene	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	660	U	µg/kg
Dibromochloromethane	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	660	U	µg/kg
1,12-Trichloroethane	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	660	U	µg/kg
Benzene	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	660	U	µg/kg

Sample Delivery Group: T0003

QC Level C

Sample No.:	VBLK-W1			VBLK-W2			VBLK-S1			VBLK-S3			VBLK-S5			VBLK-S6			VBLK-S2		
Locator:	425719			VBLK-W2			425813			VBLK-S3			VBLK-S5			VBLK-S6			VBLK-S2		
Date Sampled:																					
Volatile Organics	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units
trans-1,3-Dichloropropene	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	660	U	µg/kg
Bromoform	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	660	U	µg/kg
4-Methyl-2-Pentanone	10	U	µg/l	10	U	µg/l	11	U	µg/kg	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg	1,300	U	µg/kg
2-Hexanone	10	U	µg/l	10	U	µg/l	11	U	µg/kg	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg	1,300	U	µg/kg
Tetrachloroethene	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	660	U	µg/kg
1,1,2,2-Tetrachloroethene	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	660	U	µg/kg
Toluene	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	660	U	µg/kg
Chlorobenzene	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	660	U	µg/kg
Ethylbenzene	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	660	U	µg/kg
Styrene	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	660	U	µg/kg
Xylene (total)	5.0	U	µg/l	5.0	U	µg/l	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	660	U	µg/kg

Sample Delivery Group: T0003

QC Level C/D

Sample No.:	VBLK-S7			12SD02MS			12SD02MSD			15SL03MS			15SL03MSD			15SL03A			VBLK-S5		
Locator:	425019			12-SD-02(.5-1.0)-01			12-SD-02(.5-1.0)-01			15-SL-03(0-.5)-01			15-SL-03(0-.5)-01			15-SL-03(0-.5)-01			VBLK-S5		
Date Sampled:	12-9-90			12-4-90			12-4-90			12-4-90			12-4-90			12-4-90			12-9-90		
Volatile Organics	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units
Chloromethane	1,300	U	µg/kg	1,400	U	µg/kg	1,400	U	µg/kg	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg
Bromomethane	1,300	U	µg/kg	1,400	U	µg/kg	1,400	U	µg/kg	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg
Vinyl Chloride	1,300	U	µg/kg	1,400	U	µg/kg	1,400	U	µg/kg	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg
Chloroethane	1,300	U	µg/kg	1,400	U	µg/kg	1,400	U	µg/kg	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg
Methylene Chloride	660	U	µg/kg	690	U	µg/kg	690	J	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
Acetone	1,300	U	µg/kg	1,400	U	µg/kg	1,400	U	µg/kg	10	U	µg/kg	10		µg/kg	10	U	µg/kg	10	U	µg/kg
Carbon Disulfide	660	U	µg/kg	690	U	µg/kg	690	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
1,1-Dichloroethene	660	U	µg/kg			µg/kg			µg/kg			µg/kg		U	µg/kg	5.0	U	µg/kg			µg/kg
1,1-Dichloroethane	660	U	µg/kg	690	U	µg/kg	690	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
1,2-Dichloroethene (total)	660	U	µg/kg	690	U	µg/kg	690	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
Chloroform	660	U	µg/kg	690	U	µg/kg	690	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
1,2-Dichloroethane	660	U	µg/kg	690	U	µg/kg	690	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
2-Butanone	1,300	U	µg/kg	1,400	U	µg/kg	1,400	U	µg/kg	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg
1,1,1-Trichloroethane	660	U	µg/kg	690	U	µg/kg	690	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
Carbon Tetrachloride	660	U	µg/kg	690	U	µg/kg	690	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
Vinyl Acetate	1,300	U	µg/kg	1,400	U	µg/kg	1,400	U	µg/kg	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg
Bromodichloromethane	660	U	µg/kg	690	U	µg/kg	690	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
1,2-Dichloropropane	660	U	µg/kg	690	U	µg/kg	690	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
cis-1,3-Dichloropropene	660	U	µg/kg	690	U	µg/kg	690	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
Trichloroethene	660	U	µg/kg			µg/kg			µg/kg			µg/kg		U	µg/kg	5.0	U	µg/kg			µg/kg
Dibromochloromethane	660	U	µg/kg	690	U	µg/kg	690	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
1,12-Trichloroethane	660	U	µg/kg	690	U	µg/kg	690	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
Benzene	660	U	µg/kg			µg/kg			µg/kg			µg/kg		U	µg/kg	5.0	U	µg/kg			µg/kg

Sample Delivery Group: T0003

QC Level C/D

Sample No.:	VBLK-S7			12SD02MS			12SD02MSD			15SL03MS			15SL03MSD			15SL03A			VBLK-S5		
Locator:	425018			12-SD-02(.5-1.0)-01			12-SD-02(.5-1.0)-01			15-SL-03(0-.5)-01			15-SL-03(0-.5)-01			15-SL-03(0-.5)-01			VBLK-S5		
Date Sampled:	12-9-90			12-4-90			12-4-90			12-4-90			12-4-90			12-4-90			12-9-90		
Volatile Organics	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units
trans-1,3-Dichloropropene	660	U	µg/kg	690	U	µg/kg	690	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
Bromoform	660	U	µg/kg	660	U	µg/kg	660	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
4-Methyl-2-Pentanone	1,300	U	µg/kg	1,400	U	µg/kg	1,400	U	µg/kg	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg
2-Hexanone	1,300	U	µg/kg	1,400	U	µg/kg	1,400	U	µg/kg	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg
Tetrachloroethene	660	U	µg/kg	690	U	µg/kg	690	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
1.1.2.2-Tetrachloroethane	660	U	µg/kg	690	U	µg/kg	690	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
Toluene	660	U	µg/kg			µg/kg			µg/kg			µg/kg		U	µg/kg	5.0	U	µg/kg			µg/kg
Chlorobenzene	660	U	µg/kg			µg/kg			µg/kg			µg/kg		U	µg/kg	5.0	U	µg/kg			µg/kg
Ethylbenzene	660	U	µg/kg	690	U	µg/kg	690	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
Styrene	660	U	µg/kg	690	U	µg/kg	690	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
Xylene (total)	660	U	µg/kg	690	U	µg/kg	690	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg

Sample Delivery Group: T0003

QC Level D

Sample No.:	VBLK-S6			15SL03AMS			15SL03AMSD		
Locator:	VBLK-S6			15-SL-03-(0-.5)-01			15-SL-03(0-.5)-01		
Date Sampled:	12-11-90			12-4-90			12-4-90		
Volatile Organics	Conc.	Qual.	Units	Conc.	Qual.	Units	Conc.	Qual.	Units
Chloromethane	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg
Bromomethane	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg
Vinyl Chloride	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg
Chloroethane	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg
Methylene Chloride	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
Acetone	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg
Carbon Disulfide	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
1,1-Dichloroethene			µg/kg			µg/kg			µg/kg
1,1-Dichloroethane	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
1,2-Dichloroethene (total)	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
Chloroform	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
1,2-Dichloroethane	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
2-Butanone	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg
1,1,1-Trichloroethane	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
Carbon Tetrachloride	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
Vinyl Acetate	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg
Bromodichloromethane	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
1,2-Dichloropropane	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
cis-1,3-Dichloropropene	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
Trichloroethene			µg/kg			µg/kg			µg/kg
Dibromochloromethane	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
1,2-Trichloroethane	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
Benzene			µg/kg			µg/kg			µg/kg
trans-1,3-Dichloropropene	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
Bromoform	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
4-Methyl-2-Pentanone	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg
2-Hexanone	10	U	µg/kg	10	U	µg/kg	10	U	µg/kg
Tetrachloroethene	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
1,1,2,2-Tetrachloroethane	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
Toluene			µg/kg			µg/kg			µg/kg
Chlorobenzene			µg/kg			µg/kg			µg/kg
Ethylbenzene	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
Styrene	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg
Xylene (total)	5.0	U	µg/kg	5.0	U	µg/kg	5.0	U	µg/kg