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FINAL PRELIMINARY SITE CHARACTERIZATION REPORT
SITE 10
NAVAL AIR STATION
PENSACOLA, FLORIDA

SOUTHNAVFACENGCOM
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Prepared for:

COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN)
NAVAL AIR STATION
PENSACOLA, FLORIDA

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19. Abstract

The following Preliminary Site Characterization was conducted for Site 10, Commodore's Pond at NAS Penacola. The purpose of this investigation was to delineate the nature and extent of contaminants in soil, sediment, and groundwater at the site. The following summary and recommendations are based on the findings of this investigation.

- According to historical records, Commodore's Pond was used for underwater storage of oak timbers during the mid-to-late 1800s. The original pond was filled with dirt in 1929 during the construction of Chevalier Field. During the late 1960s, oak timbers were found onsite during trenching operations for the industrial waste sewer system. It is reported no hazardous materials were encountered during this effort.

- Previous investigations at the site identified metals (chromium, lead, end zinc), total recoverable petroleum hydrocarbons, polynuclear aromatic hydrocarbons, and phenols in soil samples. Metals (cadmium, chromium, lead, and nickel) and phenols were detected in the groundwater samples.

- No inorganics were detected in site soil samples exceeding PRGs. Several inorganics, barium, chromium, cyanide, lead, manganese, and mercury were detected in site soil samples having concentrations exceeding their respective RCs. However, of these exceedances, most lead concentrations and all barium and manganese concentrations were within the range of values observed in background samples. The only organic compound detected in soil samples exceeding a PRG was dieldrin.

- Aluminum, iron, and manganese exceeded their respective PRGs in site groundwater samples. Concentrations of aluminum and iron in background wells are above secondary drinking water standards, indicating these parameters occur naturally at elevated concentrations. Additionally, the concentrations of Fe and Mn are consistent with those representative of ambient groundwater quality in the Sand and Gravel Aquifer in southern Escambia County. No organic compounds were detected in groundwater samples.
- A sediment sample was collected to evaluate potential contaminant migration from Site 10 to the receptor wetland, Wetland 5. Lead and 4.4'-DDT were detected in the site sediment sample exceeding their respective SSVs. A full evaluation of this wetland area is planned as part of the Site 41 — NAS Pensacola Wetlands RI.

- Groundwater flow across Site 10 is toward the drainage ditch that traverses the eastern boundary of the site. The gradient is approximately .0036 and calculated average horizontal pore velocities for groundwater flow toward the ditch are approximately 0.63 ft/day.

[• **The preliminary risk estimate based on a conservative chad-trespasser scenario indicated risk associated with site dieldrin concentrations did not exceed the 1E-6 USEPA and FDEP threshold.]**

The following recommendations are based on the conclusions of this investigation.

[• **No** analyzed **parameters exceeding risk-based standards were detected in shallow groundwater. Although several dieldrin concentrations above risk-based standards were noted in site sol, preliminary risk evaluation results (based on a conservative child-trespasser scenario) indicate human exposure risk is below** the **accepted risk threshold. Consequently, no further action or investigation is warranted for Site 10.]**

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List of Acronyms and Abbreviations

bls	below land surface
BNA	Base-neutral/acid extractable organic compound
CG	Cleanup Goal
CLP	Contract Laboratory Program
CN	Cyanide
CSAP	Comprehensive Sampling and Analysis Plan
CSS	Contaminant Source Survey
E/A&H	EnSafe/Allen & Hoshall
E&E	Ecology & Environment, Inc.
FDEP	Florida Department of Environmental Protection
FSDWS	Florida Secondary Drinking Water Standards
ft/day	feet per day
G&M	Geraghty & Miller
MCL	Maximum Contaminant Level
msl	mean sea level
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
mg/kg	milligrams per kilogram
NAS	Naval Air Station
NTU	Nephelometric turbidity units
PCB	polychlorinated biphenyls
ppb	parts per billion
ppm	parts per million
PRG	Preliminary Remediation Goals
PSC	Preliminary Site Characterization
PVC	polyvinyl chloride
QA/QC	Quality Assurance/Quality Control
RBC	Risk-Based Concentrations
RC	Reference Concentration
SMCL	Secondary Maximum Contaminant Levels
SSV	Soil Screening Value
TAL	Target Analyte List
TCL	Target Compound List
USEPA	U.S. Environmental Protection Agency
VOC	Volatile Organic Compounds

EXECUTIVE SUMMARY

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- Previous investigations at the site identified metals (chromium, lead, and zinc), total recoverable petroleum hydrocarbons, polynuclear aromatic hydrocarbons, and phenols in soil samples. Metals (cadmium, chromium, lead, and nickel) and phenols were detected in the groundwater samples.

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The following recommendations are based on the conclusions of this investigation.

[• No analyzed parameters exceeding risk-based standards were detected in shallow groundwater. Although several dieldrin concentrations above risk-based standards were noted in site soil, preliminary risk evaluation results (based on a conservative child-trespasser scenario) indicate human exposure risk is below the accepted risk threshold. Consequently, no further action or investigation is warranted for Site 10.1

1.0 INTRODUCTION

As part of the U.S. Navy Comprehensive Long-Term Environmental Action Navy program, a preliminary site characterization (PSC) study has been completed at Site 10 — Commodore's Pond, at Naval Air Station (NAS) Pensacola. Site 10 is in the southeastern portion of NAS Pensacola, southeast of Murray and Taylor roads, and approximately 300 feet west of Chevalier Field.

The investigation was undertaken by EnSafe/Allen & Hoshall (E/A&H) to meet the requirements of the federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980, which administers the investigation and cleanup of former hazardous waste sites. The PSC report summarizes the activities conducted during the investigation and presents the resulting findings and conclusions. The objectives of the PSC are outlined below.

Objectives of the *Preliminary* Site Characterization

- To determine the source, nature, magnitude, and distribution of potential soil, sediment, and/or groundwater contamination.

- To explore appropriate methods of addressing detected site contamination based on data generated during this investigation.

This investigation was organized into the following elements:

- A review of previous investigations and historical information to develop a comprehensive understanding of the site history and background.

- A preliminary field investigation including a habitat and biota survey to characterize the study area field conditions.

- A field investigation comprising of soil boring completion and monitoring well installation; sediment, soil, and groundwater sampling for chemical analyses; and a hydrologic assessment.

2.0 SITE DESCRIPTION AND HISTORY

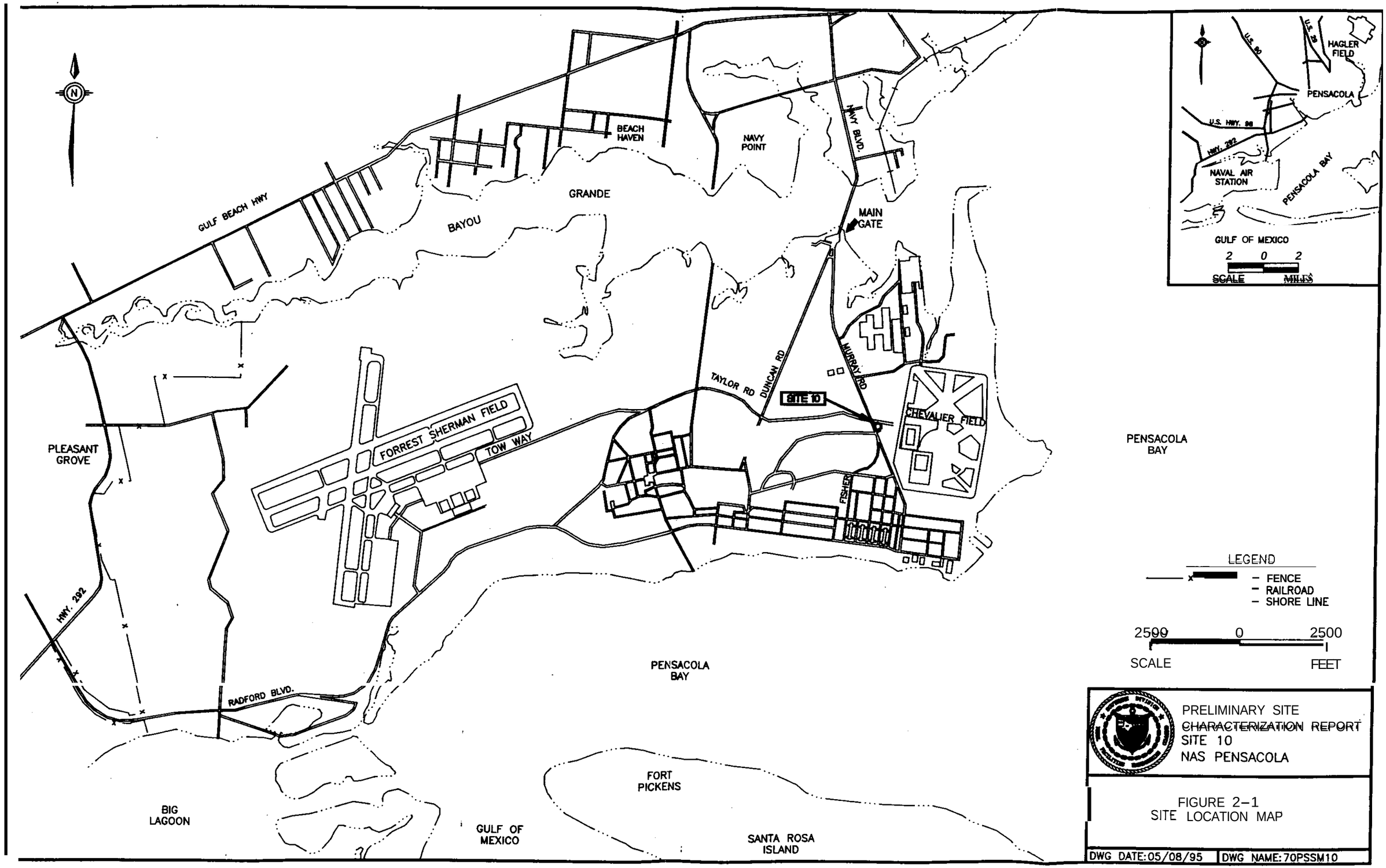
Contaminant Source Survey

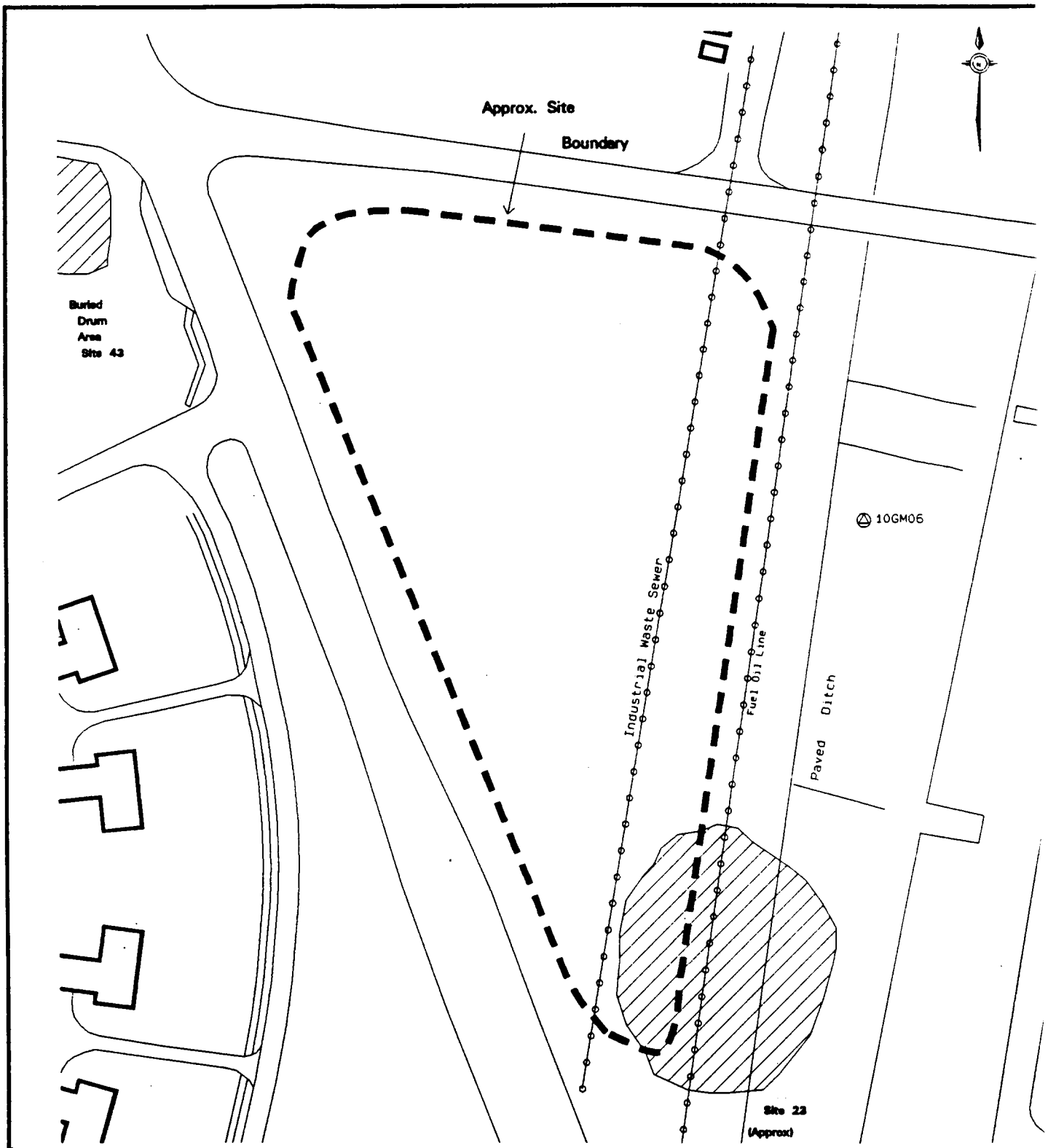
A Contaminant Source Survey (CSS) was completed for Site 10 before field work began to determine past and present site activities, or occurrences related to known or suspected releases of contaminants to the environment, and to determine potential former and/or present source areas of contamination. The CSS included reviewing available previous investigation documents, aerial photographs, maps, underground utility information, and interviews with NAS personnel. CSS findings have been incorporated into the following site description and history discussion.

2.1 Site Description

Site 10 is the approximate location of a former small surface water body known as Commodore's Pond. As Figure 2-1 shows, the site is due west of Chevalier Field and occupies part of an open field and a wooded area southeast of Murray and Taylor roads. As Figure 2-2 shows, the southeastern portion of the site also encompasses parts of the Chevalier Field Pipe Leak area (Site 23), where two separate underground fuel oil line leakages occurred in 1965 and 1970. In addition to the fuel oil line, the north-to-south trending industrial waste sewer line crosses Site 10 along its eastern portion. .

The site area is an unpaved, sandy tract covered with native grasses, live oaks, and other native plant species. A stand of pine trees has been planted along the site's southern portion. A concrete-lined drainage ditch trends south-to-north adjacent to the site's eastern margin. Land surface across the site slopes moderately from west to east, varying from approximately 25 feet above mean sea level (msl) at the northwestern extent to approximately 4 feet above msl along the eastern extent. No permanent monitoring wells were previously installed at Site 10; however, shallow well GM-6 is approximately 200 feet east of the site (Figure 2-2).


N
GULF BEACH HWY
BEACH HAVEN
NAVY POINT
NAVY BLVD.
GRANDE
BAYOU
MAIN GATE
TAYLOR RD
DUNCAN RD
MURRAY RD
SITE 10
CHEVALIER FIELD
FISHER
FORREST SHERMAN FIELD
TOW WAY
PLEASANT GROVE
HWY. 292
RADFORD BLVD.
PENSACOLA BAY
PENSACOLA BAY
FORT PICKENS
BIG LAGOON
GULF OF MEXICO
SANTA ROSA ISLAND
U.S. 90
U.S. 29
HAGLER FIELD
PENSACOLA
U.S. HWY. 98
HWY. 292
NAVAL AIR STATION
PENSACOLA BAY
GULF OF MEXICO
2 0 2
SCALE MILES
LEGEND
FENCE
RAILROAD
SHORE LINE
2500 0 2500
SCALE FEET
PRELIMINARY SITE CHARACTERIZATION REPORT
SITE 10
NAS PENSACOLA
FIGURE 2-1
SITE LOCATION MAP
DWG DATE:05/08/95
DWG NAME:70PSSM10



Preliminary Site
Characterization
Report
Site 10
NAS Pensacola

Figure 2-2

SITE 10 - COMMODORES
POND SITE MAP

Date: 18 APR 95

AML: alan_dir/final102

An area containing buried drums was discovered west of Site 10 in 1993. The actual number of drums and their contents are not yet known; however, a geophysical survey was performed in March 1994 to investigate the area. The results of the survey suggest this area is not one of systematic widespread drum disposal, but is limited in areal dimensions (approximately 100 by 120 feet square) and number of disposed drums. Typical estimated burial depths across this area are 5 feet or less. The geophysical survey results are presented in a previously submitted technical memorandum that is included as an appendix of this report (Appendix A). As a result of this survey, the buried-drum area will be further investigated as an newly designated site, Site 43.

2.2 Site History

Commodore's Pond, also identified as Spar Pond on early 1900s maps, was used for underwater storage of hand-hewn oak timbers during the mid-to-late 1800s. This storage method preserved the wood before use for ship building (NEESA 1983). The original pond was filled with dirt in 1929 during the construction of Chevalier Field, therefore its exact dimensions are unknown. Aerial photographs indicate Taylor Road was constructed across the site's northern extent during the mid-to-late 1950s. During the late 1960s, oak timbers were found onsite during trenching operations for the industrial waste sewer system. These timbers were exhumed and reburied on Magazine Point. It is reported no hazardous materials were encountered during this effort.

Previous Investigations

Site 10 was included in the Initial Assessment Study of NAS Pensacola performed in 1983 by the Naval Energy and Environmental Support Activity, now the Naval Facilities Engineering Service Center. Based on its findings, NEESA concluded that there was no evidence of hazardous material use, storage, or disposal at the site, and the site did not pose a threat to human health or the environment (NEESA 1983). No further study of the site was recommended. No environmental sampling was performed onsite to substantiate this conclusion.

In 1991, Ecology and Environment, Inc. (E&E) performed a Phase I screening investigation of Site 10 to identify principal areas and potential contaminants of concern. The investigation results are discussed completely in the E&E Interim Data Report (IDR) (E&E 1992). The location of the former pond was not determined from historical records or by field methods conducted during the investigation. Past activities such as trenching, excavating, and backfilling associated with underground utilities installation were identified as having disturbed and redistributed site soil. Additionally, drainage features (paved ditches) were noted to divert surface runoff from areas west of the site onto Site 10. Tables 2-1 and 2-2 present summary analytical results for the E&E investigation. Soil and groundwater samples were collected and submitted for laboratory analyses. Metals (chromium, lead, and zinc), total recoverable petroleum hydrocarbons, polynuclear aromatic hydrocarbons, and phenols were detected in soil samples. Metals (cadmium, chromium, lead, and nickel) and phenols were detected in the groundwater samples. Further assessment activities were recommended for Site 10 as a result of this investigation.

Table 2-1
E&E Phase II Investigation
Summary Analytical Screening Results for Soil Samples
NAS Pensacola Site 10
(All results in µg/kg, unless noted)

Parameter	Detection Limit	Sample Number (Location and Depth Interval)							RCRA PCAL
		P10S001A (B001A)	P10S001AD[a] (B001A)	P10S001B (B001B)	P10S001C (B001C)	P10S002A (B002A)	P10S003A (B003A)	P10S003B (B003B)	
Chromium (mg/kg)	**1.0**	—	—	**1.1**	—	**1.1**	—	—	**400[b]**
Zinc (mg/kg)	2.0	—	—	—	—	—	—	—	16,000
Lead (mg/kg)	4.0	7.6	—	—	—	—	—	—	—
TRPHs (mg/kg)	5.0	—	—	—	—	35	—	—	—
Total PAHs as Benzo-a-pyrene	1,000	—	—	—	—	1,500	—	—	—
Phenols as Trichlorophenol	**2,000**	—	—	—	—	1,200,000	—	—	—

Parameter	Detection Limit	P10S004A (B004A)	P10S005A (B005A)	P10S005B (B005B)	P10S005C (B005C)	P10S005D (B005D)	P10S006A (B006A)		RCRA PCAL
Chromium (mg/kg)	**1.0**	—	—	—	**1.6**	—	—		**400[b]**
Zinc (mg/kg)	2.0	3.0	2.5	—	—	—	—		16,000
Lead (mg/kg)	4.0	—	—	—	—	—	5.8		—
TRPHs (mg/kg)	5.0	13	13	23	12	31	8.2		—
Total PAHs as Benzo-a-pyrene	1,000	—	—	—	—	—	—		
Phenols as Trichlorophenol	**2,000**	3,800	—	—	—	—	—		—

Notes:

[a] = Duplicate of sample P10S001A,
[b] = This PCAL is for hexavalent chromium.
RCRA PCAL = Resource Conservation and Recovery Act Proposed Corrective Action Level.
— = Compound not detected.
µg/Kg = Micrograms per kilogram.
mg/Kg = Milligrams per kilogram.

Source: Ecology and Environment, Inc., 1992.

Table 2-2
E&E Phase I Investigation
Summary Analytical Screening Results for Groundwater Samples
(from Temporary Monitoring Wells)
NAS Pensacola Site 10
(All results in µg/L, unless noted)

Parameter	Detection Limit	Sample Number (Well Number)				FPDWS/FSDWS
		P10GW001 (TW001)	P10GW002 (TW002	P10GW002D* (TW002)	P10GW006 (TW006)	
Chromium	10	450	41	42	20	50
Zinc	20	700	110	120	84	5,000
Lead	40	520	120	120	96	50
Cadmium	5.0	46	—	—	—	10
Nickel	40	420	—	—	—	—
Copper	25	170	—	—	—	1,000
Phenols as Trichlorophenol	100	—	10,000	17,000	—	

Notes:

*	=	Duplicate of sample P10GW002.
FPDWS	=	Florida RImary Drinking Water Standard.
FSDWS	=	Florida Secondary Drinking Water Standard.
	=	Compound not detected.
µg/L	=	Micrograms per liter.

Source: Ecology and Environment, Inc., 1992.

3.0 ENVIRONMENTAL SETTING

3.1 Physiography

NAS Pensacola is in the Gulf Coast lowlands on a peninsula bounded by Pensacola Bay to the south and east and Bayou Grande to the north. The main topographic feature is a bluff paralleling the southern and eastern shorelines of the peninsula. Landward of the bluff is a gently rolling upland with elevations up to 40 feet above msl (USGS 1970a and 1970b). In the eastern part of the base, a low and nearly level marine terrace lies east of the bluff with elevations of approximately 5 feet or less above msl, comprising the areas of Chevalier Field and Magazine Point.

Sandy soils typify the NAS Pensacola area. Consequently, most rainfall infiltrates directly into the subsurface, resulting in few natural streams. Streams on base generally are man-made and channelized. Numerous natural wetlands occur in low-lying areas.

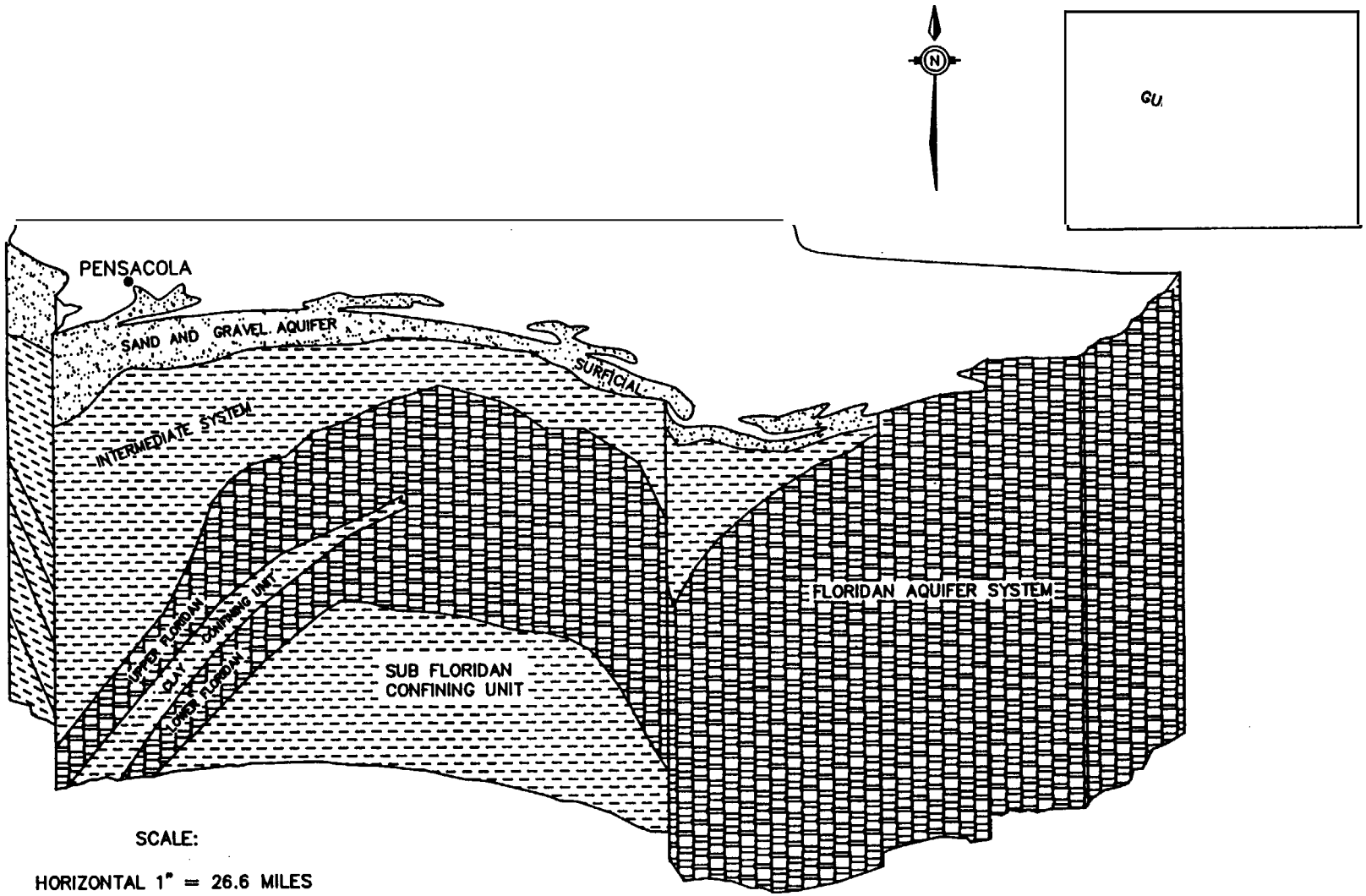
3.2 Stratigraphy and Hydrogeology

3.2.1 Regional Characterization

Stratigraphy beneath the Florida Panhandle generally consists of Quaternary terrace marine and fluvial deposits, underlain by a thick sequence of interlayered fine-grained clastic deposits and carbonate strata of Tertiary age (SEGS 1986). Three main regional hydrogeologic units have been defined within this stratigraphic column (in descending order): the Surficial/ Sand-and-Gravel Aquifer, the Intermediate System, and the Floridan Aquifer System. Figure 3-1 provides a generalized cross section of these hydrogeologic units in northwest Florida.

Sand-and-Gravel Aquifer (Surficial Aquifer)

The Surficial Aquifer, comprising primarily unconsolidated siliciclastic sediments, is approximately 300 feet thick at NAS Pensacola. These sediments belong to undifferentiated Pleistocene-Holocene terrace deposits, the Pliocene Citronelle formation, and underlying



SCALE:

HORIZONTAL 1" = 26.6 MILES

VERTICAL 1" = 500 FEET

VERTICAL EXAGGERATION = 281

SOURCE: E&E 1992c.

PRELIMINARY SITE
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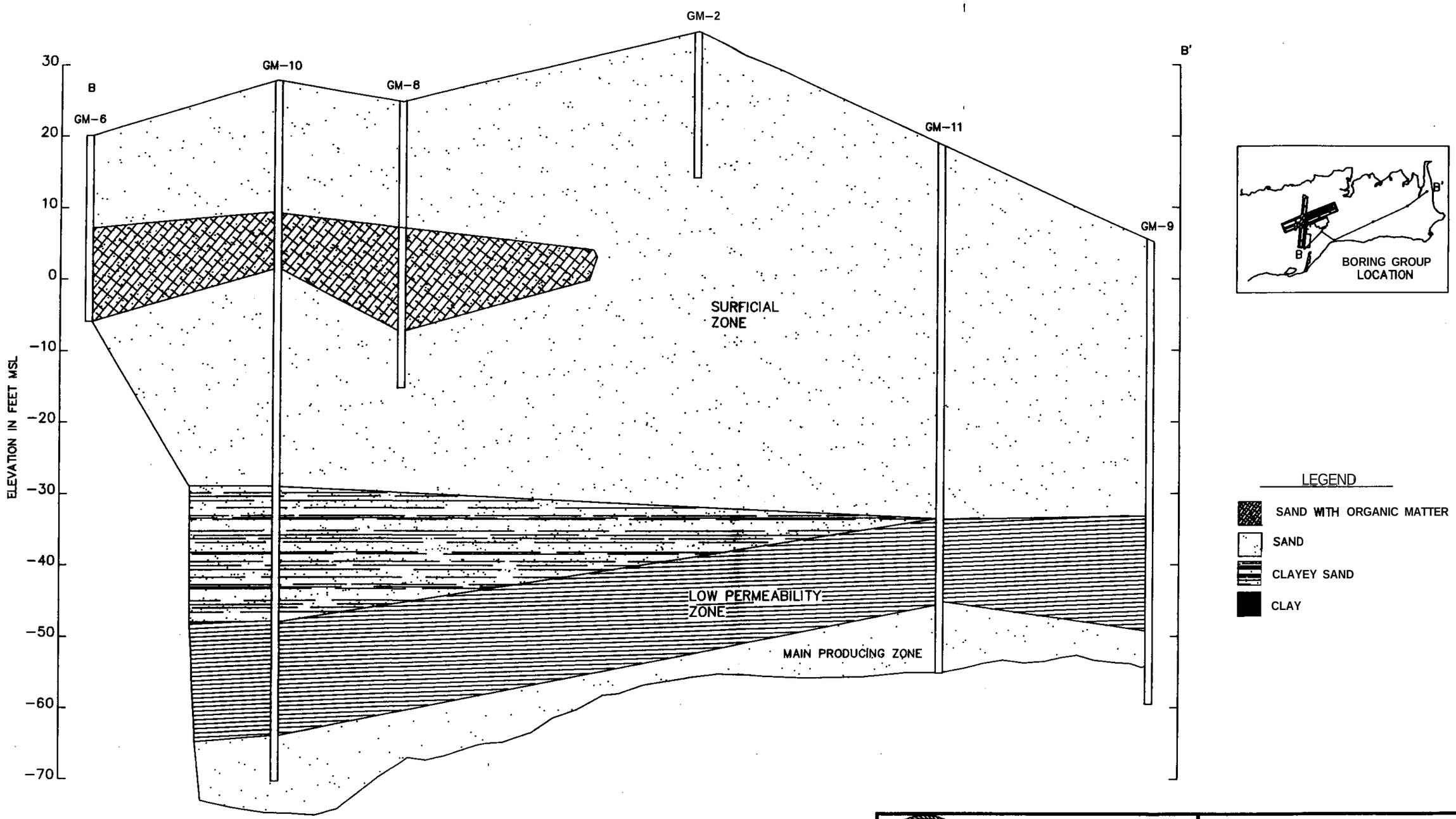
FIGURE 3-1
GENERALIZED GEOLOGIC CROSS-SECTION OF
HYDROGEOLOGIC UNITS IN
NORTHWEST FLORIDA

DATE: 03/31/95 | DWG NAME: 70PSC10G

Miocene coarse clastics (Wilkins et al. 1985). West of the Choctawhatchee River in northwest Florida, the Surficial Aquifer is referred to as the Sand-and-Gravel Aquifer, and is a major source of drinking water (SEGS 1986). The Florida Department of Environmental Protection (FDEP) classification of the surficial aquifer is G-1 with a U.S. Environmental Protection Agency (USEPA) classification of IIA. Because the Sand-and-Gravel Aquifer is the uppermost unit contiguous with land surface and receives recharge through direct infiltration, it is susceptible to contamination from surface activities. In the vicinity of NAS Pensacola, the unit has been subdivided into three distinct zones based on hydrogeologic differences (in descending order): the surficial zone, the lower permeability zone, and the main producing zone (Wilkins et al. 1985). This investigation focuses on the upper (shallow depth) and basal (intermediate depth) portions of the surficial zone. A generalized cross section of the Sand and Gravel Aquifer produced by Geraghty & Miller, Inc. (G&M 1984), shown in Figure 3-2, illustrates the stratigraphic relationship of these zones.

Surficial Zone

The surficial zone is contiguous with land surface and contains groundwater under water table or perched conditions. At NAS Pensacola, the surficial zone is approximately 40 to 60 feet thick and is generally composed of a poorly graded quartz sand (G&M 1984, 1986). Beneath the western side of the base, a substantial strahun of sand with abundant organic matter occurs within the zone and pinches out to the east. Depth to groundwater ranges from 0 to 20 feet depending on ground surface elevation. Aquifer tests have yielded high hydraulic conductivities, on the order of 10^{+1} to 10^{+2} feet/day (E&E 1990). The lower contact with the low permeability zone is transitional, resulting in increased clay content in the lower portion of the surficial zone proper. This more clayey zone is thicker (on the order of 5 to 15 feet thick) to the west, and thins to the east. This increased clay content in the transition from surficial to the low permeability zone is responsible for lower hydraulic conductivities measured in the base of the surficial zone. Shallow groundwater flow is generally influenced by topography, usually flowing toward and discharging to the nearest surface water body.



SOURCE GERAGHTY & MILLER, 1986

PRELIMINARY SITE CHARACTERIZATION REPORT
SITE 10
NAS PENSACOLA

FIGURE 3-2
GEOLOGICAL CROSS-SECTION OF THE SURFICIAL AQUIFER AT NAS PENSACOLA

DATE: 05/08/95 | DWG NAME: 70PCGC10

Low *Permeability* Zone

The low permeability zone underlies the surficial zone and is characterized by clay and silt-sized sediments. At NAS Pensacola, this zone is composed of gray to blue, sandy and silty marine clay with some shell fragments and clayey sands, with total thickness ranging from 8 to 40 feet (G&M 1984, 1986). The upper contact is transitional with the overlying surficial zone; however, the top of the low permeability zone is marked by the first occurrence of a stiff blue-gray clay. Studies at NAS Pensacola indicate the low permeability zone is continuous beneath the air station, given that the limited number of borings completed to the appropriate depth encountered the clays and silty clays. Hydraulic conductivities of the low permeability zone are much lower than the overlying surficial zone, ranging between the orders of 10^{-4} feet/day for clays and 10^{+0} feet/day for clayey sands (G&M 1986). Hence, the low permeability zone acts as a confining or semiconfining layer to inhibit groundwater flow between the overlying surficial and underlying main producing zone.

Main Producing Zone

The main producing zone underlies the low permeability zone and comprises the bottom portion of the Sand-and-Gravel Aquifer. Regionally, depth to the top of the zone ranges from 60 to 120 feet. The zone is composed of sand and gravel with thin beds of silt and clay, and is estimated to be approximately 300 feet thick at NAS Pensacola. Of the three zones in the Sand-and-Gravel Aquifer, this one is generally the most permeable and is the principal source of water supply for the Pensacola area (Wilkins et al. 1985). Groundwater in this zone generally is confined, and in southern Escambia County it recharges primarily by leakage through the low permeability zone supplemented by direct recharge in the northern parts of the county where it is present at the surface. Regional groundwater flows generally east toward Pensacola Bay and south toward the Gulf of Mexico. Three supply wells at NAS Pensacola produce water from this zone; however, they are used only as a supplement to the base water supply and for fire protection due to the water's high iron content (G&M 1984, 1986). For potable water,

NAS Pensacola depends on an offsite water source provided from main producing zone wells at Cony Field, approximately three miles to the north.

Intermediate System

The Intermediate System, a regionally and vertically extensive, laterally persistent hydrologic unit, underlies the Surficial/Sand-and-Gravel Aquifer. The system comprises fine-grained clastic units of Miocene age (Pensacola Clay, Alum Bluff Group) that lie beneath coarse Clastics of the overlying Sand-and-Gravel Aquifer. In the vicinity of NAS Pensacola, depth to the top of the unit is approximately 300 feet, with a thickness of approximately 1,100 feet (Wilkins et al. 1985, SEGS 1986). The system is regionally characterized by poor to non-water-bearing conditions. Permeabilities are much lower than those of the overlying Sand-&-Gravel Aquifer and the underlying Floridan Aquifer System, and consequently the system functions as a confining unit for the underlying Floridan Aquifer System (SEGS 1986).

Floridan Aquifer System

The Floridan Aquifer System underlies the Intermediate System at an approximate depth of 1,400 feet in the NAS Pensacola area. The unit is composed predominantly of limestone, but is separated into upper and lower units by a significant clay layer called the Bucatunna Clay (see Figure 3-1). Groundwater within the Floridan System is highly mineralized in the area of NAS Pensacola and is not used for water supply (Wagner et al. 1984). However, groundwater from the Upper Floridan Aquifer is used for water supply as close as approximately 25 miles east of NAS Pensacola.

3.2.2 Site-Specific Stratigraphy and Hydrogeology

Stratigraphy

The previous Site 10 investigation (E&E 1992a) was limited to the Sand-and-Gravel Aquifer. Borings were completed only to relatively shallow depths (approximately 16 feet below land surface (bls) of the surficial zone during this investigation. Boring logs indicate the surficial

zone comprises primarily of tan to light brown, fine- to medium-grained quartz sand to this depth.

Hydrogeology

Shallow wells (completed during this and the previous E&E investigation) monitor water table conditions. Depth to groundwater measured in shallow monitoring wells on site ranged from approximately 3.7 to 12.0 feet bls. Groundwater flow studies at the site have included piezometric mapping of the shallow zone water-level elevations.

The previous E&E study determined groundwater flow within the shallow, water table portion of the surficial zone mimics topography under natural conditions, flowing to the east toward the paved ditch lying adjacent to the site. Because no greater depth wells have been completed at Site 10, data for deeper surficial aquifer zone groundwater flow are not available. Geologic and hydrologic results of this investigation will be presented in Section 5.1.

3.3 Ecological setting

3.3.1 Regional Setting

Editor's note: This section is from Wolfe et al., 1988. The Florida Panhandle has a wide variety of surface waters and physiographic regions, leading to an ecological diversity found in few other areas of the United States. Watersheds of the panhandle support a diverse array of habitats and vegetative communities. Bottom land hardwoods predominate in river floodplains and pines, mixed with a variety of other shrubs, prevail in upland areas. Wetlands are prevalent along the coastal fringe and river floodplains. Barrier islands support dune vegetation communities and salt marshes. Bays support seagrass meadows and oyster reefs are present in intertidal and subtidal areas.

Seven major rivers in the region discharge into seven bar-built estuaries formed at the mouths of the rivers. The Florida Panhandle is a crossroads where animals and plants from the

Gulf Coastal Plain reach their eastward distributional limits, and where many northern species reach their southern limits. Many peninsular Florida species are also distributed there. Due to the wet temperate climate of the region, the panhandle area may support the highest diversity of species of any other similar-size territory in the U.S.

The high annual rainfall and low, gently sloping terrain creates numerous wetlands in the region. Bogs, swamps, marshes, wet prairies, and wet flatwoods provide a diversity of wetland types supporting a wide variety of flora and fauna. Terrestrial vegetation includes open pine woods and hardwood forests; most are second-growth forests of pines and encroaching hardwoods.

The Florida Panhandle's estuaries and nearshore marine habitats are some of the greatest natural and economic assets of the region. Important commercial organisms (such as oysters and fish) abound in these areas and contribute to the economy of the region. Coastal saltmarsh habitats provide critical nursery, feeding, and refuge for these important commercial species. Seagrass beds within estuaries also are vital to the seafood industry.

3.3.2 NAS Pensacola Setting

NAS Pensacola, which occupies approximately 5,800 acres, is bounded by Bayou Grande to the north and Pensacola Bay to the east and south. On the west, the installation abuts to a less developed portion of Escambia County containing swampy lowlands. NAS Pensacola's eastern portion is largely developed, with military and industrial facilities and historical/cultural sites. Most of the installation's activities are on the eastern side of the base. The less developed west side of the base has approximately 3,500 acres of natural or seminatural beach areas, forests, and wetlands.

NAS Pensacola is the setting for numerous, widely varied aquatic and terrestrial habitats, from coastal strand and estuarine environments along the bay and bayou to inland pine flatwoods communities. Wetland environments include a broad spectrum of both estuarine and palustrine

wetlands, as well as various disturbed habitats, many in states of recovery as they undergo reforestation or otherwise return to their natural condition.

Vegetation Communities

NAS Pensacola natural vegetation communities fall into several broad categories: (1) coastal dune scrub communities, (2) pine flatwoods communities, (3) hardwood/pine communities, (4) sand pine scrub communities, (5) bay swamps, (6) freshwater marshes, and (7) estuarine coastal marshes (USFWS 1987).

Coastal dune scrub communities are associated with shorelines subject to high-energy waves. The vegetation consists of salt-tolerant plants able to establish themselves in shifting sands. Pine flatwood communities in coastal lowlands are characterized by trees that can tolerate various soil moisture conditions. Tree species in flatwoods communities are short, with a wide variety of small shrubs and herbaceous plants in the understory. Hardwood/pine communities are a highly diverse mixture of hardwood trees and pines. Sand pine scrub communities on well drained sandy soils contain sand pines, oaks, and various shrubs. Bay swamps are wetlands with titi and cypress swamps known to contain permanent standing water and high accumulations of organic peat. Freshwater marshes occur as grass/sedge/rush/herb communities in areas with high soil saturation or standing water. Estuarine coastal marshes, including salt marshes, occur along low energy shorelines and in tidal bayous (USFWS 1987).

Wildlife

NAS Pensacola habitats provide potential ranges for a wide variety of animal life such as deer, squirrel, opossum, raccoon, fox, beaver, and bobcat. The station's beaches serve as resting, feeding, and nesting areas for various shorebirds. Ospreys have been observed nesting along undeveloped shoreline areas of the Big Lagoon, southeast of the Forrest Sherman Airfield. Numerous small mammals, amphibians, and reptiles also inhabit the base. The coastal marsh, submerged grass bed, and shallow water habitats at NAS Pensacola help support fishery

communities within the Pensacola Bay estuarine complex. Approximately 180 species of bony fishes form the basis of the Pensacola Bay fish community (USFWS 1987).

Threatened and Endangered Species

Appendix A of the ***Comprehensive Natural Resources Management Plan for NAS Pensacola and Outlying Field Bronson*** lists the rare, threatened, and endangered species that may be found within NAS Pensacola boundaries (USFWS 1987). E/A&H investigations of different areas of NAS Pensacola have identified osprey, great blue heron (as well as other shorebirds), alligator snapping turtle, Godfrey's golden aster, Carolina lilaeopsis, white-top pitcher plant, and narrow-leaved sundew. All are considered rare or endangered for Escambia County, Florida, by the Florida Natural Areas Inventory (1994).

3.3.3 Site-Specific Setting

A Phase I habitat/biota survey for Site 10 was conducted by an E/A&H biologist following procedures outlined in Section 8 of the Comprehensive Sampling and Analysis Plan (CSAP) (E/A&H 1994). The primary objective of the survey was to describe site habitats and support the development of an Ecological Risk Assessment, if necessary.

Habitat and Biota Survey

Site 10 is a triangular-shaped wooded zone bound on the west by Murray Road, on the south by Taylor Road, and on the east by the tile-lined drainage ditch traversing the area. The terrain is gently sloped, descending from Murray Road to the drainage ditch. No buildings or activities reside onsite, and it appears to currently be unused by the Navy. Due to its locale, it is maintained by NAS Pensacola landscaping contractors, who periodically mow grassy areas on the site, and clear brush and weeds to keep it from becoming unsightly. The site is dominated by scattered hardwood trees. A strip of young planted pine trees grows along the eastern extent of the site, on the bank of the drainage ditch.

Trees found on the site include live oak *(Quercus Virginiana)*, sand live oak *(Quercus geminata)*, laurel oak *(Quercus hemisphaerica)*, pignut hickory *(Carya glabra)*, southern magnolia *(Magnolia grandiflora)*, long-leaf pine *(Pinus palustris)*, and cabbage palm *(Sabal palmetto)*. Shrubs and vines found on the site include yaupon *(Ilex vomitoria)*, gum bumelia *(Bumelia languinosa)*, paw paw *(Asmina triloba)*, St. Andrew's cross *(Hypericum hypericoides)*, catbrier *(Smilax bona-nox)*, dewberry (Rubus *trivialis)*, and cross vine *(Bignonia capreolata)*. Herbs include pennywort *(Hydrocotyle, sp.)*, morning glory *(Ipomea, sp.)*, and spider wort *(Tradescantia ohiensis)*.

Due to the site's proximity to human habitats on the base, and because it is kept clear of most vegetation other than trees, the site does not provide suitable habitat for wildlife other than birds and squirrels. No rare or endangered plants or animals were found to exist onsite.

3.4 Climate

NAS Pensacola has a mild, subtropical climate, with average annual temperature ranging from 55°F in the winter to 81°F in the summer. Daily temperatures can be more extreme, ranging from less than 7°F in the winter to more than 102°F in the summer. Thunderstorms, which occur on approximately half the summer days, can cause a precipitous drop in temperature of 10 to 20 degrees in a matter of minutes (E&E 1992b).

November is the driest month of the year, with an average rainfall of 3.2 inches, based on climatological data from 1962 to 1991. Annual rainfall averages approximately 60 inches, with the highest amounts in July and August when thunderstorms occur almost daily. Thunderstorms resulting in 3 to 4 inches of rain in an hour are common. Rainfall is lowest during spring and fall (4 inches average per month). In general, spring and fall rains are less intense, last longer, and produce less surface runoff, but higher rates of infiltration and net recharge (E&E 1992b).

Winds, which prevail from the north during the winter and the south during the summer, are generally moderate in velocity, except during thunderstorms. A difference in the ocean-land temperature produces the sea-breeze effect, a daily clockwise rotation in the surface wind direction near the coast. Hurricanes and tornadoes can substantially damage the nearshore environment. Since 1980, six hurricanes have passed within 50 miles of Pensacola.

4.0 FIELD INVESTIGATION AND METHODS

Field Investigation Summary

During this investigation, E/A&H personnel directed the installation of five permanent shallow monitoring wells, and collected sediment, soil, and groundwater samples for laboratory analyses. Figure 4-1 illustrates Site 10 monitoring well and sample collection locations for this investigation. Table 4-1 lists each sample location, associated sample identification number, and analytical parameters. Boring logs and well construction diagrams are presented in Appendix B. Soil and groundwater samples were collected and analyzed to characterize contaminants potentially present in areas likely impacted by site activities. The single sediment sample was collected to evaluate potential contaminant migration from the site to the drainage ditch/wetland. Full Target Analyte List/Target Compound List (TAL/TCL) analyses were performed by Pace Laboratories, Inc., of Hampton, New Hampshire, using Contract Laboratory Program (CLP) protocol. These analyses included TCL volatile organic compounds (VOCs), TCL base-neutral/acid extractable organic compounds (BNAs), TCL pesticides, TCL polychlorinated biphenyls (PCBs), TAL metals (unfiltered for groundwater), and TCL cyanide. The single sediment sample was analyzed for grain-size by Thompson Engineering and Testing, Inc. of Mobile, AL. Sediment, soil, and groundwater sample analytical results are discussed in Sections 6.1, 6.2, and 6.3 of this report, respectively.

Strict quality assurance/quality (QA/QC) control procedures were followed during the investigation as outlined in Section 15 of the CSAP. These included collecting numerous QA/QC samples such as field blank, equipment rinsate blank, trip blank, material blank, duplicate, matrix spike, and matrix spike duplicate samples. Sample collection dates and times were noted in field logbooks or field' sample forms. All samples collected during this investigation were labeled, processed, packaged, and shipped in accordance with Section 12 of the CSAP.

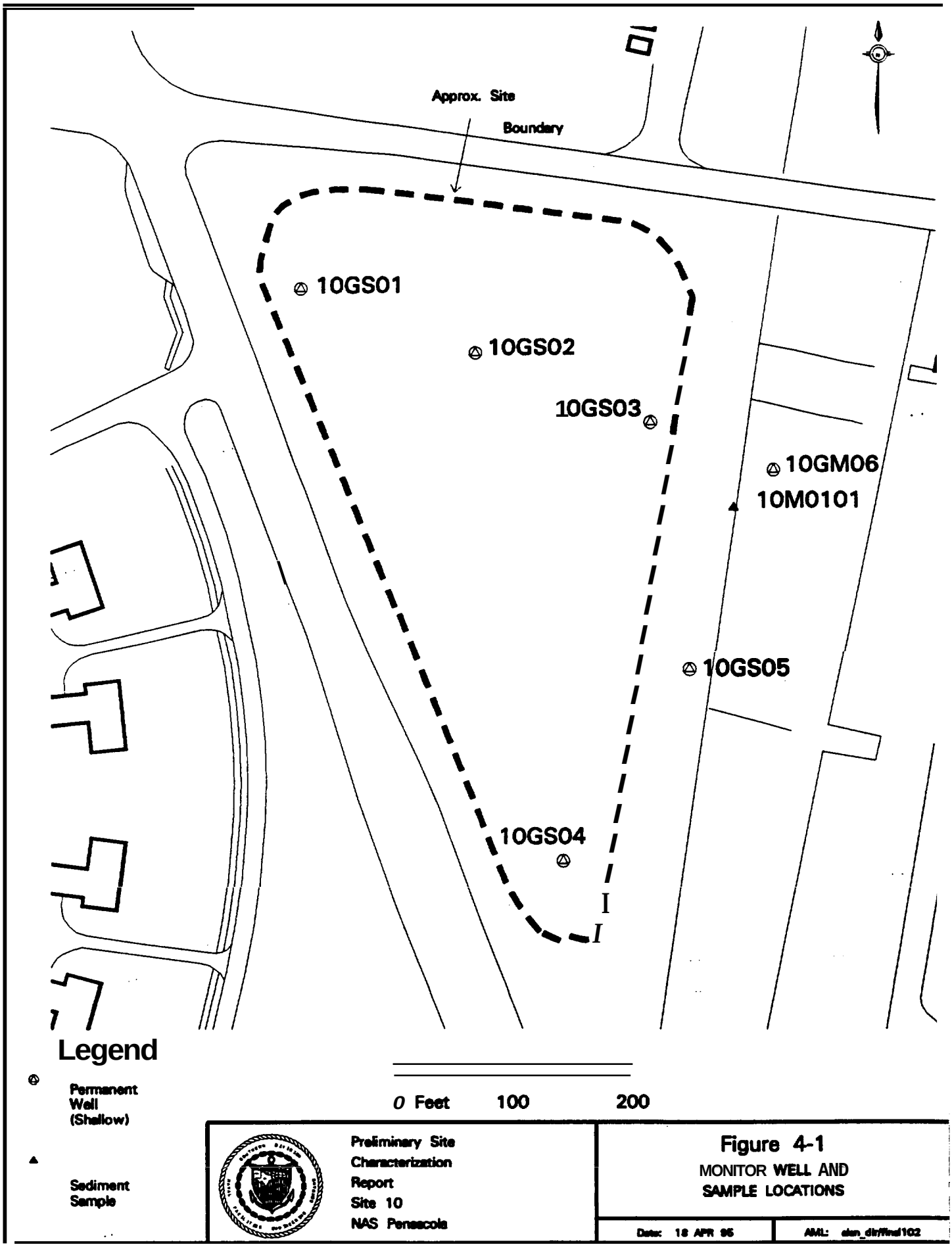

Approx. Site
Boundary
10GS01
10GS02
10GS03
10GM06
10M0101
10GS05
10GS04
Legend
Permanent Well (Shallow)
Sediment Sample
0 Feet
100
200
Preliminary Site Characterization Report
Site 10
NAS Pensacola
Figure 4-1
MONITOR WELL AND SAMPLE LOCATIONS
Date: 18 APR 95
AML: alan_dir/final102

Table 4-1
Sample Numbers and Analytical Parameters

Media	Location	Sample Number	Analytical Parameters
Sediment	Drainage Ditch	10M0101	TAL/TCL GS
Soil	Boring-1OSOI	10S0101	TALKCL
		1OSOI03	TAVTCL
		1OSOI05	TALKCL
		1OSOI07	TAL/TCL
		10S0109	TAL/TCL
		10S0111	TAVTCL
		1OSOI13	TAUTCL
		1OSOI15	TAVTCL
		1OSOI16	TAL/TCL
	Boring-1OS02	1os0201	TALKCL
		1OS0203	TALKCL
		1OS0205	TAUTCL
		1OS0207	TALKCL
		1OS0209	TALKCL
	Boring-1OS03	1OS0301	TALKCL
		1OS0303	TALKCL
	Boring-1OS04	1OS0401	TALKCL
		1OS0403	TAUTCL
	Boring-1OS05	1OS0501	TAUTCL
		1OS0503	TAL/TCL

Table 4-1
Sample Numbers and Analytical Parameters

Media	Location	Sample Number	Analytical Parameters
Groundwater	MW-10GS01	10GS01	TALKCL
		10GGS0102	Pest/PCB
	MW-10GS02	10GS02	TALKCL
		10GGS0202	Pest/PCB
	MW-10GS03	10GS03	TALKCL
	MW-10GS04	10GS04	TALKCL
	MW-10GS05	10GS05	TALKCL
	MW-GM06	10GGM06	TALKCL

Notes:
TAL/TCL – Contract Laboratory Program Target Analyte List/Target Compound List.
Pest/PCB – TCL pesticide and polychlorinated biphenyl (PCB) analysis only.
MW – Monitoring well.

4.1 Sediment Sampling

A single sediment sample, 10M0101, was collected from the drainage ditch east of Site 10 on March 2, 1994 (see Figure 4-1). This sample was collected from the 0 to 0.5-foot depth interval using a stainless-steel hand auger. The last two digits of the sample identification number indicate the sample collection depth to the nearest foot bls. Auger-retrieved sediment was placed directly into stainless-steel bowls before being containerized. Before homogenizing the sediment, representative sample aliquots were containerized for VOC analysis to avoid degassing. Sample depth, lithologic descriptions, organic vapor concentrations, and other pertinent information were noted in the boring log or field logbook during the collection process.

4.2 Soil Sampling

Twenty soil samples (not including QA/QC samples) were collected on February 2 and 3, 1994, while installing the five permanent shallow monitoring wells—10GS01 through 10GS05. Soil samples were collected with a 24-inch, stainless-steel split-barrel sampler (without stainless-steel liners) as described in Section 4 of the *CSAP*. Soil samples were collected continuously from land surface to the water table at the following frequency: 0 to 1 foot bls, 1 to 3 feet bls, 3 to 5 feet bls, etc., until the water table was reached. The last two digits of the sample identification number indicate the sample collection depth in feet bls.

Before homogenizing soil samples, representative sample aliquots were collected directly from the sampler and containerized for VOC analysis to avoid degassing. Sample depth, lithologic descriptions, organic vapor concentrations, and other pertinent information were noted in boring logs or field logbooks during the collection process.

4.3 Monitoring Well Installation

Soil borings for sampling and well installation were completed on February 3 and 4, 1994, using hollow-stem auger drilling techniques with 4.25-inch inside diameter (ID) augers. After soil sampling, borings were advanced to a depth sufficient to install permanent shallow monitoring wells bracketing the water table. All Site 10 wells were assembled through the annulus of the augers as described in Section 5.3 of the CSAP. Each shallow well was constructed of flush threaded, 2-inch diameter Schedule 40 PVC terminating with a 10-foot length, 0.01-inch continuous slotted well screen. A graded 20-30 size quartz sand filter pack was installed around and to a depth approximately 2 feet above each well screen. Bentonite pellets were carefully placed above the filter pack and hydrated with analyte-free water to form an approximate 2-foot seal. When sufficient well depth allowed, a neat Portland cement was installed above the seal to land surface via tremie pipe. A square 3-foot-by-3-foot concrete pad was constructed on the grout at land surface; however, for wells screened within 3 feet of land surface, the concrete pad

was completed directly on the seal. All well construction was finished with an approximate 2.5 feet of stick-up, bumper posts, and protective steel casings above land surface.

4.4 Groundwater Sampling

Monitoring wells were developed February 9 and 10, 1994, prior to groundwater sampling, as described in Section 5.4 of the CSAP. Well development occurred within approximately one week of installation, but no sooner than 24 hours after well completion. Development involved surging the well first with a decontaminated PVC surge block, and then pumping the well using a centrifugal pump and decontaminated PVC tubing until field parameters stabilized and turbidity readings below approximately 20 nephelometric turbidity units (NTUs) were obtained. At least 55 gallons (12 well volumes) were purged from each well during development.

Groundwater samples were collected from all newly installed wells and existing shallow well GM-6 on February 11 and 14, 1994, within one to four days of well development, as described in Section 6.3 of the CSAP. These samples were analyzed for the full TAL/TCL suite. Additionally, wells 10GS01 and 10GS02 were resampled for TCL pesticides/PCBs only in the same manner December 14, 1994. Before sample collection, at least three well volumes were purged from each well using a peristaltic pump and decontaminated Teflon tubing. Purging was performed at a slow, controlled (approximately 0.25 gallons per minute or less) pumping rate while field parameters and turbidity levels were monitored. Field parameter stabilization and turbidity readings of approximately 10 NTUs or less were obtained within four volumes at each well.

Groundwater samples were collected immediately after well purging. Using the same peristaltic pump and Teflon tubing, groundwater was collected under low vacuum pressure via an in-line collection/transfer bottle apparatus. This apparatus consisted of a two-aperture Teflon cap attached to a 300 series laboratory-certified, 80-ounce glass container (using a clean container for each well). Teflon tubing from the well was attached to one aperture while the tubing from

the peristaltic pump was attached to the second. The vacuum created by the pump was sufficient to lift groundwater from the well, filling the collection/transfer bottle at a low controlled flow rate (approximately 0.1 gallons per minute). This technique allowed groundwater with minimal turbidity to be collected and transferred to the appropriate metals, BNAs, pesticides, PCBs, and cyanide analyses containers. Sample volumes for VOC analysis were collected by removing the Teflon tubing from the well and the transfer cap, and allowing the unagitated groundwater volume retained in the line to flow backward into 40-milliliter (mL) volatile organic analysis vials.

4.5 Hydrologic Assessment

All sampling and monitoring well locations were surveyed and well top-of-casing elevations determined to an accuracy of $\pm$ 2 millimeters with a global positioning system after sampling events were completed. Water-levels were measured below each well top of casing to the nearest 0.01 foot with an electronic water-level indicator. Based on these measurements, the site's piezometric surface was mapped and shallow groundwater flow direction determined. Hydrologic assessment results are presented in Section 5.1 of this report.

4.6 Equipment Decontamination

Equipment used in the field investigation was decontaminated following procedures described in Section 11 of the CSAP. All exploration and drilling equipment was decontaminated before its use at each sampling station, while sampling equipment that came into contact with the actual sampled material was decontaminated before sample collection at any given station. All investigationderived wastes, which included soil cuttings, development and purge water, decontamination liquids, plastic sheeting, and personal protective equipment, were drummed and labeled as described in Section 13 of the CSAP.

5.0 GEOLOGIC AND HYDROLOGIC ASSESSMENT RESULTS

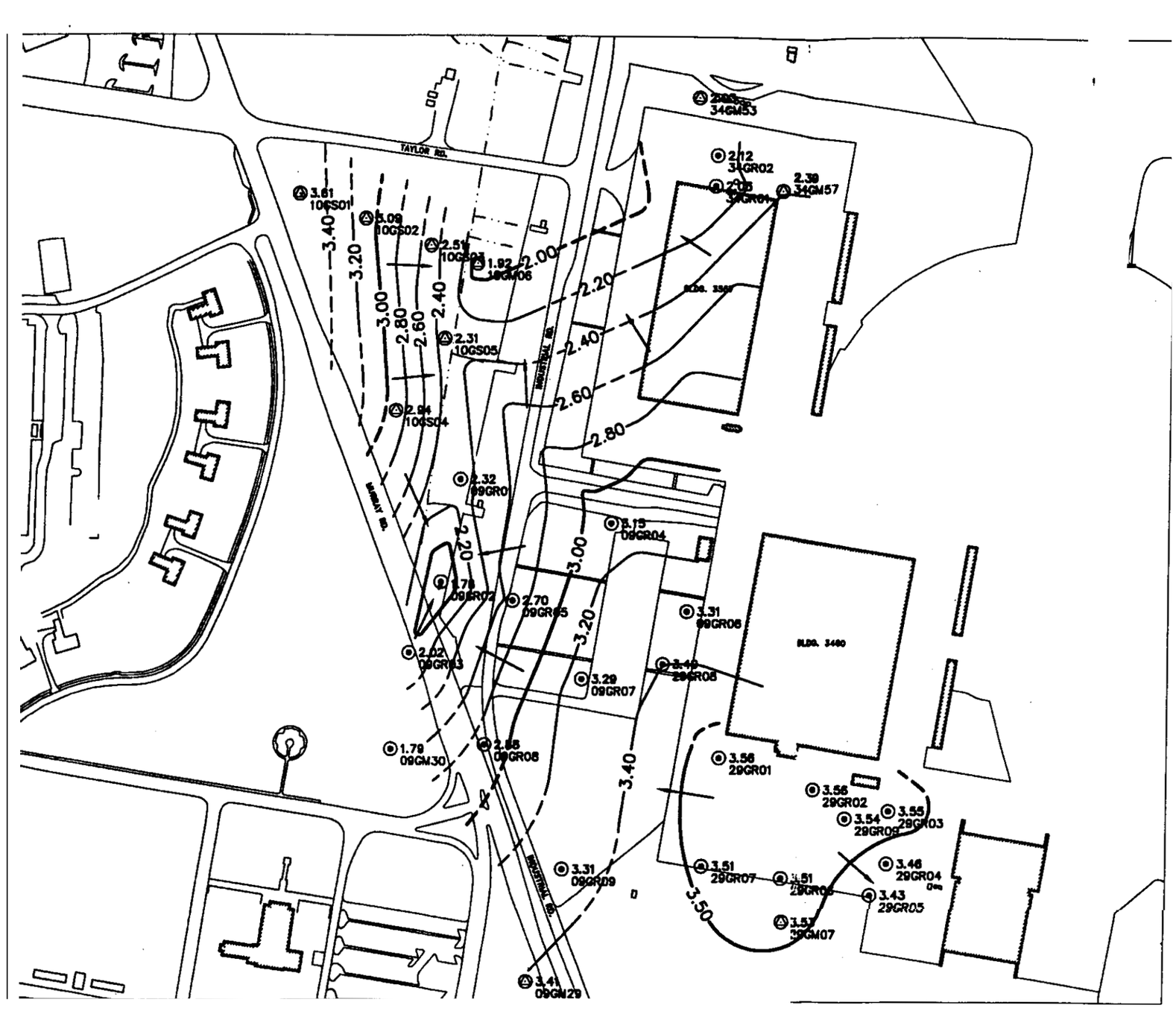
5.1 Site-Specific Geology

Subsurface lithologies observed across the site during drilling generally consisted of 4 to 6 inches of surfical light to dark brown sandy loam with decayed organics and root traces, underlain by buff white to tan and/or orange to gray to brown, fine- to medium-grained quartz sand containing varying amounts of silt-sized organic material. However, black, potentially fuel-stained soil was observed adhering to the sides of the augers after the completion of well 10GS05. This soil was not observed in the cuttings returned to land surface during drilling and was apparently present near or below the water table. The presence of petroleum stained soil is not unexpected given the proximity of well 10GS05 to Site 23 — Fuel Pipeline Leak. The depth to the water table observed during drilling varied from approximately 3 feet bls along the site's eastern portion (well locations 10GS03, 10GS04, and 10GS05) to approximately 16 feet bls at the northwestern comer (well 10GS01).

5.2 Hydrologic Interpretation

Because Category V Sites 9, 10, 29, and 34 (all within/near Chevalier Field) are in close proximity to each other, they are discussed together in this section to offer a more expansive description of shallow groundwater flow across this area.

Water levels were measured in all existing and newly installed wells at Sites 9, 10, 29, and 34 on February 15, 1994. Figure 5-1 presents the piezometric surface of the surficial aquifer at these sites across the western portion of Chevalier Field and adjacent areas. Site 10 water-level data and well construction information are shown on Table 5-1. Two general features characterize groundwater flow across this portion of Chevalier Field: a linear area of lower elevations, oriented approximately north-south and coincident with the drainage ditch separating Sites 10 and 9; and an area of lower elevation on the south si& of Site 34. Overall, except for the low area south of Site 34, flow generally mimics topography, moving from higher areas of Site 10, 29, and 9, discharging to lower areas along the drainage ditch.



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N

LEGEND

⊙	TEMPORARY MONITORING WELL
O	PERMANENT MONITORING WELL
(3.41)	GROUNDWATER ELEVATION (ft.)
→	DIRECTION OF GROUNDWATER FLOW

GRAPHIC SCALE

250 0 125 250 500

(IN FEET)
1 inch = 250 ft.

PRELIMINARY SITE CHARACTERIZATION REPORT
SITE 10
NAS PENSACOLA

FIGURE 5–1

SHALLOW SURFICIAL PIEZOMETRIC SURFACE

DWG DATE 5/1/95 | DWG NAME: 10FIG5–1

Table 5-1
Site 10
Monitoring Well Construction Information and Water Level Elevations
February 15, 1994

Location	Total Well Depth (bls)	Screened Interval (bls)	Top of Casing Elevation	Depth to Water (BTOC)	Water Level Elevation
10GS01	25.30	14.60 - 24.60	22.60	18.99	3.61
10GS02	18.60	7.90 - 17.90	13.57	10.48	3.09
10GS03	13.00	2.30 - 12.30	6.80	4.29	2.51
10GS04	13.00	2.30 - 12.30	7.33	4.39	2.94
10GS05	13.10	2.40 - 12.40	6.29	3.98	2.31
GM-6	12.20	9.70 - 12.20	5.79	3.87	1.92

Notes:
All elevations measures in feet above msl.
All wells constructed of 2-inch PVC.
Total well depth includes an approximate .7-foot well point (except for GM-6).
Screened interval for GM-6 taken from G&M 1984.
Water-level measurements taken at approximately 1400 hours.
BTOC = Below top of casing.

The low area south of Site 34 does not represent natural conditions. During the Site 34 CSS, a sump system (a total of six sumps) was discovered operating in the northern portion of Building 3557. This system collects washdown wastes from aircraft disassembly and degreasing operations. The sumps are below the water table and *require* constant-rate pumping to keep them evacuated. Sump discharge is directed into the industrial waste sewer line. The constant-rate pumping of the sump system has created a depression in the water table, and is influencing groundwater flow on Site 34. As of the writing of this report, aircraft maintenance is no longer conducted in this building, and a closure plan regarding these sumps has been submitted to the FDEP (Joyner, pers.comm).

The gradient across Site 29 is relatively flat. Groundwater elevations indicate flow is generally to the east-southeast on the site's eastern side, and to the west-northwest on the western side. Flow across Site 34 is generally to the northwest or west, with a divergence in the vicinity of the sump system. Groundwater at Sites 9 and 10 flows to the west and east, respectively, toward the drainage ditch. Respective gradients across Sites 9 and 10 are approximately .0020 and .0036. Based on these gradients, an average hydraulic conductivity of 44.0 feet per day (Wday) for the shallow zone (obtained from NAS Pensacola Operable Unit 10 slug and specific capacity tests), and an effective porosity estimate of 25 percent, calculated average horizontal pore velocities for groundwater flow toward the ditch are approximately 0.35 ft/day (westerly) from Site 9, and 0.63 Wday (easterly) from Site 10.

6.0 CONTAMINATION ASSESSMENT

Sections 6.1, 6.2, and 6.3 discuss the analytical results for Site 10 sediment, soil, and groundwater samples, respectively, collected during this investigation. Conclusions drawn from these analytical results are presented in Section **6.4. [Due to the detection of an elevated parameter at a single location (dieldrin in site soil), a preliminary health risk evaluation was performed and is presented in Section 6.5).**

Tables **6-1,** 6-2, and **6-3** summarize analytical results for [site] samples, listing only positive detections for each analyzed parameter. Several inorganic and organic parameters were detected above the CLP-required detection limits. The analytical results have been validated and the full analytical data report is included as Appendix C.

Establishment of Preliminary Remediation Goals

State of Florida and/or USEPA risk-based concentrations, general guidance concentrations, and promulgated standards have been defined as Preliminary Remediation Goals (PRGs) for this investigation. Resultingly, PRGs have been used to evaluate Site **10** analytical results for contaminant distribution and risk assessment purposes. Discussions of the analytical results specifically address the relationships between detected parameters and the PRGs listed below.

Soil

- Risk-Based Concentrations (RBCs) from USEPA Region **III** Contaminants of Concern Screening Table for residential soil, March **18, 1994;**

- FDEP Cleanup **Goals** (CGs) for Department of Defense Sites, most stringent of either aggregate resident or child resident scenario, **[April 5, 1995];**

- USEPA Revised Interim Soil Lead Guidance (Draft), May **27,** 1994.

Table **6-1**
Site **10**
Summary Analytical Results for Sediment Sample

Parameter	SSV/CG	10M0101 (0-.5 ft BLS)
Aluminum	—175000	313.00 J
Calcium	—1—	731.00
Cobalt	—14700	20.70 J
Copper	2812900	14.20 J
Iron	—/—	402.00 J
Lead	211500	**31.40**
Nickel	20.911500	4.30
Vanadium	—1480	1.10 J
Zinc	68123000	59.6 J
Organics-ppb (µg/kg)		
4,4'-DDD	—14400	37.00 J
4,4'-DDE	—12900	29.00 J
4,4'-DDT	3.3/3100	11.00 J

Notes:

SSV	=	Draft USEPA Region IV Waste Management Division Sediment Screening Values for Hazardous Waste Sites.
CG	=	FDEP Soil Cleanup Goal for Dept. of Defense sites.
—	=	No SSV or CG reported for this parameter.
J	=	Parameter positively detected; however reported concentration is approximate.
Bold Underline	=	Indicates concentration exceeded SSV for this parameter.
(0-.5 ft bls)	=	Sample depth interval in feet below land surface.
ppm	=	Parts per million or milligrams per kilogram (mg/kg)
ppb	=	parts per billion or micrograms per kilogram (µg/kg)

Table 6-2
Site 10
Summary Analytical Results for Soil Samples

Parameter	PRG[1]	RC (2xMC)	10S0101 (0-1 ft bls)	10S0103 (1-3 ft bls)	10S0105 (3-5 ft bls)	10S0107 (5-7 ft bls)	10S0109 (7-9 ft bls)	10S0111 (9-11 ft bls)
Inorganics-ppm (mg/kg)								
Aluminum	75000.00[b]	3833.36	752.00 J	1010.00 J	1110.00 J	1010.00 J	913.00 J	165.00 J
Calcium	—	912.37	75.90	ND	ND	ND	ND	ND
Chromium	66000.00[b]	6.13	1.70 J	0.84 J	2.00 J	1.40 J	3.00 J	2.00 J
Copper	2900.00[b]	5.74	ND	ND	ND	ND	ND	ND
Cyanide	1600.00[b]	0.52	0.09	0.09	ND	ND	ND	ND
Iron	—	2745.00	820.00 J	1050.00 J	1100.00 J	1070.00 J	981.00 J	179.00
Lead	400.00[c]	7.32	23.40	1.70	ND	1.40	1.30	ND
Magnesium	—	133.33	26.70 J	22.50 J	37.40 J	49.40 J	52.40 J	3.6 J
Manganese	390.00[c]	21.36	19.20	12.20	6.70	5.90	7.50	ND
Mercury	23.00[c]	0.10	ND	*0.15 J*	ND	ND	ND	ND
Nickel	1500.00[b]	6.38	ND	ND	ND	ND	ND	ND
Sodium	—	107.85	5.30	5.70	5.00	7.00	ND	ND
Vanadium	480.00[b]	5.83	ND	ND	ND	ND	ND	ND
Zinc	23000.00[c]	16.87	5.10 J	ND	ND	ND	ND	ND

Table 6-2
Site 10
Summary Analytical Results for Soil Samples

Parameter	PRG[1]	RC (2xMC)	10S0101 (0-1 ft bls)	10S0103 (1-3 ft bls)	10S0105 (3-5 ft bls)	10S0107 (5-7 ft bls)	10S0109 (7-9 ft bls)	10S0111 (9-11 ft bls)
Organics-ppb (µg/kg)								
4,4'-DDD	2700.00*	NA	ND	ND	ND	ND	ND	ND
4,4'-DDE	1900.00*	NA	23.00 J	ND	ND	ND	ND	ND
4,4'-DDT	1900.00*	NA	16.00 J	ND	ND	ND	ND	ND
Aroclor 1260	—	NA	ND	ND	ND	ND	ND	ND
Dieldrin	40.00*	NA	710.00*J	ND	ND	19.00	7.60 J	ND

Table 6-2
Site 10
Summary Analytical Results for Soil Samples

Parameter	PRG[1]	RC (2xMC)	10S0113 (11-13 ft bls)	10S0115 (13-15 ft bls)	10S0116 (15-16 ft bls)	10S0201 (0-1 ft bls)	10S0203 (1-3 ft bls)	10S0205 (3-5 ft bls)
Inorganics-ppm (mg/kg)								
Aluminum	75000.00[b]	3833.36	208.00 J	624.00 J	456.00 J	785.00	192.00	679.00
Barium	5000.00[b]	4.63	ND	ND	ND	***6.10 J***	1.20 J	ND
Calcium	—	912.37	ND	ND	ND	652.00 J	111.00 J	561.00 J
Chromium	66000.00[b]	6.13	3.80 J	***12.90***	***29.10***	3.30 J	1.90	4.00 J
Copper	2900.00[b]	5.74	ND	ND	ND	1.40 J	ND	ND
Cyanide	1600.00[b]	0.52	ND	ND	ND	0.12	***3.50***	0.33
Iron	—	2745.00	221.00 J	839.00 J	671.00 J	724.00 J	147.00 J	903.00 J
Lead	400.00[c]	7.32	ND	ND	ND	***92.40 J***	***15.80 J***	***26.10 J***
Magnesium	—	133.33	5.60 J	15.70 J	12.30 J	55.90 J	8.30 J	36.60 J
Manganese	390.00[a]	21.36	2.80	8.70	5.90	***42.10***	4.30	***31.80***
Nickel	1500.00[b]	6.38	ND	ND	3.70	ND	ND	ND
Sodium	—	107.85	ND	ND	5.00	ND	ND	ND
Zinc	23000.00[b]	16.87	ND	ND	ND	***19.90***	ND	8.40

Table 6-2
Site 10
Summary Analytical Results for Soil Samples

Parameter	PRG[1]	RC (2xMC)	10S0113 (11-13 ft bls)	10S0115 (13-15 ft bls)	10S0116 (15-16 ft bls)	10S0201 (0-1 ft bls)	10S0203 (1-3 ft bls)	10S0205 (3-5 ft bls)
Organics-ppb (µg/kg)								
4,4'-DDE	1900.00*	NA	ND	NO	ND	35.00	2.00 J	4.70
4,4'-DDT	1900.00*	NA	ND	ND	ND	42.00	2.20 J	a.40
Aroclor 1260	—	NA	ND	ND	ND	49.00	ND	ND
Dieldrin	40.00*	NA	ND	3.70 J	ND	69.00	4.50 J	6.50
Di-n-butylphthalate	—	NA	ND	ND	ND	ND	ND	ND

Table 6-2
Site 10
Summary Analytical Results for Soil Samples

Parameter	PRG[1]	RC (2xMC)	10S0207 (5-7 ft bls)	10S0209 (7-9 ft bls)	10S0301 (0-1 ft bls)	10S0303 (1-3 ft bls)	10S0401 (0-1 ft bls)	10S0403 (1-3 ft bls)
Inorganics-ppm (mg/kg)								
Aluminum	75000.00[b]	3833.36	1030.00	628.00	320.00	270.00	363.00	271.00
Barium	5000.00[b]	4.63	***5.20 J***	4.10 J	ND	ND	ND	ND
Calcium	—	912.37	557.00 J	189.00 J	162.00 J	146.00 J	48.40 J	116.00 J
Chromium	66000.00[b]	6.13	3.50 J	2.70 J	0.84 J	1.30 J	1.30 J	1.70 J
Copper	2900.00[b]	5.74	1.00 J	ND	ND	ND	ND	ND
Cyanide	1600.00[b]	0.52	*0.69*	6.60	0.11	ND	0.32	7.SO
Iron	—	2745.00	993.00 J	488.00 J	286.00 J	164.00 J	526.00 J	333.00 J
Lead	400.00[c]	7.32	***67.70 J***	***12.70 J***	5.50 J	3.50 J	***9.00 J***	4.50 J
Magnesium	—	133.33	66.10 J	33.70 J	9.30 J	10.60 J	30.30 J	37.00 J
Manganese	390.00	21.36	***51.40***	11.00	2.40	ND	3.60	3.00
Mercury	23.00[a]	0.10	ND	ND	ND	***0.75***	ND	ND
Selenium	39.00[a]	0.62	ND	ND	ND	ND	ND	0.47 J
Sodium	—	107.85	4.6	ND	ND	ND	ND	9.70
Zinc	23000.00	16.87	78.00	4.80 J	4.70 J	ND	4.60 J	ND

Table 6-2
Site 10
Summary Analytical Results for Soil Samples

Parameter	PRG[1]	RC (2xMC)	10S0207 (5-7 ft bls)	10S0209 (7-9 ft bls)	10S0301 (0-1 ft bls)	10S0303 (1-3 ft bls)	10S0401 (0-1 ft bls)	10S0403 (1-3 ft bls)
Organics-ppb (µg/kg)								
4,4'-DDD	2700.00*	NA	ND	ND	ND	ND	ND	ND
4,4'-DDE	1900.00*	NA	43.00	6.40 J	ND	2.40 J	ND	ND
4,4'-DDT	1900.00*	NA	65.00	9.70 J	ND	ND	ND	ND
Aroclor 1260	—	NA	37.00	ND	60.00 J	40.00 J	ND	ND
Dieldrin	40.00*	NA	74.00	11.00 J	3.30 J	15.00 J	41.00	7.20 J
Fluoranthene	310,000.00*	NA	70.00 J	ND	ND	ND	ND	ND

Table 6-2
Site 10
Summary Analytical Results for Soil Samples

Parameter	PRG[1]	RC (2xMC)	10S0501 (0-1 ft bls)	10S0503 (1-3 ft bls)				
Inorganics-ppm (mg/kg)								
Aluminum	75000.00[b]	3833.36	230.00	71.80				
Barium	5000.00[1]	4.63	ND	ND				
Calcium	—	912.37	138.00 J	ND				
Chromium	66000.00[b]	6.13	1.50 J	0.40 J				
Copper	2900.00[1]	5.74	2.40	ND				
Cyanide	1600.00[b]	0.52	ND	ND				
Iron	—	2745.00	294.00 J	44.60 J				
Lead	400.00[c]	7.32	*15.90* J	ND				
Magnesium	—	133.33	18.00 J	3.90 J				
Manganese	390.00[a]	21.36	5.70 J	ND				
Mercury	23.00[a]	0.10	ND	ND				
Potassium	—	460.67	ND	99.6				
Selenium	39.00[a]	0.62	ND	0.26 J				
Sodium	—	107.85	ND	ND				
Zinc	23000.00	16.87	12.70	ND				

Table 6-2
Site 10
Summary Analytical Results for Soil Samples

Parameter	PRG[1]	RC (2xMC)	10S0501 (0-1 ft bls)	10S0503 (1-3 ft bls)				
Organics-ppb (µg/kg)								
4,4'-DDD	**2700.00[a]**	NA	**1.40** J	ND				
4,4'-DDE	**1900.00[a]**	NA	**31.00**	**ND**				
4,4'-DDT	**1900.00[a]**	NA	26.00	ND				
Aroclor **1260**	—	NA	ND	ND				
Dieldrin	**40.m**	NA	4.80	ND				

Notes:

ppm	=	Parts per million.
ppb	=	Parts per billion.
mg/kg	=	Milligrams per kilogram.
µg/kg	=	Micrograms per kilogram.
PRG	=	Preliminary Remediation Goal.
RC	=	Reference Concentration. Calculated as two times the mean concentration (MC).
1	=	Value is mort stringent standard for listed parameter.
a	=	USEPA RBC
b	=	FDEP CG
o	=	EPA Revised Interim Soil Lead Guidance Concentration.
—	=	No PRG reported for this parameter.
J	=	Parameter positively detected: however reported concentretion is approximate.
Bold [a]	=	Concentration exoeeds FDEP CG.
Bold Italic	=	Concentration exceeds NAS Pensacola RC.
Bold Underline	=	Concentration exceeds USEPA RBC.
(0-1 ft **bls)**	=	Sample depth interval in feet below lend surface.
ND	=	Not detected.
NA	=	RC not applicable.

Table 6-3
Summary Analytical Results for Groundwater Samples

Parameter	PRG[1]	RC (2xMC)	10GS01	10GS02	10GS03	10GS04	10GS05	10GGM06
Inorganics-ppb(µg/L)								
Aluminum	**50.00[a]**	**3882.8**	**179.00***	**3820.00***	**1170.00***	**248.00***	97.70.	31.80
Arsenic	**50.00[b]**	**2.8**	**ND**	***4.40***	**ND**	**ND**	ND	ND
Barium	**2000.00[b]**	**13.2**	**ND**	**12.60**	**ND**	**ND**	ND	ND
Calcium	**—**	**17560.0**	**9530.00**	**15300.00**	**15000.00**	**17100.00**	***18600.00***	22700.00
Copper	**1000.00[a]**	**16.2**	**ND**	**3.20 J**	**ND**	**ND**	ND	ND
Iron	**300.00[a]**	**1707.8**	**101.00**	**2020.00***	**1550.00***	**775.00***	65.70	ND
Lead	**15.00[b]**	**1.6**	**ND**	***3.80***	***2.10***	**ND**	**ND**	ND
Magnesium	—	2872.6	1300.00	1980.00	1930.00	1810.00	1940.00	1720.00
Manganese	50.00[a]	22.0	11.70 J	62.60 ***J****	***27.30*** J	**36.20J**	**ND**	**ND**
Potessium	—	12167.6	1080.00 J	888.00 J	715.00	1330.00 J	**1070.00 J**	**1110.00 J**
Sodium	**160,000.00[b]**	18345.0	4300.00	4340.00	8800.00	12700.00	7580.00	6460.00
Vanadium	**49.00[c]**	**9.6**	**ND**	**7.60**	**ND**	**ND**	**ND**	**ND**

Notes:

ppb	=	Parts per billion.
µg/L	=	Micrograms per liter.
PRG	=	Preliminary Remediation Goal.
RC	=	Reference Concentretion. Calculated as two times the mean concentretion (MC).
1	=	Vdue is most stringent stenderd for listed peremeter.
a	=	USEPA SMCL and/or FSDWS.
b	=	USEPA MCL and/or FPDWS.
c	=	Florida Groundwater Guidance Concentration.
—	=	No PRG reported for this parameter.
J	=	Parameter positively detected; however reported concentretion is epproximete.
Bold *	=	Indicates concentretion exceeds SMCL and/or FSDWS.
Bold Italic	=	Indicates concentretion exceeds NAS Pensacola Reference Concentration.
ND	=	Not detected.

Groundwater

- USEPA Maximum Contaminant Levels (MCLs) and Secondary Maximum Contaminant Levels (SMCLs);

- Florida Primary and Secondary Drinking Water Standards (FPDWS and FSDWS, respectively);

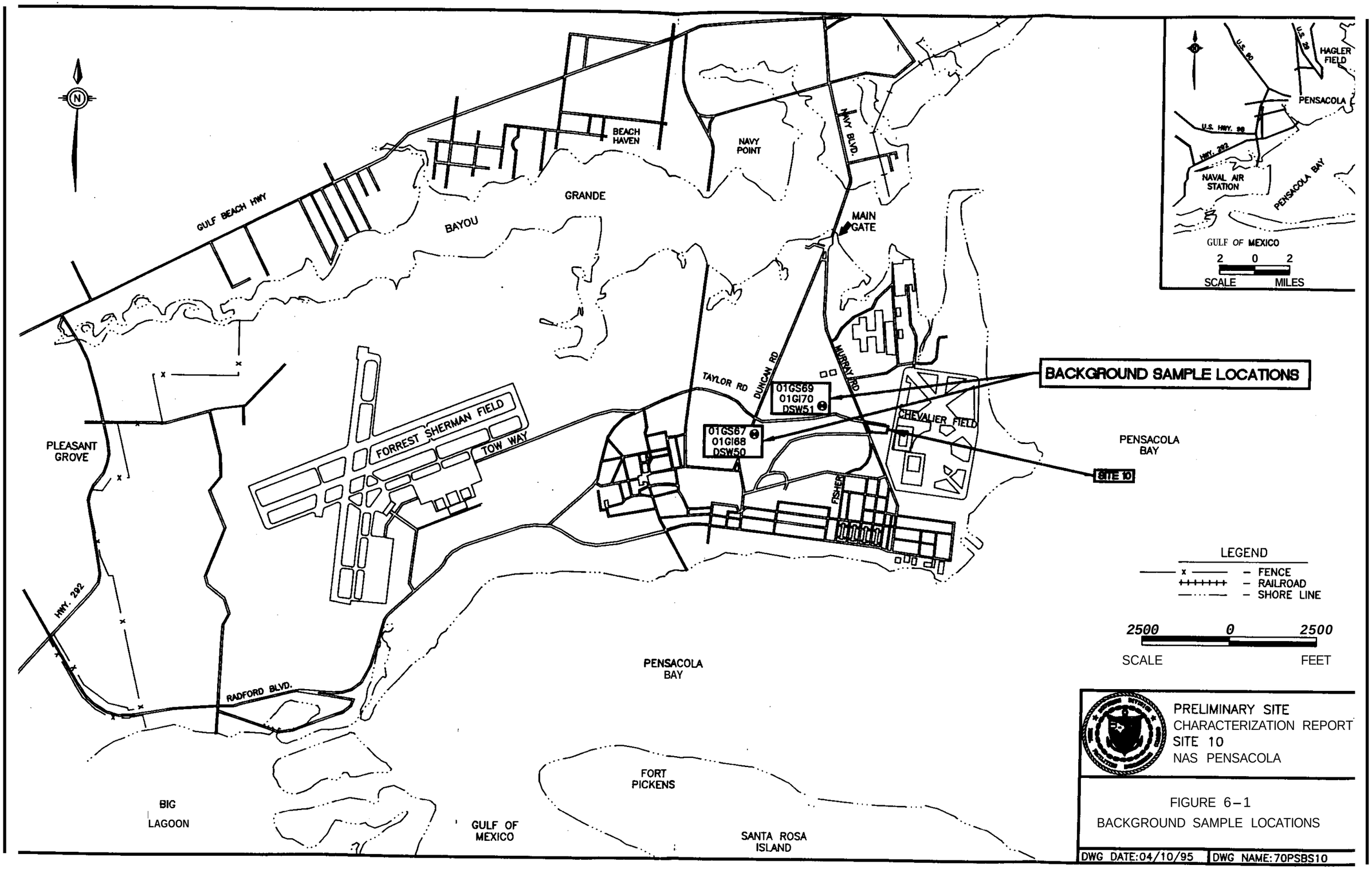
- Florida Groundwater Guidance Concentrations (FGGCs, including systemic toxicants, carcinogens, and organoleptic concentrations), June 2, 1994 (update).

All available PRGs are presented in Appendix D. Parameters detected at concentrations below available PRGs are not discussed.

[Additionally, USEPA Region IV (Draft) Sediment Screening Values (SSVs) for Hazardous Waste Sites, February 16, 1994, and FDEP CGs have been compared to Site 10 sediment sample results for screening purposes only. A full evaluation of this wetland, including the development of appropriate PRGs, will be performed as part of the Site 41 — NAS Pensacola Wetlands RI.]

Establishment of Background

Summary analytical results for background soil and groundwater samples used to determine ambient conditions (inorganic parameters only) at NAS Pensacola are presented in Appendix E. Background sample locations are shown on Figure 6-1. Soil samples were collected while installing background wells 01GS67, 01GI68, 01GS69, and 01GI70 during the 1993 Site 1 Remedial Investigation (RI). These shallow and intermediate wells (01GS67 and 01GS69, 01GI68 and 01GI70, respectively) were sampled in 1993 (using Teflon bailers) and, due to sample turbidity, were resampled in July 1994 using low-flow rate quiescent sampling techniques. Deep supply wells 01DSW50 and 01DSW51 were also sampled during the 1993 Site 1 RI to obtain the remaining deep zone background data. Because the supply wells


BACKGROUND SAMPLE LOCATIONS
01GS69
01GI70
DSW51
01GS67
01GI68
DSW50
SITE 10
GULF BEACH HWY
BEACH HAVEN
NAVY POINT
NAVY BLVD.
GRANDE
BAYOU
MAIN GATE
TAYLOR RD
DUNCAN RD
MURRAY RD
FISHER
CHEVALIER FIELD
FORREST SHERMAN FIELD
TOW WAY
PLEASANT GROVE
HWY. 292
RADFORD BLVD.
PENSACOLA BAY
FORT PICKENS
SANTA ROSA ISLAND
GULF OF MEXICO
BIG LAGOON
HAGLER FIELD
PENSACOLA
U.S. HWY. 98
U.S. 29
U.S. 90
NAVAL AIR STATION
GULF OF MEXICO
2 0 2
SCALE MILES
LEGEND
FENCE
RAILROAD
SHORE LINE
2500 0 2500
SCALE FEET
PRELIMINARY SITE
CHARACTERIZATION REPORT
SITE 10
NAS PENSACOLA
FIGURE 6-1
BACKGROUND SAMPLE LOCATIONS
DWG DATE:04/10/95
DWG NAME:70PSBS10

contained operable turbine pumps, they were sampled directly from a valve at the wellhead without the use of a bailer. For comparative purposes, background sample (1993 soil samples, 1994 shallow and intermediate groundwater samples, and 1993 deep groundwater samples) results have been used to define a range of concentrations for each detected inorganic parameter considered representative of ambient conditions. Furthermore, a "referenceconcentration" (RC) has been calculated for each inorganic parameter, equal to two times the parameter's mean concentration. In instances where an analyzed parameter was not detected above the quantitation limit, a value of one-half the reported detection limit was used to calculate the mean concentration for the RC. Calculated RCs for detected inorganic parameters are presented in Appendix E.

Inorganic parameters detected in site samples will be discussed in the following sections relative to RCs only when a specific parameter exceeds PRG or when no PRG is available for a parameter. As noted in Appendix E, concentrations of aluminum and iron detected in background groundwater samples exceeded secondary drinking water standards for all wells, indicating that these metals may naturally occur at relatively high concentrations in the groundwater at NAS Pensacola. Specifically, the lithology of the surficial zone of the Sand and Gravel Aquifer can locally contain high percentages of ferrous/manganese hydroxides, clays, and detrital shell material, so the abundance of Al, Fe, Mn, and Ca is not unexpected. In addition to comparisons to site-specific background, comparisons for some inorganics in groundwater are occasionally made utilizing data presented by the Northwest Florida Water Management District (Clemens et al. 1989). This publication presents ambient water quality data for all of the district but comparisons are limited to the Sand and Gravel Aquifer in southern Escambia County.

6.1 Sediment Analytical Results

Sample 10M0101 was collected to evaluate potential contaminant migration from Site 10 to the receptor wetland, Wetland 5. A full evaluation of this wetland area is planned as part of the Site 41 — NAS Pensacola Wetlands RI.

Inorganics

As shown on Table 6-1, lead (31.4 parts per million [ppm]) was the only inorganic parameter detected in sample 10M0101 that exceeded a sediment screening value (SSV), 21 ppm.

Organic Compounds

As shown on Table 6-1, the pesticides 4,4'-DDD (37.0 parts per billion [ppb]), 4,4'-DDE (29.0 ppb), and 4,4'-DDT (11.0 ppb) were detected in sample 10M0101. The 4,4'-DDT concentration exceeded the SSV (3.3 ppb) for this compound.

[No FDEP CGs were exceeded by sediment sample results.]

6.2 Soil Analytical Results

Inorganics

Inorganics detected in site soil are shown on Table 6-2. No PRGs or RCs (for parameters with no available PRGs) were exceeded by soil metals concentrations. Several inorganics barium, chromium, cyanide, lead, manganese, and mercury were detected having concentrations exceeding their respective RCs. However, of these exceedances, most lead concentrations and all barium and manganese concentrations were within the range of values observed in background samples (*see* Appendix E).

Organic Compounds

As shown on Table 6-2, pesticides (4,4'-DDD, 4,4'-DDE, 4,4'-DDT, and dieldrin), the PCB Aroclor 1260, the common laboratory VOC artifact di-n-butylphthalate, and the BNA flouranthene were detected in site soil.

Only dieldrin was detected at concentrations exceeding a PRG (40 ppb) (Table 6-2). Dieldrin concentrations exceeding PRGs in site soil are shown on Figure 6-2. Dieldrin concentrations detected across the site ranged from 41.0 ppb to 710.0 ppb.

6.3 Groundwater Analytical Results

Inorganics

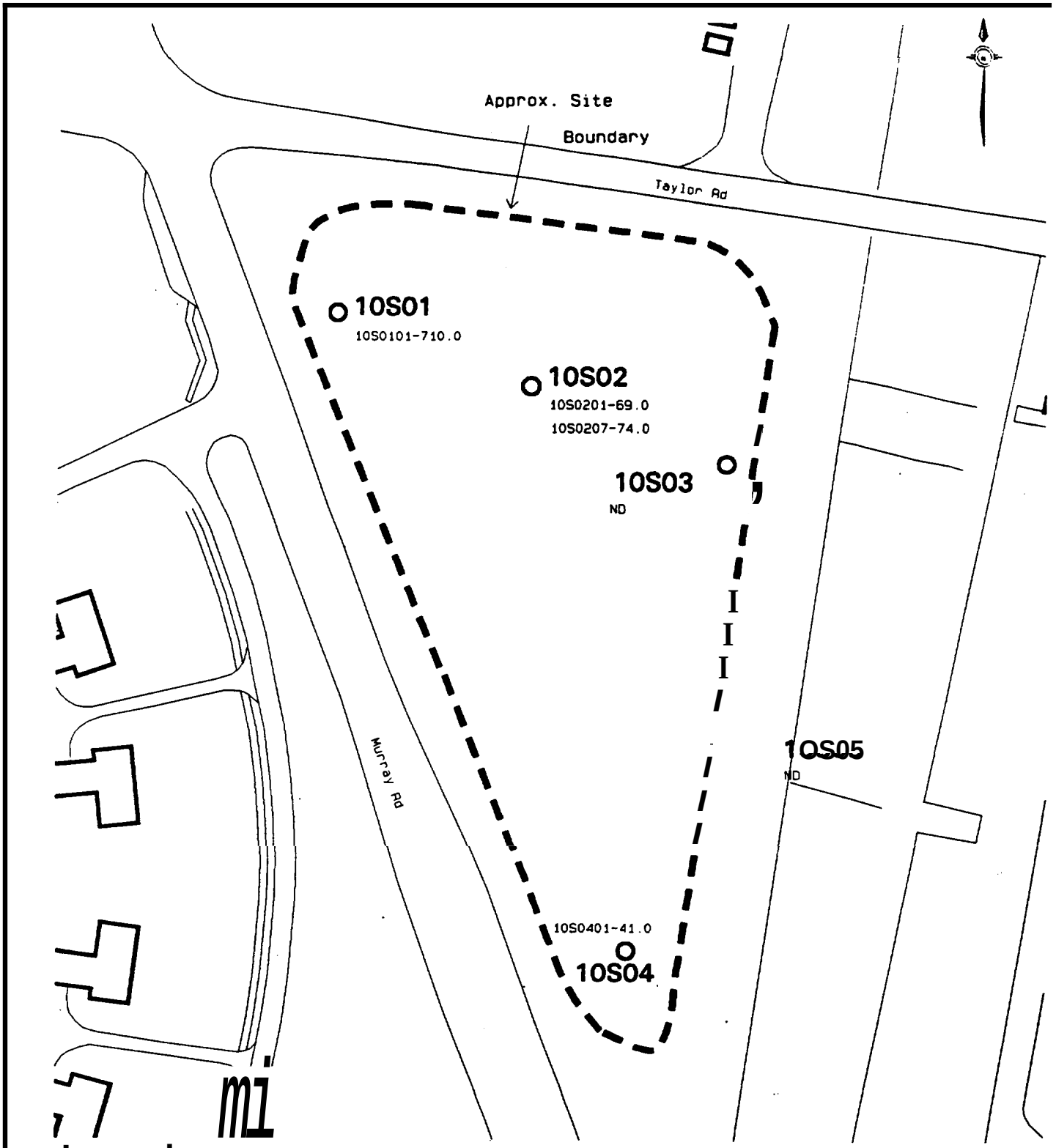
Inorganic parameter analyses were performed only on groundwater samples collected during February 1994. As shown on Table 6-3, the only PRGs exceeded by site' groundwater concentrations were USEPA SMCLs for aluminum (50 ppb), iron (300 ppb), and manganese (50.0 ppb). As noted earlier, concentrations of aluminum and iron in background wells are above secondary drinking water standards, indicating these parameters occur naturally at elevated concentrations. Additionally, the concentrations of Fe, Mn, and Ca are consistent with those representative of ambient groundwater quality in the Sand and Gravel Aquifer in southern Escambia County. Aluminum and iron concentrations detected in site groundwater were below RCs calculated for these metals (3882.8 ppb and 1707.8 ppb, respectively) with the exception of iron in well GS02. Concentrations exceeding PRGs are shown on Figure 6-3. The RC for calcium, for which there is no available PRG, was exceeded in samples 10GS05 (18600 ppb) and 10GGM06 (22700 ppb). These concentrations are also above the maximum calcium concentration detected in background wells.

Organic Compounds

No organic compounds were detected in Site 10 groundwater samples collected in February and December 1994.

6.4 Interpretations and Conclusions

Analytical results indicate that drainage ditch sediments in the area of sample 10M0101 have not been impacted by Site 10 activities. Detected metals and pesticide concentrations in sediment sample 10M0101 are comparable to those detected in site soil, both of which are relatively unremarkable with respect to applicable PRGs. Only lead and 4,4'-DDT detected in sediments exceeded SSV PRGs. Lead appears to be a fairly ubiquitous inorganic constituent at NAS Pensacola and can be attributed to natural occurrence, leaching from asphalted surfaces, and introduction to the various media via combustion of leaded fossil fuels; pesticide



Preliminary Site Characterization Report
Site 10
NAS Pensacola

Figure 6-2
DIELDRIN DETECTED IN SOIL SAMPLES EXCEEDING PRGs

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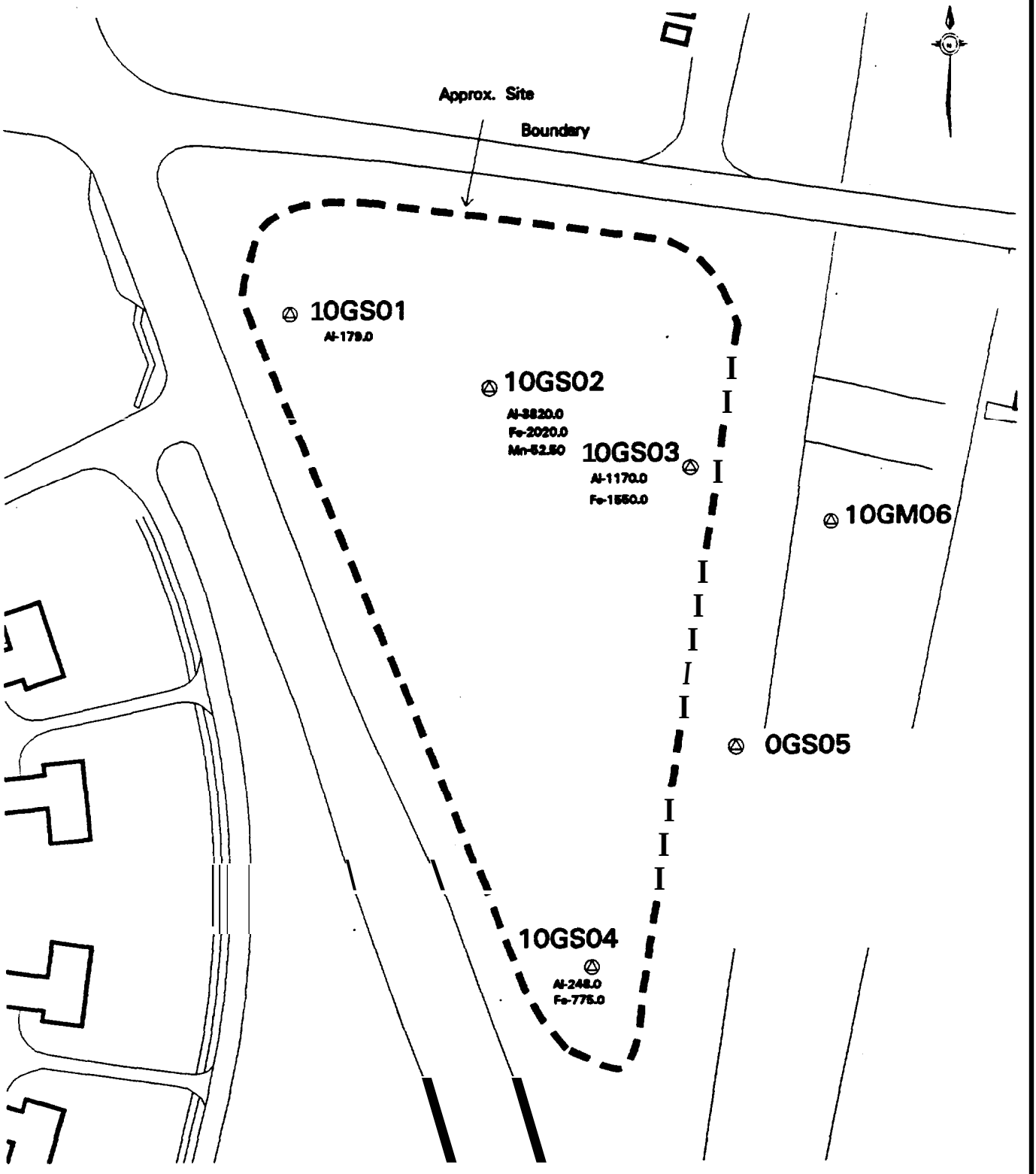

Legend

Permanent Well (Shallow)

Al - Aluminum
Fe - Iron
Mn - Manganese

Preliminary Site Characterization Report
Site 10
NAS Pensacola

Figure 6-3

INORGANICS DETECTED IN GROUNDWATER SAMPLES EXCEEDING PRGs

Date: 18 APR 95 | AML: alan_dir/final102

detections *can* be attributed to past insect control application common to areas of standing water. During the RI, heavy pesticide application along the banks of the paved ditch were noted; it is likely that this is a historically common practice.

Soil collected at all boring locations contains one or more inorganic parameters exceeding RCs; however, none was detected above PRGs. A greater number of relatively higher metals concentrations (Ba, CN, Pb, and Mn) were detected in samples from Boring 10S02. These higher concentrations were present throughout the sampled intervals (total depth of boring 9 feet). Additionally, one or more pesticides were detected at each boring location, with the highest concentrations generally present in the surficial (0 to 1 foot bls) and shallow (1 to 3 feet bls) sample intervals.

Pesticides and lead detected in surface and near surface soil are likely the result of non-site related cultural activities. Relatively higher lead concentrations are potentially the result of storm water runoff and motor vehicle emissions from adjacent roadway traffic. The detection of pesticides in these intervals is also likely associated with storm water transport of roadside pesticide application and/or routine pesticide application residue. This is especially probable with sample 10S0101, which contained the highest total pesticide concentration (749.0 ppb). Boring 10S01 is approximately 30 feet downslope of Murray Road, and approximately 15 feet downgradient from a concrete-lined drainage swale which directs storm water from Murray Road onto the site. Dieldrin and other pesticide concentrations detected in the surficial interval at other boring locations further support a non-discriminate surface application scenario. However, the presence of pesticides, Aroclor 1260, and relatively higher metals in samples collected at depth from Boring 10S02 is inconsistent with a surface application/exposure scenario. **[These are likely the indirect result of extensive soil reworking for subsurface utility installation and the introduction of fill material from off-site areas for Chevalier Field area development.]**

Except for secondary drinking water standards, detected parameters in site groundwater do not exceed PRGs. Detected metals concentrations (with the exception of manganese) in groundwater samples, while exceeding **FSDWS,** were within the ranges detected in background groundwater samples for NAS Pensacola. Manganese, which exceeded the maximum concentration detected in background wells was still detected at concentrations typical of the Sand and Gravel Aquifer. Based on the analytical data, no apparent groundwater contamination exists at the site.

In summary, the data indicate that Site 10 activities have not adversely impacted soil, groundwater, or sediments when the available PRGs are used as a benchmark. Parameters that were detected above PRGs are either consistent with ambient conditions or cannot be conclusively associated with site activities.

[NOTE: For readability, the following newly added section has not been bolded or bracketed].

6.5 Preliminary Health Risk Evaluation

Given the magnitude of the dieldrin PRG exceedance at soil sample location 10S0101, a risk-based screening exercise was performed to estimate an excess risk value for a conservative trespasser-exposure scenario. The following chronic daily intake (CDI) and incremental lifetime cancer risk (ILCR)/hazard quotient (HQ) tables (Tables **6-4** through **6-9)** were prepared consistent with the standard default exposure assumptions for a **7** to **16** year old trespassing child at Site 10.

Although dieldrin was detected at each of the five sample locations (borings 10S01 through 10S05), the concentration detected in surface sample 10S0101, **.71 mg/kg,** exceeded all other reported values by an order of magnitude or more. Due to the areal extent of dieldrin detected in site surface soil, an extremely conservative assumption was made in the CDI calculations; the maximum detected concentration **(.71** mg/kg) was used as the site-wide exposure concentration.

CDI was estimated for two dieldrin exposure pathways: incidental ingestion and dermal contact of surface soil. CDI, in milligrams per kilograms body weight per day (mg/kg-day), is calucalated separately for noncarcinogens and carcinogens to facilitate comparisons of HQs and excess cancer risks (ECRs) to USEPA and **FDEP** threasholds. The noncarcinogen HQ and carcinogen ECR values are estimates based on corresponding CDIs. The USEPA and **FDEP** thresholds for hazard and risk are 1.0 and 1E-6, repectively. If risk and hazard estimates do not exceed these thresholds, no further action is generally recommended.

As shown on Table 6-4, given an assumed exposure point dieldrin concentration of 0.71 mg/kg across the entire site, the noncarinogenic- and carcinogen-based CDI calculation values are 2.25E-07 and 3.21E-08 mg/kg-day from incidental ingestion of surface soil at Site 10. As shown of Table 6-5, based on the USEPA reference dose (RfD) and slope factor (SF) constants for dieldrin of 5E-05 mg/kg-day and 16, respectively, the estimated total risk for a trespassing child is 5E-07 ILCR.

As Table 6-6 shows, given the same assumed exposure point dieldrin concentration of 0.71 mg/kg across the entire site, the noncarinogenic- and carcinogen-based **CDI** calculation values are 8.88E-08 and 1.27E-08 mg/kg-day from dermal contact with surface soil at Site 10. As Table 6-7 shows, based on the same USEPA RfD and SF constants for dieldrin, the estimated total risk for a trespassing child is 4E-07 ILCR.

Table 6-8 presents the remedial goal options (RGOs) for Site 10 dieldrin soil contamination calculated based on the previous HQ and ILCR estimated for the ingestion and dermal exposure values. As shown, the carcinogenic risk-based RGO for the 1E-06 risk level is 0.8 mg/kg, a value higher than the actual maximum detected site concentration. Additionally, the hazard-based RGO for a value of 1.0 is 88 mg/kg, a value significantly higher than the actual maximum detected site concentration. Also shown for comparison is the USEPA Region III RBC value of 0.04 mg/kg based on a residential exposure scenario.

Table 6-4
Chronic Daily Intakes (CDI)
Incidental Ingestion of Surface Soil (0-1')
NAS Pensacola, Site 10
Pensacola, Florida

Chemical	Exposure Point Concentration (mg/kg)	Fraction from Contaminated Source	Trespassing Child (age 7-16) H-CDI (mg/kg-day)	Trespassing Child (age 7-16) C-CDI (mg/kg-day)
Dieldrin	0.71	1	2.25E-07	3.21E-08

Notes:
CDI = Chronic Daily Intake in mg/kg-day.
H-CDI = CDI for hazard quotient.
C-CDI = CDI for excess cancer risk.
NA = No information available.

Chemical	Oral RfD (mg/kg-day)	Oral SF (mg/kg-day)$^{-1}$	Trespassing Child (age 7-16) Hazard Quotient	Trespassing Child (age 7-16) ILCR
Dieldrin	5E-05	16	0.0045	5.1E-07
Hazard Indices			0.004	
Total Risk				5E-07

Notes:
RfD = USEPA reference dose constant for dieldrin.
SF = USEPA slope factor constant for dieldrin.
ILCR = Incremental Lifetime excess cancer risk.

Table 6-6
Chronic Daily Intakes (CDI)
Dermal Contact with Surface Soil (0-1')
NAS Pensacola, Site 10
Pensacola, Florida

Chemical	Dermal Absorption Factor (unitless)	Exposure Point Concentration (mg/kg)	Fraction from Contaminated Source	Trespassing Child (age 7-16) H-CDI (mg/kg-day)	Trespassing Child (age 7-16) C-CDI (mg/kg-day)
Dieldrin	0.010	0.71	1	8.88E-08	1.27E-08

Notes:
CDI = Chronic Daily Intake in mg/kg-day.
H-CDI = CDI for hazard quotient.
C-CDI = CDI for excess cancer risk.
NA = No information available.

- The dermal absorption factor was applied to the exposure point concentration to reflect the different trans-dermal migration of inorganic versus organic chemicals.

Table 6-7
Hazard Quotients and Incremental Lifetime Cancer Risks
Dermal Contact with Surface Soil
NAS Pensacola, Site 10
Pensacola, Florida

Chemical	Oral to Dermal Adjustment	Oral RfD (mg/kg-day)	Oral SF (mg/kg-day)$^{-1}$	Trespassing Child (age 7-16) Hazard Quotient	Trespassing Child (age 7-16) ILCR
Dieldrin	0.5	5E-05	16	0.0036	4.1E-07
Hazard Indices				0.0036	
Total Risks					4E-07

Notes:
RfD = USEPA reference dose constant for dieldrin.
SF = USEPA slope factor constant for dieldrin.
ILCR = Incremental Lifetime excess cancer risk.

- Dermal-to-absorbed dose adjustment factor is applied to adjust for oral absorption efficiency.

Table 6-8
Remedial Goal Options for Surface Soil (0 to 1 foot Depth Interval)
NAS Pensacola, Site 10
Pensacola, Florida

Chemical	Carcinogenic Risk-Based RGOs Risk Goal (mg/kg)				Hazard-Based RGOs Hazard Quotient Goal (mg/kg)		Unadjusted EPC (mg/kg)	Reference Concentration (mg/kg)	Risk-Based Screening Value (mg/kg)	Source
	0.0001	1E-05	1E-06	10	1	0.1				
Dieldrin	77	8	0.8	882	88	9	0.71	NA	0.04	RBCr

Notes:
EPC = Exposure point concentration.
NA = Indicates an RGO was not applicable for this chemical under risk and/or hazard-based conditions.
RBCr = Indicates the risk (1E-6) or hazard **(HQ = 0.1)** based screening values as presented in USEPA, Region III, ***Risk-Based Screening*** *Concentration Tables*, March 18, 1994.

- Noncarcinogenic hazard base **RGOs** were computed based on the future child site resident scenario with combined ingestion and dermal exposure (where applicable).
- Carcinogenic risk-based RGOs were computed based on the future site resident lifetime weighted average scenario with combined ingestion and dermal exposure (where applicable).

Given these calculated values and estimated excess risk estimates, the potential risk to a child trespasser, assuming focused chronic exposure to the maximum reported dieldrin soil concentration, is below the USEPA and FDEP defined baseline risk criteria of 1E-06.

Of note, the maximum detected dieldrin site soil concentration was above the USEPA Region III RBC and FDEP CG values for a residential exposure scenario. Consequently, should the Site 10 area ever be designated for residential development, the fate of the area of highest dieldrin concentration should be re-evaluated. Given that Site 10 is not currently planned for residential development, no further investigation nor remedial action is warranted at the site.

7.0 DATA VALIDATION

DATA VALIDATION

Most field and analytical data collected from the Site 10 investigation at NAS Pensacola, have been validated by Pace Laboratories Inc., in New Hampshire and Minnesota. Secondary sample analyses were performed by CompuChem Laboratories Inc., Research Triangle Park, North Carolina. The analytical protocols were performed in accordance with the following guidance documents:

- USEPA Contract Laboratory Program, *Statement of Work for Organic Analyses (CLP* 3/90).

- USEPA Contract Laboratory Program, *Statement of Work for Low Concentration Water for Organic Analyses (U P 10/92)*

- USEPA Contract Laboratory Program, *Statement of Work for Inorganic Analyses (CLP* 3/90).

- *Standard Methods for Examination of Water and Wastewater (I 7th Edition, 1989)* for determination of total organic carbon in soil, sediment, sludge and aqueous samples based on EPA Method 505.

- NEESA Level D QA/QC guidelines as stated in the *Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation and Restoration Program (NEESA 20.2-047B).*

- *USEPA Contract Laboratory Program National Functional Guidelines For Organic and Inorganic Data Review, February 1994.* Office of Solid Waste and Emergency Response.

Data Quality

The overall quality of the investigational data received for Site 10 for site remediation and risk assessment was evaluated and validated with the appropriate data qualifiers, based on data usability and CLP contractual satisfaction. Samples were collected and analyzed under three organic and three inorganic CLP Sample Delivery Groups (SDGs). Secondary sample collection and analysis was performed under two organic SDGs and two inorganic SDGs. Phase I organic and inorganic case numbers were designated PENSA, and all Phase 11 case numbers contained randomly generated SDG numbers.

Organic Analysis

Each SDG was received by the laboratory in good condition with the proper chain of custody documents and seals intact. Additionally, technical and contractual holding times were not exceeded. Holding times were considered to be from the time of sample collection until sample extraction or analyses.

Blanks

Blanks are used to help determined the magnitude of any laboratory or field contamination. Associated data were evaluated to determine whether there was an inherent variability in the data, or if any problems were isolated occurrences. Concentrations of the following compounds were present in the blanks: toluene, methylene chloride, acetone for volatiles and several phthalate esters for semivolatiles. These compounds are considered common laboratory artifacts and were evaluated and qualified based on the action levels for each SDG.

Action levels are based on the highest positive sample concentration of any laboratory artifact present in a method blank(s) or QC sample above the Contract Required Quantitation Limit (CRQL). No positive sample result for a common laboratory artifact is reported unless the concentration of that artifact exceeds the action level of ten times (10X) the amount found in any

blank(s). For compounds that are not considered to be common laboratory artifacts, the action level is five times (5X) the amount found in any blank or QC sample.

Two types of blanks were created in the laboratory during preparation and sample analysis. Each sample designation will be followed by a number corresponding to that blank. For example, the third volatile method blank would be designated VBLK03.

Method Blank Designations

VBLK — Volatile Method Blank
SBLK — Semivolatile Method Blank
PBLK — Pesticide/PCB Method Blank

These blanks are used by the laboratory to determine the concentrations of contamination associated with processing and analyzing samples. Method blanks are identified by the laboratory using the first letter of the analysis fraction performed followed by the abbreviation BLK for Blank.

Instrument Blank

PIBLK — Pesticide/PCB Instrument Blank

The laboratory uses an instrument blank to determine if any contamination present before, during, or after pesticide/PCB sample analysis *can* be attributed to the gas chromatography instrumentation.

SDG 505 Volatile Organic Analyses

In SDG *505,* the compounds acetone and methylene chloride were present at low concentrations in method blanks VBLKCU, VBLKCV, and VBLKCW. Both compounds were qualified using method blank VBLKCY and trip blank 10ST02. Methylene chloride was present at 630 $\mu g/kg$

in soil method blank VBLKCY. The present of methylene chloride in associated sample 10S0209 below 10X this amount was flagged as undetected. The detection limit was raised to the concentration of contamination in the sample. Acetone and methylene chloride were also present at 5 µg/L and 13 µg/L, respectively, in equipment rinsate blank 10SE01. Acetone and methylene chloride were qualified using method blank VBLKCY and trip blank 10ST02.

In trip blank 10ST02, acetone was present at 15 µg/L; methylene chloride, at 6 µg/L, Compounds present in the associated samples below 10X these amounts were U-flagged as undetected and the detection limit was raised to the concentration of contamination in each sample. Blank contaminations below the CRQL were raised to the CRQL and U-flagged as undetected.

Nontarget compounds identified by analysis are labeled as *Tentatively Identified Compounds* (TICs); in CLP analyses, these compounds are reported for volatiles and semivolatiles. The compound 2-propanol was reported as a TIC at a concentration of 8 µg/L in equipment rinsate blank 10ST02. Concentrations of 2-propanol in associated samples below 5X this amount were U-flagged as undetected. [Note: 2-propanol is used during field sampling as a intermediate rinse during decontamination with deionized water. Therefore, 2-propanol is not considered to be a sample constituent at this site.]

SDG 505 Semivolatile Organic Analyses

Target compounds were not detected in the method blanks or equipment rinsate blanks. Tetratriacontane and decamethyl-cyclopentasiloxane were present as TICs at 67 µg/kg in soil method blank SBLKFR. Using the 5X rule, the concentrations present were sufficient to flag the compounds as undetected in associated samples.

SDG 505 Pesticide/PCB Organic Analyses

Heptachlor was present at 0.081 µg/L in equipment rinsate blank 10SE01. Because there were no positive detections of heptachlor in the associated samples, no action was necessary.

SDG 506 Volatile Organic Analyses

Methylene chloride was present at 4 µg/kg in soil method blank VBLKCZ. Concentrations of methylene chloride in the associated samples below 10X this amount were U-flagged as undetected and the detection limit was raised to the concentration of the contamination in each sample. Methylene chloride, which was present at 3 µg/L in equipment and field blanks, was previously qualified using soil method blank VBLKCZ. Methylene chloride was detected at 4 µg/L in trip blank 70FB05. This compound was previously qualified using soil method blank VBLKCZ. Blank contaminations below the CRQL were raised to this limit and flagged as undetected.

SDG 513 Volatile Organic Analyses

In SDG 513, acetone was present at 3 µg/L in method blank VBLK049. However, a higher concentration of acetone was present at 5 µg/L in equipment blank 10GE01. Acetone was present in samples 10G02, 10G03, 10G05, 10G05D, 10GE01, and 10GT01 below 10X this amount and below the CRQL. Thesesamples were qualified by raising the concentration to the CRQL and flagging them as undetected.

SDG 513 Semivolatile Organic Analyses

There were no positive detections of target compounds in the method blanks. The TIC compounds 2-cyclohexen-1-one and octodecanoic acid, butyl ester were present at 3 µg/L each in water method blank SBLK48-1. Because there were no positive detections of this compound in the associated samples, no action was taken.

SDG 0019L Pesticide/PCB Low Concentration Organic Analyses

Pesticide compounds were present in four method blanks

PBLK36 (in **µg/L)**

Heptachlor	**0.00053**
Endrin Aldehyde	**0.0014**

PBLK52 (in µg/L)

Beta-BHC	**0.002**
Heptachlor Epoxide	0.00079
Dieldrin	**0.0013**
Endosulfan II	**0.0024**
Endrin Aldehyde	**0.0022**
G-Chlordane	0.00099

PBLK18 (in µg/L)

Heptachlor Epoxide	0.00061

PBLK45 (in µg/L)

Endrin	**0.0028**
Endosulfan II	**0.0013**

Heptachlor was qualified using method blank PBLK36 and endrin was qualified using method blank PBLK45. Method blank PBLK52 was used to qualify all associated samples for the analytes beta-BHC, dieldrin, endosulfan 11, endrin aldehyde, and g-chlordane at concentrations below 5X these amounts.

Based on evaluation of the data provided by the QC sample, all frequencies and compliance requirements were satisfactory. *Also* based on the data, it appears that these common laboratory

artifacts and other blank contaminants are partially, if not all, a result of laboratory conditions at the time of sample analysis. However, the pesticide/PCB concentrations reported in SDG 0019L do not affect the pesticide/PCB contamination in SDGS 505 and 506. The pesticide/PCB results shown in samples such as 10S0101, 10S0101DDL, 10S0101D, and 10S0207 are considered valid. Therefore, no conclusions or recommendations for Site 10 are based on laboratory artifacts.

Calibration

Requirements for instrument calibration were established to ensure that the data provided are acceptable qualitatively and quantitatively. The initial calibration measures the instrument's stability, which indicates its sensitivity and capabilities before the analytical run. The continuing calibration indicates the instrument's performance throughout each subsequent analytical run and throughout the run. Historical performance data indicate poor response and/or erratic behavior by those compounds known to be present as common laboratory artifacts. Since no contractual criteria for these compounds exists, for review and data validation purposes, all compounds including the common laboratory artifacts were considered for qualification when the following criteria were not met.

- Initial/continuing calibration standard relative response factors (RRFs) for all target compounds and surrogates must be equal to or greater than 0.05.

- Percent relative standard deviation (%RSD) must not exceed ± 30 percent in the initial calibration.

- Percent difference (%D) not exceeding ± 25 percent in the continuing calibration.

SDG 505 Volatile Organic **Analyses**

The volatile compounds methylene chloride and acetone consistently failed %RSD criteria during the initial calibration analysis for SDGs **505** and *506.* In **SDG 505,** the %RSD was 43.9% for acetone for the standards analyzed on December 27, 1993. **This** RSD exceeded the 30% **QC** limit. Therefore, because acetone is considered a laboratory artifact, the positive detection of acetone in associated sample 10S0209 was flagged **as** estimated.

SDG 505 Semivolatile Organic **Analyses**

The following compounds failed %D criteria due to poor response and/or frequent intervals of erratic behavior: 4-chloroaniline, 3,3-dichlorobenzidine, di-n-octylphthalate, **bis(2-ethylhexyl)phthalate, 4-chlorophenyl-phenylether, and hexachlorocyclopentadiene** Although **this** was a systematic occurrence, these poor responders represent the large majority of compounds that failed both %D and/or %RSD for nearly each SDG. All associated positive sample results outside the linear portion of the initial calibration curve were qualified with a J flag if the %RSD was greater **than** 30% elimination of either the high point or the low point on the initial calibration curve and recalculation did not restore the **%RSD** result **to** a value less than or equal to **30** percent. However, if **this** action did restore the %RSD result to a value below **30** percent, no action is deemed **necessary based** on **CLP QC** protocols. All initial calibration semivolatile standards were within CLP criteria; therefore, no action was necessary. However, the percent differences exceeded the 25% **QC** limit for the continuing calibration standard analyzed on February 7, 1994, for the following compounds.:

Compounds	**%D**
Hexachlorocyclopentadiene	25.4
Pentachlorophenol	25.3

Because there were no positive detections of compounds in the associated samples, no data qualification was required. Also, the %D's exceeded the 25% QC limit for the continuing calibration standard analysis on February 8, 1994, for the following compounds:

Compounds	%D
2,4-dinitrophenol	32.3
pentachlorophenol	37.7

Because there were no positive detections of these compounds in the associated samples, no data qualification was necessary.

Pesticide/PCB Organic Analyses SDG 505

Because all pesticide instrument performance criteria for the method were met, no data qualification was required. The %RSDs for alpha-BHC and gamma-BHC were 29.3% and 22.1%, respectively, for the initial calibration (primary column) analyses on February 8, 1994, which exceeded the 20% QC limit. Because these were the only exceedances, no action was required. The %RSD for methoxychlor was 23.3% for the initial calibration (secondary column) analyzed on February 8, which exceeded the 20% QC limit. Because this was the only exceedance, no action was taken.

The %Ds for the continuing calibration standard analyzed on February 10, 1994, exceeded the 25% QC limit for:

Compounds	%D
2,4-dinitrophenol	27.4
pentachlorophenol	39.7

Because there were no positive detections of these compounds in the associated samples, no data qualification was required.

Two sets of laboratory control samples (LCS) were analyzed by the laboratory in addition to the required MS/MSDs. All criteria for these samples were within QC limits. The %Ds between GC columns 1 and 2 exceeded the 30% QC limit for:

Sample	Compound	%D
10S0501	4,4'-DDD	161

The reported result was flagged as estimated.

SDG 506 Volatile Organic Analyses

All initial calibration criteria for the method were met, so no action was required. However, in the continuing calibration, the percent difference for bromoform was 25.6% for the standard analyses on February 11, 1994, which was outside the 25% QC limit. Because there were no positive detections of bromoform in the associated samples, no action was deemed necessary.

SDG 506 Semivolatile Organic Analyses

All the initial calibration CLP QC criteria were met; therefore, no action was necessary. However, the percent differences for the continuing calibration .standard analyzed on February 8, 1994, exceeded the 25% QC limit:

Compounds	%D
2,4-dinitrophenol	32.3
Pentachlorophenol	37.7

Because there were no positive detections of these compounds in the associated samples, no data qualification was required. Also, the percent difference was 32.3% for pentachlorophenol for the standard analyses on February 12, 1994, which exceeded the 25% QC limit. Since there were no positive detections of this compound in the associated samples, no data qualification was necessary.

SDG 506 Pesticides/PCB Organic Analyses

All pesticide instrument performance criteria for the method were met, so no data qualification was required. The %RSDs for alpha-BHC and gamma-BHC were 29.3% and 22.1%, respectively, for the initial calibration (primary column) analyzed on February 8, 1994. These percentages exceeded the 20% QC limit. Because these were the only exceedances, no action was required. The %WD for methoxychlor was 23.3% for the initial calibration (secondary column) analyses on February 8, 1994, which exceeded the 20% QC limit. Because this was the only exceedance, no action was necessary.

SDG 513 Volatile Organic Analyses

In the initial calibration for SDG 513, the %RSD was 47.9% for total 1,2-dichloroethene for the standard analyzed on February 7, 1994 exceeded the 30% QC limit. There were no positive results in any associated samples; therefore, no action was taken. The percent difference for the following compounds exceeded the QC limit of 25% on February 17, 1994, and February 18, 1994. (The percent difference was the difference measured between the initial and continuing calibration). Not one of these compounds was detected in the samples; therefore, no action was taken.

SDG 513 Semivolatile Organic Analyses

Not one of these compounds was detected in any associated samples; so, no action was required. The following compounds exceeded the 25% QC limit for the standard analyses on February 26, 1994:

Compounds	%D	Compounds	%D
Bis(2-chloroethyl) ether	35.7	nexachlorocyclopentadiene	61.2
3-Nitroaniline	48.7	3-nitroaniline	37.1
Carbazole	65.8	2,4-deinitriphenol	39.2
Indeno (1,2,3-cd) pyrene	25.8	carbazole	45.7
Benzo (g,h,i) perylene	32.7		

Because there were no positive detections of these compounds in the associated samples, no data qualification was required. Also, the %Ds exceeded the 25% QC limit for the continuing calibration standard analyzed on February 28, 1994 for the following compounds:

Compounds	%D
Bis (2-chloroethyl)ether	34.5
Hexachlorocyclopentadiene	30.9
2,4-dinitrophenol	39.1
Carbazole	39.0
2,3-Dichlorobenzidine	50.7

Because there were no positive detections of these compounds in the associated samples, no data qualification was required.

SDG 513 Pesticides/PCB Organic Analyses

The %RSD for alpha-BHC was 24.6% for the initial calibration (primary column) analyzed on February 26, 1994. This percentage exceeded the 20% QC limit. Because CLP guidelines allow two single-component pesticides to have %RSD's within 20 to 30%, no action was required.

Precision

In each analytical method used to analyze environmental samples, there are variations in the reported results that may be due to the random differences in the handling and analysis of that matrix. These variations are referred to as the *precision* or the *reproducibility of results.* To demonstrate reproducibility, the CLP SOW specifies the addition of known quantities of several compounds to two separate aliquots of each sample matrix type. The 'spiked' aliquots are referred to as the matrix spike and the matrix spike duplicate. These samples then can be analyzed by applying the same preparation techniques and analytical methods used for all the samples of similar matrix types. This enables the MS and MSD to be used to detect matrix effects caused by contamination during analysis that could also interfere and/or cover up target compounds present within the sample.

SDG 513 Semivolatile Organic Analyses

The percent recovery of 4-nitrophenol in matrix spike duplicate sample 10G01MSD was 81%, which was outside the recovery limits of 10 to 80%. All other MS/MSD percent recoveries and RPDs were within QC limits. The one exceedance was not indicative of matrix effects or systematic lab problems; therefore, no action was taken.

E/A&H believes that the MS/MSD results indicate the effect of sample matrix on the associated sample data, including the MS/MSD samples themselves. This *can* be determined by consistent high percent recoveries when deionized water is analyzed and the inconsistent percent recoveries and %RPDs reported when soil samples were analyzed. As a general rule, no action is taken on MS/MSD data alone. However, the MS and MSD results are used with other *QC* criteria such as surrogate recoveries, internal standard area QC requirements and the comparison of %RSD results of nonspiked compounds with the original sample results to determine the need to qualify some of the associated positive sample results as estimated or unusable.

Accuracy

Accuracy is the degree to which a given result agrees with the true value. To check the accuracy in a volatile, semivolatile, pesticide and/or PCB analysis, the CLP SOW requires the addition of known amounts of surrogate *compounds and internal standard compounds* or compounds which are not likely to be found in the actual samples. If upon analysis of the sample, the percent recovered for the surrogate and/or internal standard compounds are accurate, that is, close to the known concentrations as defined within the limits set by the CLP, then the reported concentrations of the target compounds are assumed to be accurate.

Also, the accuracy of the overall measurement system is an indication of any bias that may exist in the environmental laboratory and/or in the field sampling/analysis plan. Possible sources of error may include the sampling process, field and/or laboratory contamination, preservation, and handling or the sample matrix itself. Other methods used to determine field inaccuracies include trip blanks and the preparation and analysis of field blanks, potable water blanks, and equipment rinsate blanks.

SDG 505 Pesticide/PCB Organic Analyses

The percent recoveries of Tetrachloro-m-xylene (TCX) and Decachlorobiphenyl (DCB) for the following samples were below the 60-150% QC limits:

samples	TCX %R Both Columns	DCB %R Both Columns
10S0201DL	0/0	0/0
10S0203	56/In	
10S0207DL	0/0	0/0
10S0207	58/In	
10S0209	52/54	
10S0401	54/50	

Samples	TCX %R Both Columns	DCB %R Both Columns
10S0403	58/56	
10S0403D	56/56	
10S0303	50/49	
10ST02		19/18

The surrogates were "diluted-out" in samples 10S0201DL and 10S0207. Positive and non-detect data for the above samples were J-flagged as estimated for positive results and a UJ-flagged for nondetects.

SDG 506 Pesticide/PCB Organic Analyses

The %Rs of TCX and DCB for the following samples were below the 60-150% QC limits:

Sample	TCX %R Both Columns	DCB %R Both Columns
10S0101	58/55	
10S0101DL	0/0	
10S0101DDL	0/0	
10S0109	Id58	
10S0115	Id59	
10S0115D	54/52	
10S0116	58/54	
10SE02		12111
70FB05		24122

The surrogates were "diluted-out" in samples 10S0101DL and 10S0101DDL. All positive sample results were qualified as estimated with a J-flag and all non-detect results for the above samples were qualified with a UJ-flag as estimated at the quantitation limit.

SDG 513 Pesticide/PCB Organic **Analyses**

The percent recoveries of **TCX** and **DCB** were below **the 60 to** 150 percent QC limits for the following samples:

Sample	TCX %R Both Columns	DCB %R Both Colllmns
10G01	54/57	
10G01MSD	59/In	
10G02	51/53	
10G03	54/56	
10G04	54/54	
10G05	42/45	
10G05D	57/58	
10GE01		52/50
10GGM06	52/52	

All associated data from the above samples **consisted** entirely of non-detects **and** were qualified as estimated. However, **as** indicated earlier, the pesticide/PCB analytical data within each **SDG** was determined **to** be reliable and usable with **the** appropriate **data** qualifiers based on the evaluation of all associated QC such **as** the initial and continuing calibrations, retention time criteria, and %D and **%RSD** criteria because **CLP** QC limits **are** advisory **and** no action is provided for samples with failing surrogate recoveries.

Representativeness

Representativeness expresses the **degree** to which sample **data** accurately **and** precisely represent the characteristic of **a** population, parameter variations **at** a sampling point, or an environmental condition. The duplicate samples assist in giving an indication of overall field and laboratory precision. **A** greater variance should be expected for the soil sample duplicates **than** for water

sample duplicates due to the differences in matrix. In all cases, the duplicate results were found to be in close agreement with the original results since most variations are due mainly to common laboratory artifacts.

Completeness

Completeness is defined as the percentage of measurement made that are judged to be valid measurements. In all, 70 samples were analyzed in accordance to the CLP Target Compound List (TCL). All positive organic sample results were determined to be valid with some qualification. Therefore, the data meets the 90% completeness level.

Comparability

Comparability is a qualitative parameter expressing the confidence with which one data set can be compared with another. All samples for Site 10 was collected using the EPA Region IV SOPs and analyzed according to CLP SOW protocol.

Inorganic Analysis

The analytical methods were performed in accordance with the EPA CLP SOW for Inorganics Analyses (3/90) guidelines. However, for hexavalent chromium analysis, the laboratory employed Method 7196A and for the determination of characterized contaminants in hazardous waste leachate, TCLP Method 1311 was used. Each method is listed in the EPA's *Test Methods for Evaluating Solid Wastes, SW-846, 3rd Edition.* Results were reported according to CLP format outlined, including forms, but not limited to those listed under NEESA Level IV guidelines and the CLP SOW.

Holding Times

All inorganic SDGs indicated that all inorganic samples were received by the laboratory in good condition with the proper custody documents and seals intact. From the date of collection to the

date of sample digestion/preparation, sample holding times were within technical and contractual requirements.

Calibration

The purpose of initial and continuing calibration is *to* ensure that the instrument is capable of acceptable and quantitative performance at the beginning and during each analytical run. Initial and continuing calibrations were performed for the inorganics analysis within the criteria established by the EPA CLP Inorganics SOW.

Blanks

Blank results are used to determine the presence and magnitude of any contamination problems. Based on review of the data, the following blank results represent the highest detections associated with the samples and were used for data qualification:

Inorganic Analyses For SDG 505 in mg/kg

Blank	Element	Maximum Concentration	Action Level
CCB3	Antimony	1.SO	7.5
PBSl	Barium	5.42	27.1
PBSl	Copper	6.94	34.7
PBSl	Iron	0.242	1.21
CCB3	Zinc	0.38	1.90
PBW1	Manganese	0.02	0.10
ICB1	Magnesium	0.78	3.90
CCB3	zinc	0.74	3.70

Inorganic Analyses For SDG 506 in mg/kg

Blank	Element	Maximum Concentration	Action Level
CCB5	Barium	1.60	8.00

PBSl	Calcium	**6.07**	**30.4**
CCB1	Iron	**6.94**	**34.7**
PBSl	Lead	0.222	1.11
CCBS	Manganese	0.44	2.20
PBW1	Mercury	0.02	**0.10**
PBS1	Selenium	**0.354**	**1.77**
CCBS	Vanadium	**1.00**	***5.00***
CCB3	Zinc	**0.74**	**3.70**
CCBS	Vanadium	**1.00**	***5.00***
CCB3	Zinc	**0.74**	**3.70**

CCB = Continuing Calibration Blank/ ICB = Initial Calibration Blank/ PBW = Water Preparation Blank/ PBSl = Soil Preparation Blank/ FB = Field Blank. All results greater than the IDL but less than 5X the blank amount (Action Level, µg/L for water samples, mg/kg for soil samples) for which the contaminated blank is an associated calibration or field/equipment blank were flagged as undetected with a U-flag. The following analytes had negative blank results and are reported in mg/kg:

SDG 505

Blank	**Element**	Maximum **Concentration**	**Action Level**
CCB4	Chromium	**-0.64**	**3.30**
PBSl		-1.25	***6.25***
ICB2	Mercury	**-0.02**	**0.10**
CCB4	Potassium	-198.4	992
ICB1	Silver	-0.98	4.90

SDG 506

Blank	Element	Maximum Concentration	Action Level (mg/kg)
PBS1	Copper	-0.786	3.93
CCB4	chromium	-0.66	3.30
PBW1	Mercury	-0.02	0.10
CCB4	Potassium	-198.4	992
CCB4	Silver	-0.98	4.90

The absolute value of the negative blank contamination was greater than its IDL. All associated positive sample results less than 5X the absolute value of the negative blank result and all non-detects were flagged as estimated with a J-flag and UJ-flag respectively.

SDG 513 Inorganic Analyses for

The following blank results represent the highest detections associated with the samples and were used for data qualification. Results are in mg/kg:

Blank	Element	Maximum Concentration	Action Level
PBW	Antimony	37.0	185.0
CCBl	Barium	2.3	11.5
EB	Calcium	114.0	570
CCBl	chromium	5.3	26.5.
EB	Iron	7.2	36.0
CCB3	Magnesium	35.0	175.0
EB	Sodium	56.5	282.5
EB	Zinc	9.9	49.5'

CCB = Continuing Calibration Blank/ ICB = Initial Calibration Blank/ PBW = Water Preparation Blank/ EB = Equipment Blank.

All positive sample results between the IDL and 5X the blank amount or Action Level, and for which the contaminated blank is an associated calibration and/or field or equipment blank were qualified as undetected.

ICP Interference Check Sample Analyses

The inductive coupled plasma interference check sample analysis (ICSA) is performed to check the laboratory's instrument and the background correction factors. In SDG *505,* positive results were observed for barium (1.8 mgkg), manganese (1.4 mg/kg) and sodium (32.8 mgkg) in ICS Solution A at concentrations greater than 2X IDL. Because aluminum, calcium, iron and magnesium were not present at concentrations greater than 50% the amount in Solution A in the associated samples, no action was necessary. Negative results in ICP Solution A were observed for the following analytes:

Analytes	Results (mg/kg)
Antimony	-4.2
Chromium	-0.8
Potassium	-274
Silver	-3.4
Selenium	-1.0
Thallium	-0.8
zinc	-1.4

All associated positive sample results less than 5X the absolute value of the ICS result and all non-detects were flagged as estimated.

SDG 505

Negative results were observed for antimony (-21.6 mg/kg), copper (-0.80 mg/kg) and manganese (-2.80 mgkg) in ICS solution A; therefore, all associated positive sample results less

than 5X the absolute value of the ICS result and all non-detects were flagged as estimated (J) and (UJ). The ICSA samples also satisfactorily met the contractual compliance requirements as stated under CLP.

SDG 506

Because percent recovery criteria for the method were met, no action was taken. Also in SDG 506, positive results were observed for barium (1.8 mg/kg), manganese (1.4 mg/kg) and sodium (32.8 mg/kg) in ICS Solution A at concentrations greater than 2X IDL. Since aluminum, calcium, iron and magnesium were not present at concentrations greater than 50% the amount in Solution A in the associated samples, no action was necessary. Negative results in ICS solution A were observed for the following analytes:

Compounds	Negative Results (mg/kg)
Arsenic	-4.2
Copper	-0.8
Selenium	-0.8
Thallium	-202.4
zinc	-1.0
Silver	-3.4

SDG 513

All percent recovery criteria for the method were within QC criteria; therefore, no action was taken. A positive result of 27.6 µg/L in the initial analysis, was observed for sodium in the ICS Solution AB analyzed on February 23, 1994. Sodium detections in all samples exceeded 5X the sodium detection in the ICP check sample, therefore no action was taken. Negative results in ICS Solution A were observed for the following analytes:

Compounds	Negative Results (µg/L)
Antimony	-23.0
chromium	-2.0
Cobalt	-2.0
Copper	-4.0
Manganese	-12.0
Nickel	-15.0
Potassium	427.0
Silver	-1.0

Negative results in ICS Solution AB were observed for the following analytes:

Compounds	Negative Results (µg/L)
Antimony	-38.0
Potassium	-207.0

All associated positive sample results less. than 5X the absolute value of the ICS result and all nondetects for these analytes were flagged as estimated.

Laboratory Control Sample Analyses

The Laboratory Control Sample (LCS) analysis is designed to monitor the efficiency of the overall performance in all steps of analysis, including the digestion procedures. In SDG *505*, the solid LCS Percent Recoveries (%Rs) were below the 80 to 120 percent QC limits for the following analytes:

SDG 505

Analytes	%Recovery
Antimony	70.1

chromium	73.8
Iron	60.6
Magnesium	71.5
Potassium	71.4
Vanadium	75.4

SDG 506

Analytes	%Recovery
Aluminum	68
Chromium	72
Iron	60
Magnesium	69
Potassium	75
Vanadium	74

All associated positive sample results were J-flagged as estimated and all non-detect data for these analytes were qualified with a UJ-flag as estimated at the quantitation limit.

Duplicate/Spike

Duplicate samples are used to determine the precision of analytical methods for each parameter. Spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. If the spike is added to the sample prior to any distillation steps, or before the digestion, it is referred to as a spiked sample, a pre-digestion/pre-distillation spike. If the spike is added to the sample after the completion of the distillation or digestion procedures, it is then referred to as a post-digestion/post-distillation spike.

SDG 505

In SDG 505, the matrix spike recoveries of silver was 72.1% for soil spiked sample 10S0301, which was below the 75-125% QC limits. All soil sample results for silver, which consisted entirely of non-detects, were flagged as estimated with a UJ-flag at the detection limit. Results shown below are in mg/kg.

Analyte	10S0401	10S0403	RPD
Aluminum	271.0	390.0	36.0
Calcium	116.0	128.0	9.8
Chromium	1.7	1.1	43.0
Iron	333.0	438.0	27.0
Lead	4.5	5.4	18.0
Magnesium	37.0	40.9	7.5
Manganese	3.0	2.9	3.4
Sodium	9.7	6.3	43.0

All relative percent differences were below the 60% QC limit for soil field duplicates, so no action was required.

SDG 506

In matrix spike sample 10S0116, the percent recovery of chromium was 65.8%, which was below the 75 to 125% QC limits. All soil sample data for chromium were qualified as estimated with a J flag for positive results and a UJ-flag for non-detects.

SDG 513

The matrix spike recovery for iron was 144.1% which was outside the QC limits of 75-125%. Since all other MS/MSD spike recovery and RPD criteria were within QC limits, no action was

taken. Field duplicates 10G05 and 10G05D were analyzed by the laboratory. The calculable RPDs are listed below in µg/L:

Analyte	10G05	10G05D	RPD
Aluminum	97.7	99.6	1.9
Barium	6.5	6.1	6.3
Calcium	18600	18600	0.0
Iron	65.7	66.0	0.5
Magnesium	1940	1930	0.5
Potassium	1070	1360	23.9
Sodium	7580	7400	2.4
zinc	10.0	13.2	27.6

All RPDs were within the 30% QC limit for water field duplicates; therefore, no action was required.

Validation Worksheets

In every EnSafe/Allen & Hoshall data validation project, worksheets are used which detail the evaluation of the analytical data. On certain sheets, the validation procedures will be equivalent to the standard operating procedures provided by the *USEPA CLP National Functional Guidelines for Organic and Inorganic Data Review.* Other sections will cover those areas which are more subjective due to the complexities of the analytical methods, and will only document the actions taken by the data evaluator. The worksheets will be provided upon request or included in the NAS Pensacola Site 10-*Final Report*.

Data Assessment

The method blanks, trip blanks, potable water blanks, DI system blanks, equipment rinsate blanks, and the equipment rinsate trip blanks contained several volatile target compounds which

were reported by the laboratory as contamination introduced during preparation, handling, and/or analysis of the samples. Volatile analyses of SDG 505 indicated that all laboratory data were acceptable with qualification. Samples 10S0207, 10S0403, and 10S0301 were diluted and re-analyzed. The concentrations of acetone approached or exceeded the highest calibration standard by more than 10% and was, therefore, J-flagged as estimated. No data qualification action was taken for the other original and reanalysis results because they did not exceed the highest standard by more than 10%. The reported values for this compound in the diluted samples (DLs) are considered more accurate. The original results are considered of preferable quality for all other analyses.

Pesticide/PCB sample data in SDG 505 were acceptable, with qualification. Samples 10S0503 and 10S0205 were diluted and reanalyzed due to detections of dieldrin and methoxychlor slightly outside the calibration range. The positive detections were essentially the same in both the original samples and the dilutions. Arochlor 1260 was detected in the original samples but not in the dilutions. The original analyses are considered of preferable data quality due to the loss of the arochlor in the diluted samples.

All laboratory data in SDG 506 for volatile and semivolatile and inorganic sample analysis were considered acceptable with qualification. Pesticide/PCB samples 10S0101 and 10S0101DL were diluted and reanalyzed due to slight calibration range exceedances of some compounds. The positive detections were of similar concentrations in both the samples and the dilutions. 4,4'-DDE was detected in the original samples but not in the dilutions. The original analyses are considered more accurate and usable due to the loss of 4,4'-DDE in the diluted samples. Samples 10GGS0102 and 10GGS0202 were analyzed under the low concentration SOW waters for pesticide/PCBs. Also all associated laboratory data were acceptable with minimal qualification for SDG 513 and all QA/QC was within CLP criteria.

All soil samples in SDGs *505* and *506* exhibit elevated quantitation limits due to the percent moisture content of each soil sample. The actual percent moisture in each soil sample varies with physical and chemical characteristics such as clay content, surface area (particle size) of the soil and/or bulk density, location of a particular soil boring in proximity to a water source, and the permeability and porosity of the soil. Permeability and porosity are the two most important physical characteristics in determining the percent moisture content in soils. Permeability refers to the ease with which liquids and/or water penetrate or pass through the bulk soil. The greater the permeability, the less resistant the soil becomes to infiltration by liquids and the dissolved chemicals they contain. As particle size decreases, which indicates a high clay content, permeability tends to decrease because of the close proximity of the soil particles. This close proximity physically retards the movement of contaminants. Porosity refers to the amount of soil sample contamination between soil particles, and is interrelated with permeability. As porosity increases, permeability increases. The amount of liquids that *can* be held in the soil also increases. Therefore, the vertical and lateral movement of the liquid may be retarded causing the soil to become saturated. This saturation of the soil by water and various concentrations of chemical contaminants leads to a combination of different percent moisture contents and matrix interferences. This combination of moisture content and matrix interferences contribute to the elevation of soil quantitation limits that also become even more magnified due to dilutions and/or medium level soil analyses. Medium level soil analyses quantitation limits in the organic CLP SOW provide reference contract required quantitation limits for soil that show severe matrix interferences. Calculation of the quantitation limit can be accomplished using the following example:

If a 1 to 10 dilution of an extract is necessary, the reported limit is 100 U based on low level soil quantitation limit of 10. However, for a soil sample, the value must also be adjusted for percent moisture. For example, if the sample had 24% moisture and a 1 to 10 dilution factor for low level analysis, then the sample quantitation limit for phenol (330 U) would be corrected to:

$$\frac{(330\ U) \times df}{D} \qquad \text{where } D = \frac{100 - \%\ moisture}{100}$$

df = dilution factor

Therefore at 24% moisture, $D = \frac{100 - 24}{100} = 0.76$

$$\frac{(330\ U) \times 10}{0.76} = 4300\ U$$ Rounded to the appropriate number of significant figures

Other Examples:

SDG *505*

Samples **10S0209** and **10S0116**

At 15% moisture $D = \frac{100 - 15}{100} = 0.85$

Therefore:

$$\frac{(330\ U)}{0.85} = 380\ U$$ Rounded to the appropriate number of significant figures

Samples **10S0403**

At 18% moisture $D = \frac{100 - 18}{100} = 0.82$

Therefore:

$$\frac{(330\ U)}{0.82} = 390\ U$$ Rounded to the appropriate number of significant numbers

In conclusion, the overall data quality of the analytical work done for Site 10 at NAS Pensacola, except for those sample results that were qualified as unusable, was considered to be satisfactory and usable for site remediation and risk assessment.

DATA QUALIFIER DEFINITIONS

The following definitions provide a brief explanation of the data qualifiers used in the validation process.

U — The compound was analyzed for, but was not detected above the reported sample quantitation limit.

J — The compound was positively detected, however, the reported concentration is considered to approximate the concentration within the sample.

UJ — The compound was not detected above the reported sample quantitation limit. However, the reported quantitation limit is an approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the compound in the sample.

R — The sample results are rejected due to serious deficiencies in the laboratory's ability to analyze the sample and meet QC criteria. The presence or absence of the compound cannot be verified.

8.0 FATE AND TRANSPORT

8.1 Sources of Detected Parameters

Parameters identified in site soil include metals, pesticides, and the PCB Aroclor 1260. With the exception of the pesticide dieldrin, these parameters were detected at concentrations below PRGs. Most metals are ubiquitous across the site, except for sporadic detections of barium, copper, mercury, and nickel generally detected in the northwestern (Boring 10S01), central, and eastern (Borings 10S02 and 10S03, respectively) portions of the site. Pesticides were detected at all boring locations with the highest concentrations generally detected in the surface (0 to 1 foot bls) and/or near surface (1 to 3 feet bls) sample interval. Aroclor 1260 was detected at various depths in the site's central and eastern portions (Boring 10S02 and 10S03, respectively). The absence of site related contaminants in groundwater precludes a fate and transport discussion of this medium.

8.2 Contaminant Migration

Leaching of Soil to Groundwater

Detected parameters in soil may be leached toward the water table by downward percolation of rainwater, or through direct continual contact with groundwater during periods of elevated water table. However, the relative absence of most soil parameters in groundwater indicates partitioning of parameters from soil to groundwater is not substantial. Soil at the site is very permeable, resulting in quick infiltration and minimal contact time between percolating water and soil above the water table, thereby limiting the opportunity for substantial leaching.

Surface Water Transport

The high permeability of site soil and the site topography may affect the transport of detected parameters via surface water flow. The channelized drainage ditch running parallel with the site's eastern border carries surface water past the site toward the Bayou Grande yacht basin. Land surface along the ditch is generally sandy and level; therefore, no significant overland flow of surface water from Site 10 to the ditch has been observed. However, steeper topography

along the site's northwestern border (west of Boring 10S01) and northern border (north of Boring 10S02) may allow limited overland transport of suspended particulates from roadside areas onto the site during heavy rainfall. Relatively higher pesticides and metals concentrations detected in surface and near surface soil are potentially attributable to this process. Specifically, surface soil from Boring 10S01, immediately topographically downslope of a concrete-lined drainage swale which directs storm water onto the site, was found to contain the highest concentrations of pesticides. Sediment collected from the channelized ditch did not indicate the ditch is being greatly impacted by site activities but may be from non-site related cultural activities. Potential ecological impacts to this wetland area will be further addressed in the Site 41 — NAS Pensacola Wetland RI.

Current and Potential Receptors

Additional potential receptors of detected site parameters are the main producing zone of the Sand-and-Gravel Aquifer, which underlies the surficial zone and is used as a potable water source for Escambia County, as well as Bayou Grande and Pensacola Bay. The presence of a 12 to 15 foot-thick, low permeability clay layer thought to be continuous between the surficial and main producing zones at NAS Pensacola, however, may preclude or at the very least inhibit any downward migration into deeper groundwater below the clay. Conservatively estimating the rate of contaminant migration to equal groundwater velocity, the detected concentrations of metals and the amount of dilution they are likely to undergo before reaching surface water bodies minimizes the potential impact to the bay and bayou. Potential ecological impacts to the bay and bayou will be further addressed in upcoming separate investigations for Sites 40-Bayou Grande, and 41-Pensacola Bay.

9.0 CONCLUSIONS AND RECOMMENDATIONS

No further action is recommended with respect to site groundwater due to the absence of detected parameters in the surficial aquifer zone exceeding risk-based standards. Several detections of the pesticide dieldrin, above risk-based standards, were noted in soil. Of particular note, the dieldrin concentration detected in soil sample 10S0101 exceeds the RBC and CG standards by an order of magnitude. However, this dieldrin concentration appears to be the result of roadside application or storm water runoff. [Furthermore, based on two groundwater sampling events, dieldrin is neither leaching to nor impacting shallow site groundwater. The preliminary risk estimate, based on a conservative child-trespasser scenario, did not exceed the USEPA and FDEP risk threshold of 1E6 for human exposure to site dieldrin soil concentrations. Therefore, no further action or investigation is warranted for Site 10. However, the NAS Pensacola master development plan should be modified to require a re-evaluation of Site 10 dieldrin soil concentrations if residential development of the area is ever considered.]

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FLORIDA PROFESSIONAL GEOLOGIST SEAL

I have read and approve of this Preliminary Site Characterization Report for NAS Pensacola Site 10 and seal it in accordance with Chapter 492 of the Florida Statutes. In sealing this document, I certify the geological information contained in it is true to the best of my knowledge and the geological methods and procedures included herein are consistent with currently accepted geological practices.

Name:	Steven J. Parker
License Number:	#1651
State:	Florida
Expiration Date:	July 31, 1996

Steven J. Parker

11/16/95
Date

Appendix A

Technical Memorandum on Buried Drum Site

TECHNICAL MEMORANDUM

Geophysical Investigation of Buried Drum *Area* Site 10 (West), Naval Air Station Pensacola

September 14,1994

Prepared by:

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on behalf of the **U.S.** Navy
CLEAN Contract #N62467-89-D-0318
CTO - **070**

SUMMARY

Responding to the discovery of several buried **drums** at the southwest corner of Murray and Taylor **roads,** west of Site 10 **at** Naval ***Air*** Station Pensacola, EnSafe/Allen & Hoshall conducted a gradient magnetics geophysical survey **to** define the extent of drum burial. The survey identified a 100-foot-by-120-foot zone where drums might **be** present. **Excavating this** zone is recommended. **A** large **part** of the **study** area **appears to be** clear of **drums,** suggesting that **this** may not be **an** extensive site of systematic disposal, but more likely is limited in **size and** the number of drums **disposed** of.

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1.0 INTRODUCTION

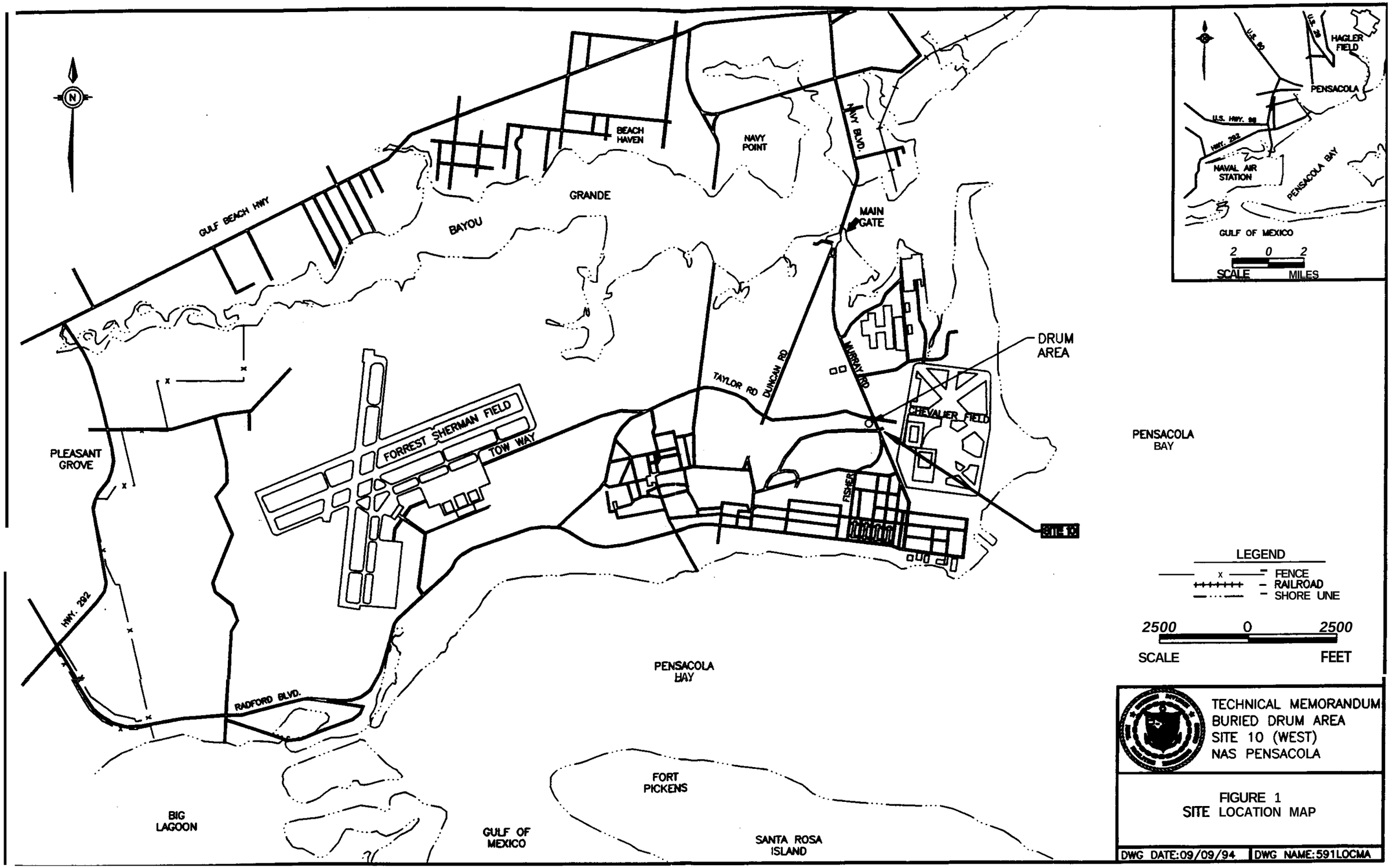
As a part of the Comprehensive Long-Term Environmental Action Navy (CLEAN) contract with the United States Navy, EnSafe/Allen & Hoshall conducted a geophysical survey in March 1994 to investigate an area where several buried drums were discovered at Naval Air Station (NAS) Pensacola in Pensacola, Florida. The survey area lies west of Site 10, on the southwest comer of Murray and Taylor roads (see Figure 1). This Technical Memorandum describes the investigation of this area and recommends followup action.

2.0 SITE HISTORY

In December 1992, a child playing with a metal detector discovered a drum exposed at the surface just east of the tennis court. As a result of the discovery, the area was fenced to prevent access until the present investigation could be made.

Geophysics was applied to this site because it is non-invasive and can provide a comprehensive overview of potential buried drum locations relatively quickly and inexpensively. The objectives of the investigation were to:

- Determine the areal extent of the disposal area.
- Determine if this is a larger drum disposal area or if only a few drums are present.


N
GULF BEACH HWY
BEACH HAVEN
NAVY POINT
NAVY BLVD.
GRANDE
BAYOU
MAIN GATE
DRUM AREA
TAYLOR RD
DUNCAN RD
MURRAY RD
CHEVALIER FIELD
FORREST SHERMAN FIELD
TOW WAY
FISHER
SITE 10
PENSACOLA BAY
PLEASANT GROVE
HWY. 292
RADFORD BLVD.
PENSACOLA BAY
FORT PICKENS
BIG LAGOON
GULF OF MEXICO
SANTA ROSA ISLAND
HAGLER FIELD
U.S. 29
U.S. 90
PENSACOLA
U.S. HWY. 98
HWY. 292
NAVAL AIR STATION
PENSACOLA BAY
GULF OF MEXICO
2 0 2
SCALE MILES
LEGEND
FENCE
RAILROAD
SHORE LINE
2500 0 2500
SCALE FEET
TECHNICAL MEMORANDUM
BURIED DRUM AREA
SITE 10 (WEST)
NAS PENSACOLA
FIGURE 1
SITE LOCATION MAP
DWG DATE:09/09/94
DWG NAME:591LOCMA

3.0 METHODS

Magnetic Field Measurements

The study was done with a gradient magnetics geophysical survey, which responds exclusively to ferrous metals. This type of survey measures two magnetic parameters: 'the total magnetic field and the vertical magnetic gradient.

The total *magnetic field* has units of nanoTeslas (nT). By far the largest contribution to this measurement is the earth's magnetic field, which is roughly 50,000 to 52,000 nT in the southeast United States. Superposed on this large signal is a much smaller signal from local buried and above-ground metals. A buried object such as a drum *can* be thought of as a large, weak magnet with a positive pole at one end and a negative pole at the other. Depending upon the orientation of the drum and the position of the magnetometer at the surface, the drum magnetic field may add to or subtract from the earth's magnetic field value. By making sufficient measurements from the surface, the overall pattern of positive and negative anomalies *can* be mapped and the drum position and depth *can* be estimated.

The response of a buried drum varies greatly with the degree of remanent magnetism imparted by manufacture, the integrity of the drum, and its orientation and depth. Field experience shows that drums near the surface exhibit anomalies in the 20 to 200 nT range. Modem magnetometers *can* detect a single drum *at* up to 5 meters deep in the absence of noise.

An interfering factor in magnetic field measurements is "drift" caused by variations in solar activity. During solar storms, and particularly during peaks in the 11-year solar activity cycle, particles are ejected in a plasma from the sun's atmosphere and are blown outward by the solar wind. Some of these particles are trapped in the earth's magnetic field and flow down the earth's field lines into the atmosphere. This causes a current to flow, and hence a secondary magnetic field that varies with time. Solar pulsations *can* range from a few seconds to years in duration, and magnitudes during a single day *can* exceed 500 nT, although 10 to 100 nT is more

normal during "quiet" solar periods (as is the case for this year). In studies where the total magnetic field is the chief parameter to be interpreted, considerable effort is needed to correct for magnetic drift.

Another interfering factor is instrument noise. Most instruments can detect field changes as small as 0.1 nT, but slight variations in positioning of the sensor and other factors make the practical field noise threshold significantly larger. A good rule-of-thumb is that the smallest detectable field is about ± 1 nT.

The *vertical magnetic gradient* has units of nanoTeslas per meter (nT/m). Two magnetometer sensors are mounted at a fixed separation on a vertical pole. Each sensor measures the total magnetic field. The gradient is the difference in the two sensor readings, normalized to a 1-meter (m) separation. Gradient measurements have several strong advantages. First, since each of the two sensors responds equally to solar pulsations, these effects are removed from the gradient parameter. Similarly, strong magnetic effects from distant buildings and other magnetic features also are minimized in gradient data. However, for localized sources such as a drum, the lower sensor sees a stronger signal than the upper sensor, resulting in a gradient anomaly. In effect, gradient data separate local anomalies from regional anomalies. Most environmental applications are thus well served by making gradient measurements.

In a completely magnetic-free environment, the gradient is zero. Buried drums have responses of 10 to 200 nT/m, and the sign can be positive or negative, depending upon the drum's orientation and magnetic polarity. Practical field repeatability is about ± 1 nT/m.

Noise Sources

It is a rare project where the only metallic objects are buried drums. Nearly every site has other metallic debris, which is considered "noise" in terms of drum recognition. Chief among these is "culture," or man-made features such as buried pipes, cables, electric lines, fences, culverts,

light poles, reinforced concrete, etc. Culture is widespread at most environmental sites and can render magnetic measurements useless in certain cases.

In addition, there is the problem of surface clutter. Usually if drums are buried at a site, one also finds other metallic debris. Smaller items often can be distinguished from dmm-sized objects, but in cases of extreme clutter this is difficult.

Technical Approach

The total magnetic field and the vertical gradient were measured with a GEM Systems GSM-19 proton-precession gradiometer with an Overhauser device. Data were obtained on a 10-foot-by-10-footgrid, which was tied to official NAS Pensacola easting/northing coordinates using the Navy CLEAN global positioning satellite (GPS)system. Two sensors were mounted on a vertical pole at a fixed separation of 56 centimeters (cm); the lower sensor was 2.2 m above ground surface. Measurements took only a few seconds, including the time required to walk to the next station. The data were stored automatically in a data recorder and were displayed on the instrument for evaluation of data quality and identification of anomalies. Data were transferred to a personal computer for processing and screen display.

In all, 1,575 measurements were made. An additional quantity of quality assurance (QA) and quality control (QC) measurements also was obtained.

QA/QC Results

Data accuracy is not directly checked in geophysical work because data precision is of far greater importance to detecting and interpreting field anomalies. Data accuracy is assured by proper factory construction and calibration of the instrument.

Data precision was checked 11 times throughout the two-day survey by repeating data at 11 stations along a baseline (Line 3300E, stations 3500 to 3600). The average standard

deviation for all the repeated gradient data was f0.59 nT/m. The baseline crossed an "anomalous" and a "background" area; precision over the anomaly was slightly poorer than in the background area (±0.75 nT/m vs. ±0.50 nT/m, respectively), because slight positioning variations result in large data changes near an anomaly. The worst standard deviation at any single station was f1.13 nT/m. Hence, one can consider the worst-case repeatability to be about ±1 nT/m. This is far smaller than the expected response from a single drum.

Magnetic drift due to solar activity also was monitored in the baseline data. Drift is a minor issue since it does not affect the gradient parameter, which is used for the present interpretation. For the record, drift in the total magnetic field parameter at station 3300E/3500N was small and fairly slow. The total field there averaged 50,097.0±12.6 nT over the course of the survey. Although there is no reason to do so now, the repeated data provide sufficient information to correct the total field measurements for drift.

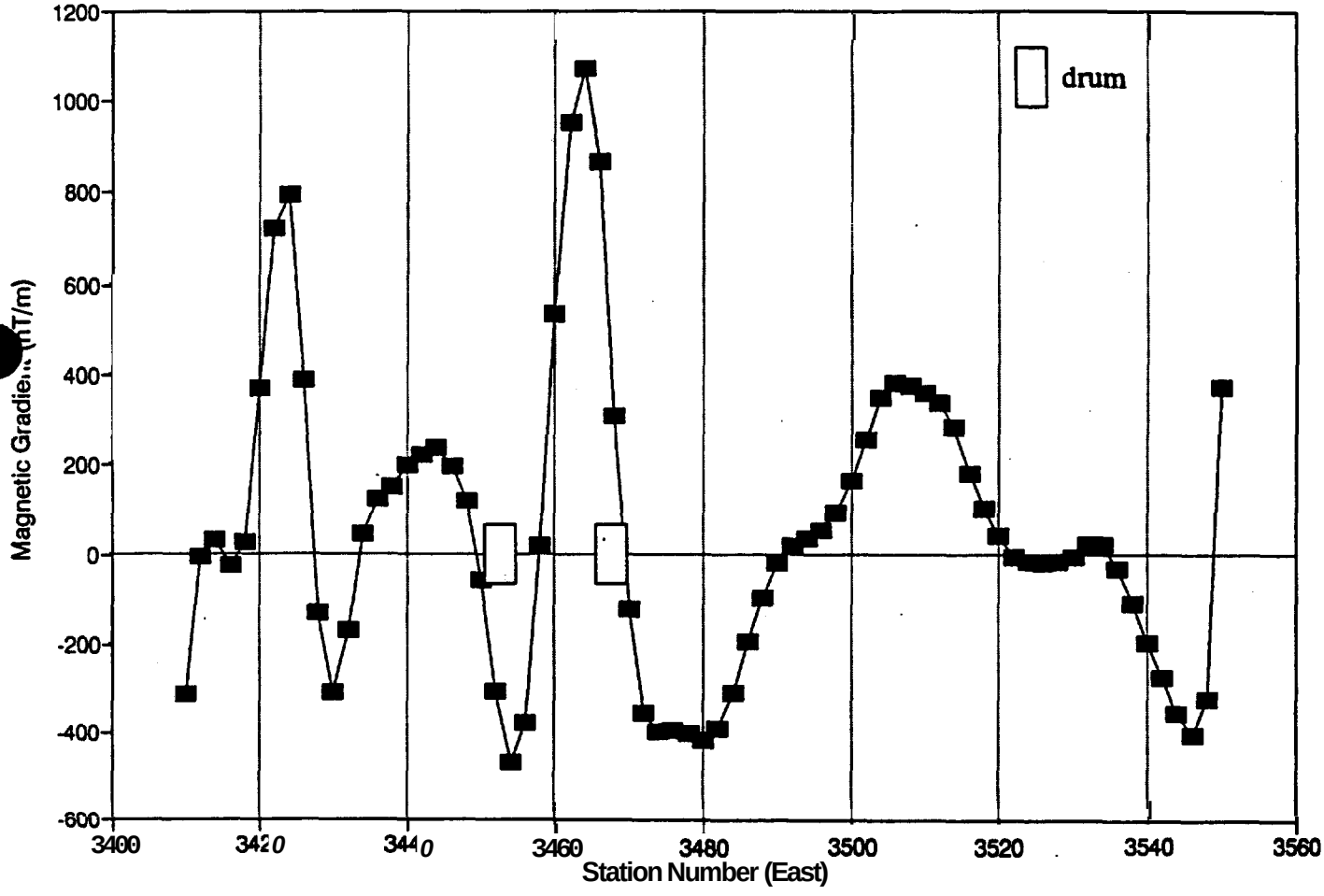
Spatial aliasing is a more important consideration. Aliasing occurs whenever sampling is done at a cruder interval than the variations being measured. The result is a hit-and-miss pattern of anomalies, with some resolved and others unresolved, depending upon the coincidental locations of sampling points. A familiar example of this in environmental work is soil sampling, during which one rarely has the luxury of having enough sample points to resolve all contaminant variations in an area (instead, a quasi-statistical sampling approach is often used to show the extent of contamination and, in some cases, to statistically sample the contaminant population).

An aliasing check was made by obtaining data at 2-foot increments along line 3588E inside the fenced drum area. This test line crossed *two* partially buried drums. Figure 2 shows the magnetic gradient data along the aliasing test line. The 2-foot station density defmes a number of smoothly varying anomalies. The width of the smallest anomaly is about 6 feet, although most are wider than 10 feet. Thus, with a sampling density of 10 feet, one would encounter a moderate aliasing effect. However, the objective of this work is to define the areal extent of

drum burial; it is not necessarily helpful or cost-effective to achieve full definition of every small anomaly (indeed, "noise" from surficial metal debris and underground pipes prevent such detailed definition in many areas). In light of the overall objective, then, aliasing has little practical impact on the final results.

Figure 2 also shows a *typical drum* response, with positive-to-negative "crossovers" in the gradient data over the two known drums. This response is quite typical of data obtained over buried metals on north-facing lines. Anomaly amplitudes are as small as 200 nT/m and as large as 1,000 nT/m. These rather large anomalies may be enhanced by underground pipes or metal debris at the surface. But the test line serves as a template for recognizing other potential drum anomalies.

Figure 2
Aliasing Test, Line 3588E



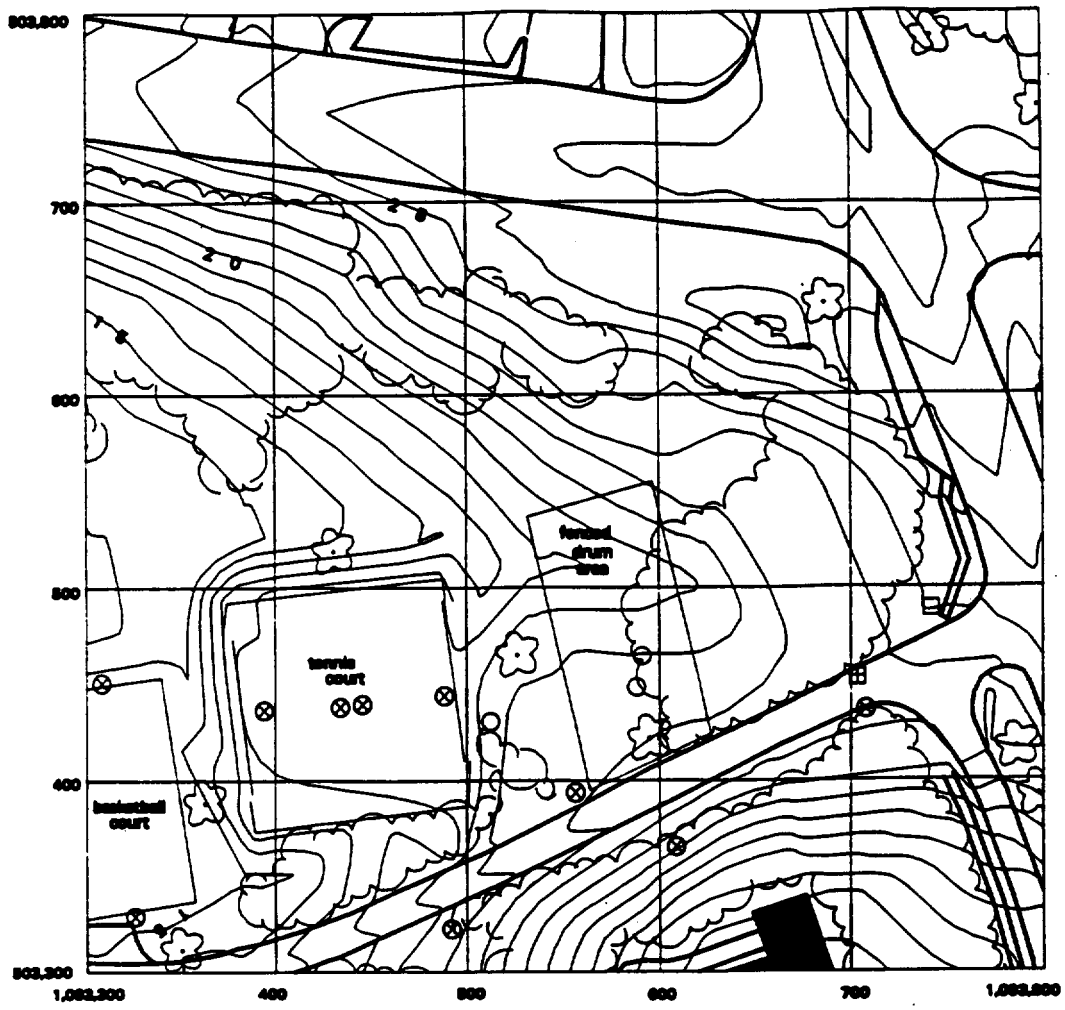
4.0 SUMMARY OF FINDINGS

The survey included a visual site inspection. The survey area is mostly planted with grass and contains a tennis court, an unfenced basketball court, and access roads to the officers' quarters. Two partially buried drums were observed inside the fenced area (see Figure 3 for locations). One of these drums is in a vertical position; its end is punctured, revealing standing water inside it. The second drum also may be vertical. A third iron object resembling a drum rim was observed between the fenced area and the tennis court. The terrain near these three objects is slightly hummocky. Smaller, rusted metal debris was observed at the surface, suggesting this was a minor disposal area. No odors, visible staining, or other indications of a contaminant release were observed here.

Figure 4 shows the total magnetic field, with no drift correction applied. Since the magnetic gradient parameter is the most definitive data set, comments are confined to those data. Trends in the two data sets are similar.

Figure 5 shows the vertical gradient of the magnetic field. A clear overlay is provided to reference key topographic features and metal objects that may affect the data. Small gradient values are in yellow-green, yellow, and yellow-orange; these can be regarded as "background" responses. Warmer colors (orange to purple) indicate significant positive gradients (i.e., above background); cooler colors (green to dark blue) indicate significant negative gradients (below background). Both positive and negative gradients are regarded as potential indicators of buried metals.

The strongest magnetic responses are from culture. Dominant among these are the very strong anomalies around the fences. Several linear features are underground utility lines. The linear feature extending off to the northwest portion of the area is most likely a buried phone cable. Its clumpy "string-of-pearls" appearance is an artifact of spatial aliasing, in which some data points happened to lie right over an anomaly crest, while others were on an upward or



0 Feet 80.8 161.6

Legend

- Metallic Grate
- Metallic Box
- Metallic Pole
- Suspected or Known Drum

Technical Memorandum
NAS Pensacola
Pensacola, Florida

Figure 03
Geophysics Survey
Buried Drum Area, Site 10 (west)

Date: 28 APR 94 | AML: Jerry10

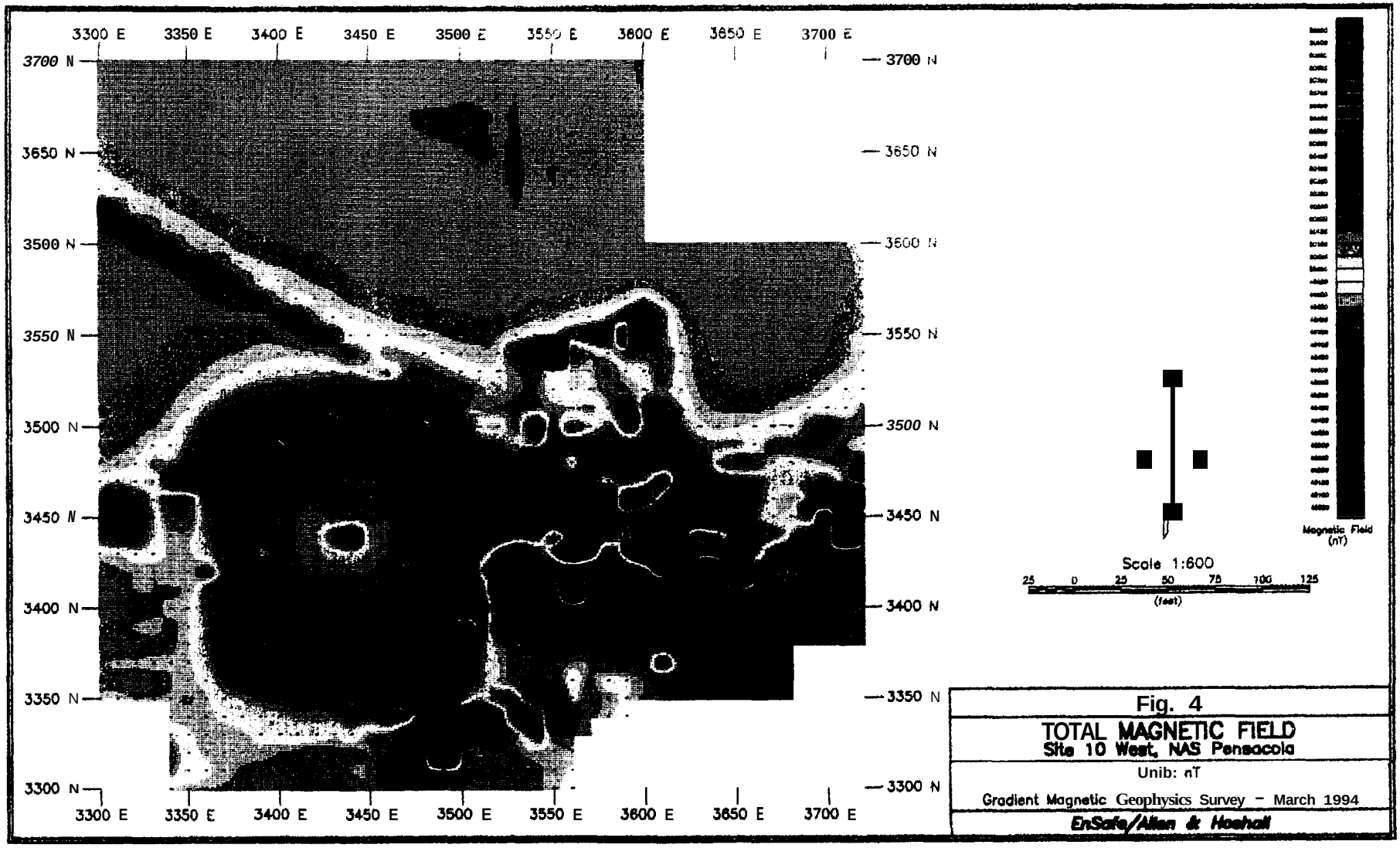


Fig. 4
TOTAL MAGNETIC FIELD
Site 10 West, NAS Pensacola
Unib: nT
Gradient Magnetic Geophysics Survey - March 1994
EnSafe/Allen & Hoshall

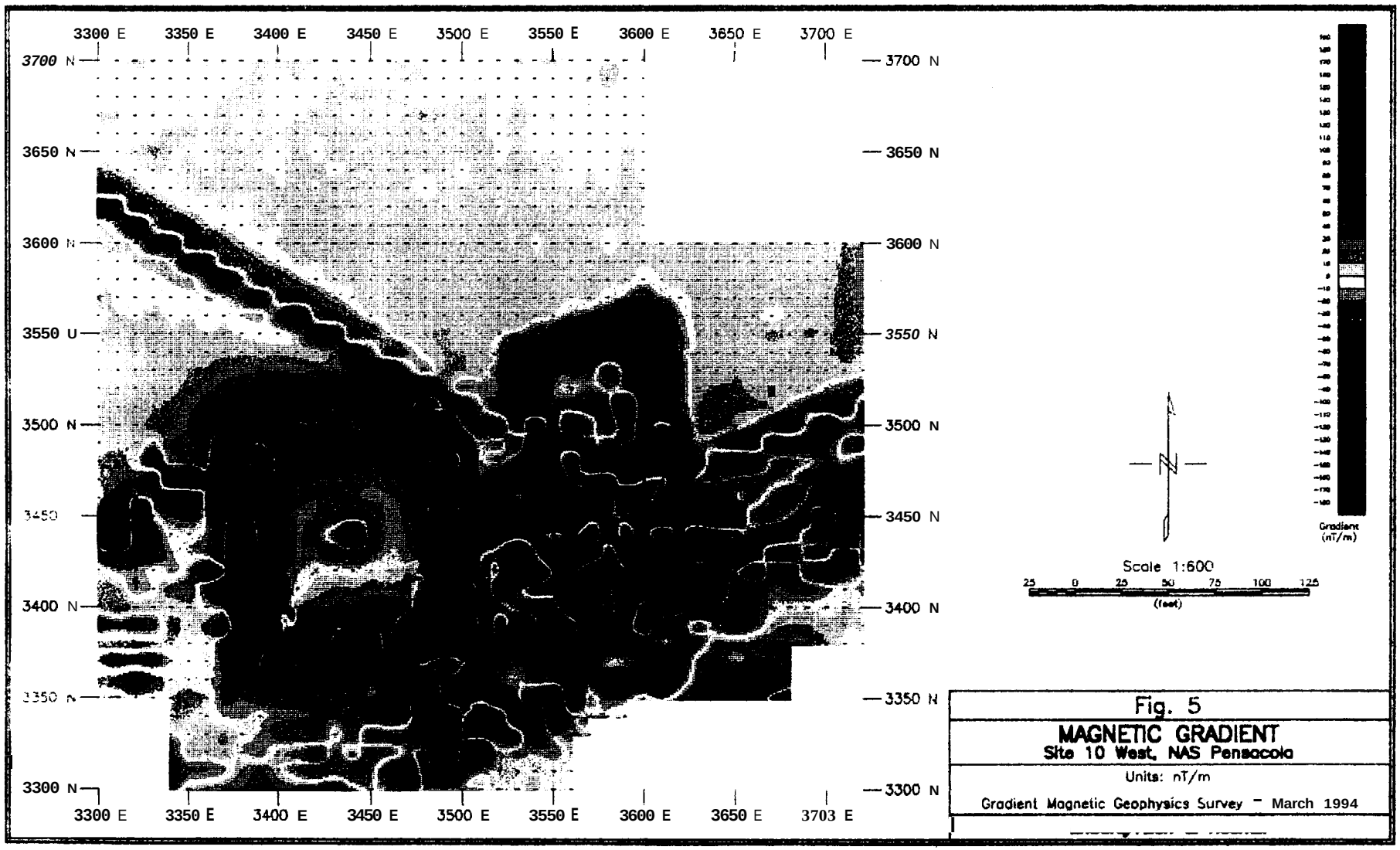


Fig. 5

MAGNETIC GRADIENT
Site 10 West, NAS Pensacola

Units: nT/m

Gradient Magnetic Geophysics Survey – March 1994

downward slope of the anomaly. A number of strong local anomalies lie along the access road to the south, which has subsurface cables, electric lines, and storm and sewer utilities. Finally, many metal poles, light fixtures, and storm grates produce strong anomalies.

Superposed on these anomalies attributed to culture are subtler anomalies, some of which are believed to be the result of buried metals. Figure 6 shows the interpretation of anomalies not likely to be caused by culture. It is possible that other anomalies have gone unrecognized near heavy culture, especially in the area's southern portion.

Anomalies 1 to 5 lie east of the basketball court; all but Anomaly 1 are strong and well-defined, and a near-surface source is indicated for all of them. Anomaly 4 should be investigated with a shovel or hand tool (see safety note in conclusions section).

Anomalies 6 to 10 are small-amplitude features in a broad area otherwise interpreted to be free of metal drums. These anomalies are smaller than a typical drum anomaly and are likely to be caused by a small piece of shallowly buried metal. However, one of these features should be excavated to confirm this interpretation (Anomaly 10 is the best candidate due to its proximity to the drum enclosure area).

Anomalies 11 to 25 have the amplitude and appearance consistent with buried drums, although it is quite possible that some are caused by other metal debris. Based on the data alone, there is no reason to consider any of these anomalies more likely to be caused by a drum than others. Instead, all of these features are worthy of investigation.

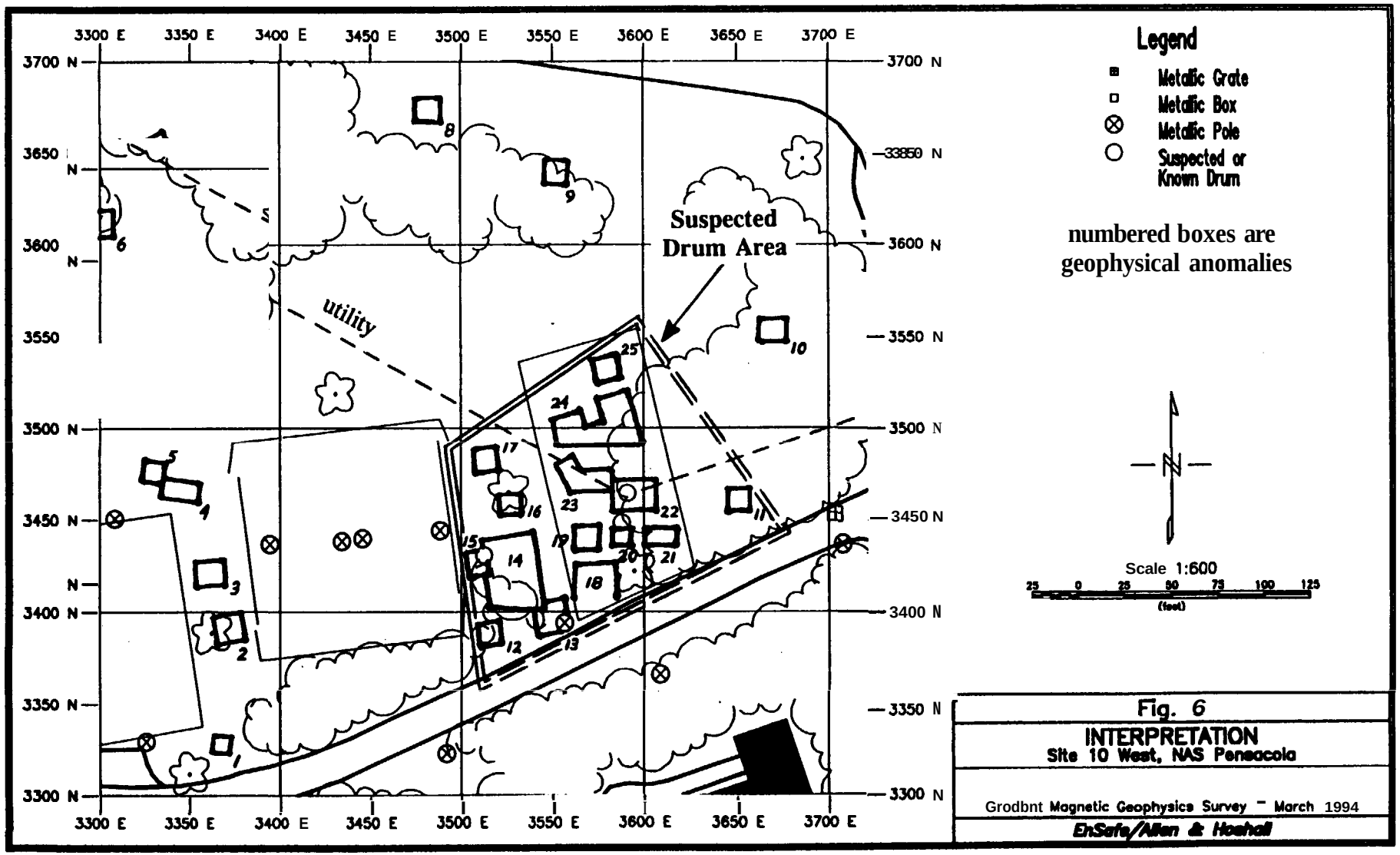


Fig. 6
INTERPRETATION
Site 10 West, NAS Pensacola
Grodbnt Magnetic Geophysics Survey - March 1994
EnSafe/Allen & Hoshall

Due to the presence of metal debris at the surface and the fusion of some anomalies, it is not possible to estimate the number of drums present. In most cases the causative metal object, whether drum or some other metal object, appears to be fairly shallow. Typical estimated depths are 5 feet or shallower.

Figure 6 shows the interpreted boundary enclosing possible drum anomalies. The east and south sides of this boundary are particularly uncertain due to interference from underground pipes. This area, which measures roughly 100 by 120 feet, is recommended for excavation to 5 feet to search for buried drums. Full excavation or a few well-placed trenches both should suffice to sample this area. Note that the area extends outside the fence.

5.0 CONCLUSIONS

A large section of land on the north half of the surveyed area is interpreted to be free of drums, with the unlikely possibility of drums at anomalies 6 to 10. Although cultural clutter precludes a definitive interpretation, anomalies of the type one might expect of drums are mostly confined to an area about 100 by 120 feet in size. Taken as a whole, the survey suggests this area is not one of systematic and widespread drum disposal, but is limited in areal dimensions and in the number of disposed drums.

The area of possible drums, defined in Figure 6, should be explored by trenching. If drums are found on the south or east parts of the fenced area, the excavation should be extended past the area shown. Caution should be exercised, as the geophysics indicates underground utilities are present in the areas to be dug up.

Although less likely to be drums, anomalies 4 and 10 also should be investigated with shovel or hand tools to confirm a non-drum source. In the unlikely event that a drum is found at one of these anomalies, the data will need to be re-evaluated to identify subtler anomalies that might require investigation.

The fenced drum area gate has no lock on it. Installing one for safety and site security is recommended.

Appendix B

Soil Boring Logs and Well Construction Diagrams

DESCRIPTION OF SUBSURFACE MATERIALS

BORING DATE: 02/04/94

SURFACE CONDITIONS– SILTY SANDY SOIL W/ ORGANIC DECAY COVER

DEPTH (FEET)	SAMPLE TYPE	% RECOVERY	BLOWS/ FT.	VAPOR CONC. (PPM)		
	SS			0	0–6" BLS	DARK BROWN SILTY SANDY SOIL (SM)
					6"–1' BLS	TAN FINE TO MEDIUM GRAINED QUARTZ SAND (SP)
5						
	SS			0	1–9' BLS	SAME AS ABOVE (SP)
10	SS			0	9–11' BLS	TAN TO BUFF WHITE FINE TO MEDIUM GRAINED QUARTZ SAND (SP)
	SS			0	11–13' BLS	SAME AS ABOVE BECOMMING MOIST SAND (SP)
15	SS			0	13–16' BLS	LIGHT TAN FINE TO MEDIUM GRAINED QUARTZ SAND WET AT 16' BLS (SP)
	CUTTINGS RETURN				16–24' BLS	SAME WET (SP) SAND AS ABOVE. B.O.H.
20						
25						
30						
35						
40						
45						
50						

KEY

(SP) – UNIFIED SOIL CLASSIFICATION SYSTEM SYMBOL
B.L.S. – BELOW LAND SURFACE
B.O.H. – BOTTOM OF HOLE
S.S. – SPLIT SPOON SAMPLE

SITE 10
NAS PENSACOLA
PENSACOM, FLORIDA

10S01

DATE. 11/01/94

DWG NAME: 70BORL1

DESCRIPTION OF SUBSURFACE MATERIALS

BORING DATE: 02/03/94

SURFACE CONDITIONS– SANDY SOIL W/ ORGANIC DECAY COVER

SS	1.6	0–1' BLS	LIGHT TAN TO BROWN FINE TO MEDIUM GRAINED QUARTZ SAND WITH ORGANICS (SP)
SS	2.2	1–3' BLS	TAN TO BUFF WHITE FINE TO MEDIUM GRAINED QUARTZ SAND (SP)
SS	4.1	3–8' BLS	ORANGE FINE TO MEDIUM GRAINED QUARTZ SAND (SP)
SS	1.7	8–9' BLS	TAN FINE TO MEDIUM GRAINED QUARTZ SAND (SP) WET AT 9' BLS

5 10 15 20 25 30 35 40 45 50

KEY

(SP) – UNIFIED SOIL CLASSIFICATION SYSTEM SYMBOL
B.L.S. – BELOW LAND SURFACE
B.O.H. – BOTTOM OF HOLE
S.S. – SPLIT SPOON SAMPLE

SITE CHARACTERIZATION REPORT
SITE 10
NAS PENSACOLA
PENSACOLA, FLORIDA

BORING
10S02

DATE: 11/01/94

DWG NAME: 70BORL2

DESCRIPTION OF SUBSURFACE MATERIALS

BORING DATE: 02/03/94

SURFACE CONDITIONS– SANDY GRASS COVERED SOIL

SS	0–1' BLS TANNISH BROWN FINE TO MEDIUM GRAINED QUARTZ SAND (SP)
SS	1–3' BLS GRAYISH BROWN FINE TO MEDIUM GRAINED QUARTZ SAND WITH ORGANICS. WET AT 3' BLS (SP)
CUTTINGS RETURN	3–12' BLS BROWNISH GRAY FINE TO MEDIUM GRAINED WET QUARTZ SAND B.O.H (SP)

5 10 15 20 25 30 35 40 45 50

KEY

(SP) – UNIFIED SOIL CLASSIFICATION SYSTEM SYMBOL
B.L.S. – BELOW LAND SURFACE
B.O.H. – BOTTOM OF HOLE
S.S. – SPLIT SPOON SAMPLE

SITE CHARACTERIZATION REPORT
SITE 10
NAS PENSACOLA
PENSACOLA, FLORIDA

BORING
1OS03

DATE: 11/01/94

DWG NAME: 70BORL3

DESCRIPTION OF SUBSURFACE MATERIALS

BORING DATE: 02/03/94

SURFACE CONDITIONS– SANDY GRASS COVERED LAND SURFACE

DEPTH (FEET)	SAMPLE TYPE	% RECOVERY	BLOWS/FT.	VAPOR CONC. (PPM)	
	SS			0.4	0–1' BLS TAN TO LIGHT BROWN FINE TO MEDIUM GRAINED QUARTZ SAND WITH ROOTS (SP)
	SS			5.0	1–3' BLS SAME AS ABOVE BECOMMING GRAY SAND WITH SEAMS OF ORGANICS AT 2.5' BLS (SP) WET AT 3' BLS
5					
10					
15					
20					
25					
30					
35					
40					
45					
50					

KEY

(SP) – UNIFIED SOIL CLASSIFICATION SYS EM SYMBOL
B.L.S. – BELOW LAND SURFACE
B.O.H. – BOTTOM OF HOLE
S.S. – SPLIT SPOON SAMPLE

SITE CHARACTERIZATION REPORT
SITE 10
NAS PENSACOLA
PENSACOLA, FLORIDA

BORING
10S04

DATE: 11/01/94

DWG NAME: 70BORL4

DESCRIPTION OF SUBSURFACE MATERIALS

BORING DATE: 02/03/94

SURFACE CONDITIONS– SANDY GRASS COVERED SOIL

DEPTH (FEET)	SAMPLE TYPE	% RECOVERY	BLOWS/FT.	VAPOR CONC. (PPM)		
	SS			2.4	0–1' BLS	BROWN TO LIGHT TAN FINE TO MEDIUM GRAINED QUARTZ SAND (SP)
	SS			12	1–3' BLS	CLEAN LIGHT TAN FINE TO MEDIUM GRAINED QUARTZ SAND WITH ORGANICS SEAMS AT 1' – 2' BLS. WET AT 3' BLS
5						
	CUTTINGS RETURN				3–6' BLS	COLOR CHANGES TO GRAY SAND BELOW WATER TABLE 12.5' BLS. = B.O.H.
10						
15						
20						
25						
30						
35						
40						
45						
50						

KEY

(SP) – UNIFIED SOIL CLASSIFICATION SYSTEM SYMBOL
B.L.S. – BELOW LAND SURFACE
B.O.H. – BOTTOM OF HOLE
S.S. – SPLIT SPOON SAMPLE

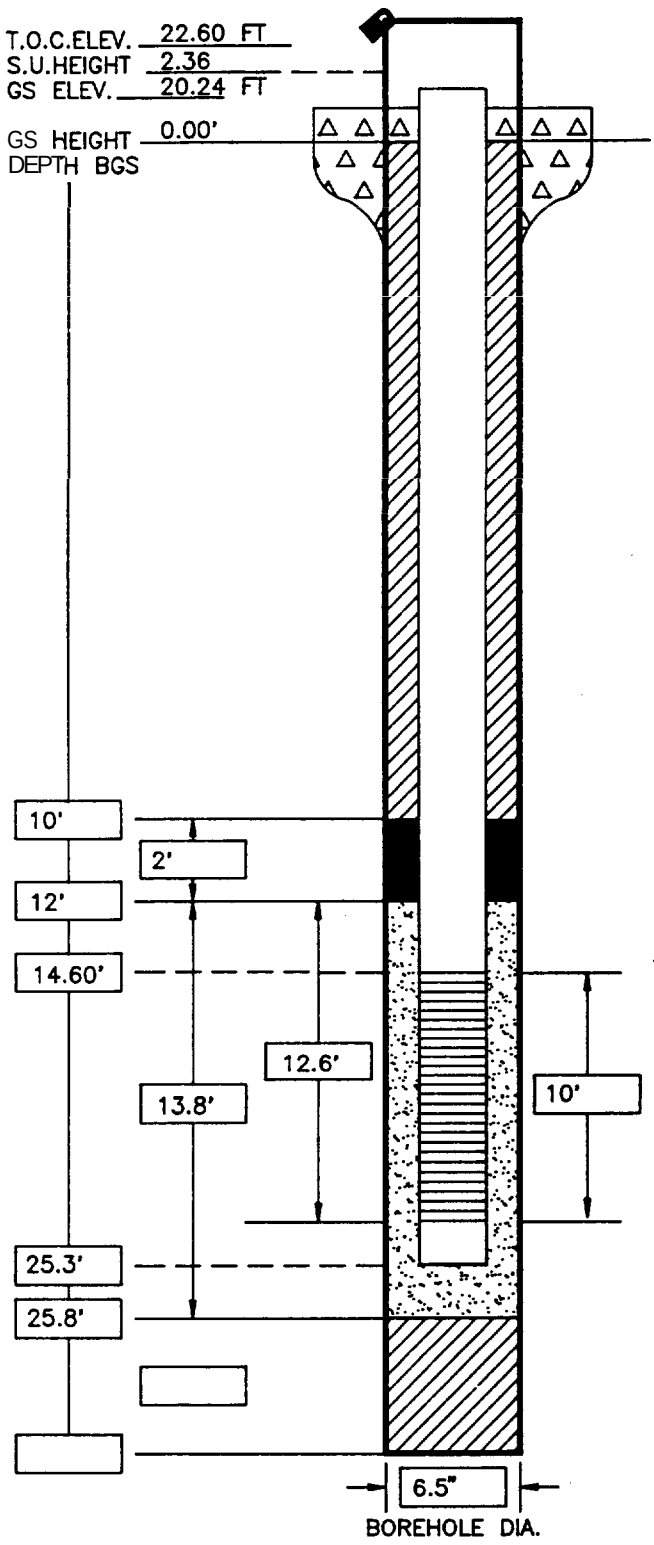
SITE CHARACTERIZATION REPORT
SITE 10
NAS PENSACOIA
PENSACOLA, FLORIDA

BORING
1OS05

DATE: 11/01/94

DWG NAME: 70BORL5

WELL NO.: 10GS01	INSTALLATION: SHALLOW MW.	SITE: NASP SITE 10
PROJECT NO.: 0700030	CLIENT/PROJECT: U.S. NAVY SOUTH DIVISION	
	DRIG. CONTRACTOR: LAYNE ENVIRON. INC.	
COMP. START: 02/04/94 (_____ m)	COMP. END: 02/04/94 (_____ m)	



PROTECTIVE CSG STEEL W/ HINGED LOCKING COVER
MATERIAL/TYPE
DIAMETER 4"X4"
DEPTH BGS 2FT WEEP HOLE(Y/N)

GUARD POSTS (Y/N) CONCRETE FILLED STEEL
NO. 4 TYPE 3" DIA X 6'LENGTH

SURFACE PAD
COMPOSITION & SIZE 4'X4'X6" CONCRETE

RISER PIPE
TYPE SCHEDULE 40 PVC
DIAMETER 2" ID
TOTAL LENGTH(TOC to TOS) 17'
VENTILATED CAP (Y/N)

GROUT
COMPOSITION & PROPORTIONS 4-98LB BAGS
TYPE I PORTLAND CEMENT - NEAT
TREMIED (Y/N)
INTERVAL BGS 0-10'

CENTRALIZERS (Y/N)
DEPTH(s)

SEAL
TYPE 1/4" BENT. PELLETS
SOURCE BAROID INC.
SETUP/HYDRATION TIME 1+ HOUR
VOL. FLUID ADDED APPROX.10 GAL DI WATER
TREMIED (Y/N) INSIDE AUGERS

FILTER PACK
TYPE SILICA QTZ SAND
AMT. USED 6-50 LB BAGS
TREMIED (Y/N) INSIDE AUGERS
SOURCE PEARL SAND CO. FILTERATION MEDIA
GR. SIZE DIST. 20-30 COUNT SIEVE SIZE

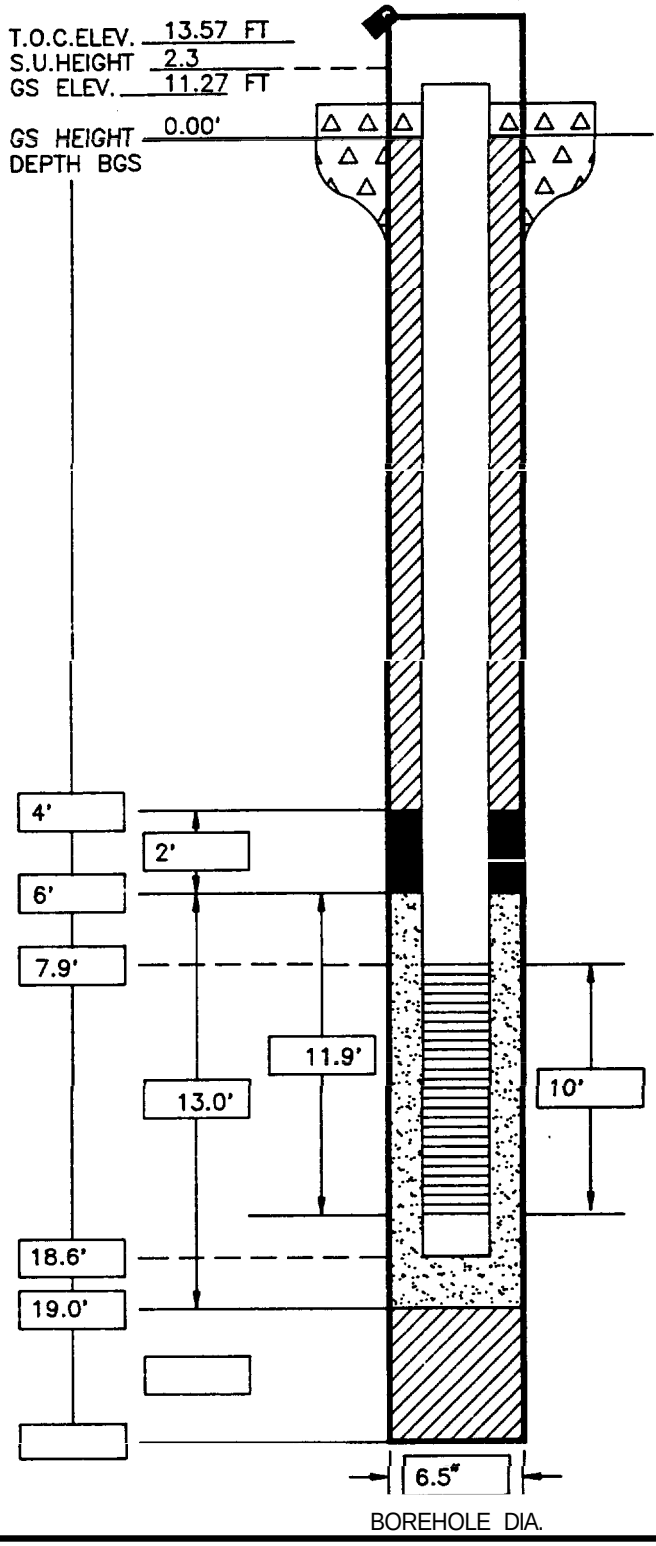
SCREEN
TYPE SCHEDULE 40 PVC
DIAMETER 2" ID
SLOT SIZE & TYPE 0.01" CONTINUOUS SLOTTED
INTERVAL BGS 14.60 - 24.60

SUMP (Y/N)
INTERVAL BGS 24.6'-25.3' LENGTH .7'
BOTTOM CAP (Y/N) INCLUDES BOTTOM CAP

BACKFILL PLUG
MATERIAL NATURAL SAND BACKFILL/COLLAPSE
SETUP/HYDRATION TIME N.A.
TREMIED (Y/N)

70MWCL01

PROJECT NO.: 0700030	CLIENT/PROJECT: U.S. NAVY SOUTH DIVISION
	DRIG. CONTRACTOR: LAYNE ENVIRON. INC.
COMP. START: 02/03/94 (_____ m)	COMP. END: 02/03/94 (_____ m)



PROTECTIVE CSG
MATERIAL/TYPE STEEL W/ HINGED LOCKING COVER
DIAMETER 4"X4"
DEPTH BGS 2FT WEEP HOLE(Y/(N))

GUARD POSTS (Y/N)
NO. 4 TYPE CONCRETE FILLED STEEL 3" DIA X 6' LENGTH

SURFACE PAD
COMPOSITION & SIZE 4'X4'X6" CONCRETE

RISER PIPE
TYPE SCHEDULE 40 PVC
DIAMETER 2" ID
TOTAL LENGTH(TOC to TOS) 11.2'
VENTILATED CAP (Y/(N))

GROUT
COMPOSITION & PROPORTIONS 2-98LB BAGS M.P.E. I PORTLAND CEMENT - NEAT
TREMIED (Y/(N)) 0-4'
INTERVAL BGS

CENTRALIZERS (Y/(N))
DEPTH(s)

SEAL
TYPE 1/4" BENT. PELLETS
SOURCE BAROID INC.
SETUP/HYDRATION TIME 8+ HOUR
VOL. FLUID ADDED APPROX.10 GAL DI WATER
TREMIED (Y/(N))

FILTER PACK
TYPE SILICA QTZ SAND
AMT. USED 6-50 LB BAGS (APPROX.)
TREMIED ((Y)/N) INSIDE AUGERS
SOURCE PEARL SAND CO. FILTERATION MEDIA
GR. SIZE DIST. 20-30 COUNT SIEVE SIZE

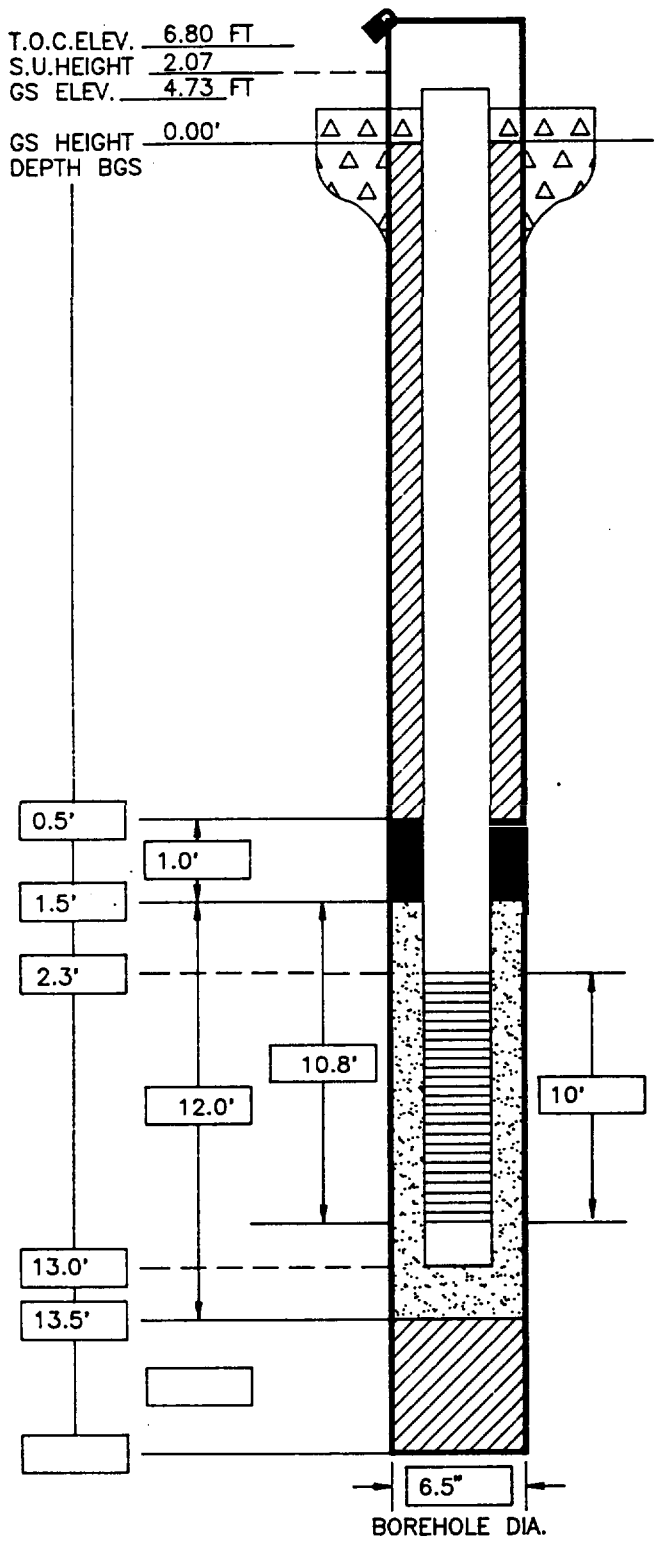
SCREEN
TYPE SCHEDULE 40 PVC
DIAMETER 2" ID
SLOT SIZE & TYPE 0.01" CONTINUOUS SLOTTED
INTERVAL BGS 7.90 - 17.90

SUMP ((Y)/N)
INTERVAL BGS 17.9'-18.6' LENGTH .7'
BOTTOM CAP ((Y)/N) INCLUDES BOTTOM CAP

BACKFILL PLUG
MATERIAL NATURAL SAND BACKFILL/COLLAPSE
SETUP/HYDRATION TIME N.A.
TREMIED (Y/N)

70MWCL02

PROJECT NO.: 070-0030	CLIENT/PROJECT: U.S. NAW SOUTH DIVISION
	DRIG. CONTRACTOR: LAYNE ENVIRON. INC.
COMP. START: 02/03/94 (____m)	COMP. END: 02/03/94 (____m)



PROTECTIVE CSG STEEL W/ HINGED LOCKING COVER
MATERIAL/TYPE
DIAMETER 4"X4"
DEPTH BGS 1FT WEEP HOLE(Y/N)

GUARD POSTS (Y/N) CONCRETE FILLED STEEL
NO. 4 TYPE 3" DIA X 6'LENGTH

SURFACE PAD
COMPOSITION & SIZE 4'X4'X6" CONCRETE

RISER PIPE
TYPE SCHEDULE 40 PVC
DIAMETER 2" ID
TOTAL LENGTH(TOC to TOS) 4.37'
VENTILATED CAP (Y/N)

GROUT
COMPOSITION & PROPORTIONS NONE - CONCRETE PAD BUILT ON BENT. SEAL
TREMIED (Y/N)
INTERVAL BGS 0-0.5'

CENTRALIZERS (Y/N)
DEPTH(S)

SEAL
TYPE 1/4" BENT. PELLETS
SOURCE BAROID INC.
SETUP/HYDRATION TIME 8+ HOUR
VOL. FLUID ADDED APPROX.10 GAL DI WATER
TREMIED (Y/N)

FILTER PACK
TYPE SILICA QTZ SAND
AMT. USED 5-50 LB BAGS (APPROX.)
TREMIED (Y/N) INSIDE AUGERS
SOURCE PEARL SAND CO. FILTERATION MEDIA
GR. SIZE DIST. 20-30 COUNT SIEVE SIZE

SCREEN
TYPE SCHEDULE 40 PVC
DIAMETER 2" ID
SLOT SIZE & TYPE 0.01" CONTINUOUS SLOTTED
INTERVAL BGS 2.3 - 12.3

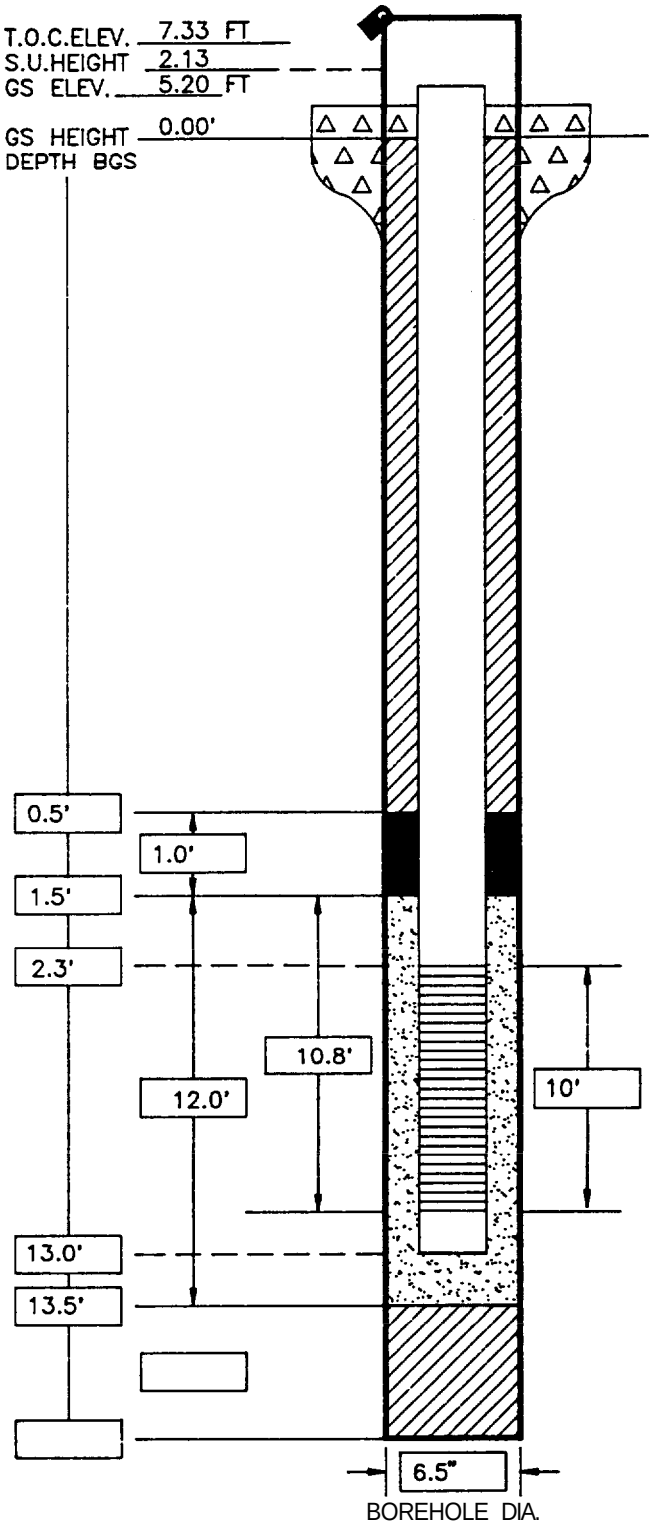
SUMP (Y/N)
INTERVAL BGS 12.3'-13.0' LENGTH .7'
BOTTOM CAP (Y/N) INCLUDES BOTTOM CAP

BACKFILL PLUG
MATERIAL NATURAL SAND BACKFILL/COLLAPSE
SETUP/HYDRATION TIME N.A.
TREMIED (Y/N)

70MWCL03

MONITORING WELL CONSTRUCTION LOG – STANDARD

WELL NO.: 10GS04	INSTALLATION: SHALLOW MW.	SITE: NASP SITE 10
PROJECT NO.: 070-0030	CLIENT/PROJECT: U.S. NAVY SOUTH DIVISION	
	DRIG. CONTRACTOR: LAYNE ENVIRON. INC.	
COMP. START: 02/03/94 (____ m)	COMP. END: 02/03/94 (____ m)	
BUILT BY: R. LEGGETT / F. MC INTURFF	WELL COORD.: NA	



PROTECTIVE CSG
MATERIAL/TYPE STEEL W/ HINGED LOCKING COVER
DIAMETER 4"X4"
DEPTH BGS 1FT WEEP HOLE(Y/N)

GUARD POSTS (Y/N) CONCRETE FILLED STEEL
NO. 4 TYPE 3"DIA X 6'LENGTH

SURFACE PAD
COMPOSITION & SIZE 4'X4'X6" CONCRETE

RISER PIPE
TYPE SCHEDULE 40 PVC
DIAMETER 2" ID
TOTAL LENGTH(TOC to TOS) 4.43'
VENTILATED CAP (Y/N)

GROUT
COMPOSITION & PROPORTIONS NONE – CONCRETE PAD BUILT ON SEAL
TREMIED (Y/N)
INTERVAL BGS 0–0.5'

CENTRALIZERS (Y/N)
DEPTH(s)

SEAL
TYPE 1/4" BENT. PELLETS
SOURCE BAROID INC.
SETUP/HYDRATION TIME 8+ HOUR
VOL. FLUID ADDED APPROX.10 GAL DI WATER
TREMIED (Y/N)

FILTER PACK
TYPE SILICA QTZ SAND
AMT. USED 4–50 LB BAGS
TREMIED (Y/N) INSIDE AUGERS
SOURCE PEARL SAND CO. FILTERATION MEDIA
GR. SIZE DIST. 20–30 COUNT SIEVE SIZE

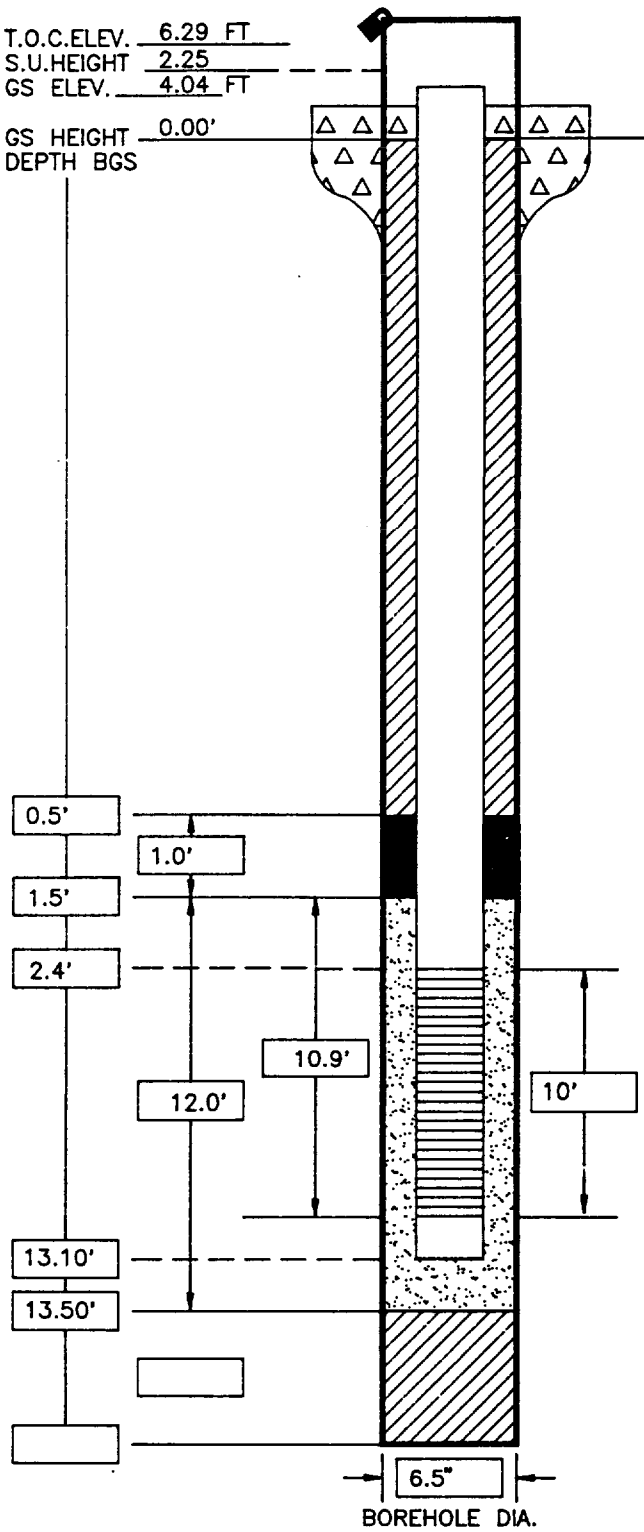
SCREEN
TYPE SCHEDULE 40 PVC
DIAMETER 2" ID
SLOT SIZE & TYPE 0.01" CONTINUOUS SLOTTED
INTERVAL BGS 2.3 – 12.3

SUMP (Y/N)
INTERVAL BGS 12.3'–13.0' LENGTH .7'
BOTTOM CAP (Y/N) INCLUDES BOTTOM CAP

BACKFILL PLUG
MATERIAL NATURAL SAND BACKFILL/COLLAPSE
SETUP/HYDRATION TIME N.A.
TREMIED (Y/N)

70MWCL04

WELL NO.: 10GS05	INSTALLATION: SHALLOW MW.	SITE: NASP SITE 10
PROJECT NO.: 070-0030	CLIENT/PROJECT: U.S. NAVY SOUTH DIVISION	
	DRIG. CONTRACTOR: LAYNE ENVIRON. INC.	
COMP. START: 02/03/94 (____m)	COMP. END: 02/03/94 (____m)	
BUILT BY: R. LEGGETT / F. MC INTURFF	WELL COORD.: NA	



PROTECTIVE CSG
MATERIAL/TYPE STEEL W/ HINGED LOCKING COVER
DIAMETER 4"X4"
DEPTH BGS 1FT WEEP HOLE(Y/N) N

GUARD POSTS (Y/N) Y
NO. 4 TYPE CONCRETE FILLED STEEL 3" DIA X G'LENGTH

SURFACE PAD
& SIZE 4'X4'X6" CONCRETE

RISER PIPE
TYPE SCHEDULE 40 PVC
DIAMETER 2" ID
TOTAL LENGTH(TOC to TOS) 4.65'
VENTILATED CAP (Y/N) N

GROUT
COMPOSITION & PROPORTIONS NONE - CONCRETE PAD BUILT ON SEAL
TREMIED (Y/N) N
INTERVAL BGS 0-0.5'

CENTRALIZERS (Y/N) N
DEPTH(S)

SEAL
TYPE 1/4" BENT. PELLETS
SOURCE BAROID INC.
SETUP/HYDRATION TIME 8+ HOUR
VOL. FLUID ADDED APPROX.10 GAL DI WATER
TREMIED (Y/N) N

FILTER PACK
TYPE SILICA QTZ SAND
AMT. USED 3-50 LB BAGS
TREMIED (Y/N) Y INSIDE AUGERS
SOURCE PEARL SAND CO. FILTERATION MEDIA
GR. SIZE DIST. 20-30 COUNT SIEVE SIZE

SCREEN
TYPE SCHEDULE 40 PVC
DIAMETER 2" ID
SLOT SIZE & TYPE 0.01" CONTINUOUS SLOTTED
INTERVAL BGS 2.4 - 12.4

SUMP (Y/N) Y
INTERVAL BGS 12.4'-13.1' LENGTH .7'
BOTTOM CAP (Y/N) Y INCLUDES BOTTOM CAP

BACKFILL PLUG
MATERIAL NATURAL SAND BACKFILL/COLLAPSE
SETUP/HYDRATION TIME N.A.
TREMIED (Y/N)

70MWCL05

Appendix C
Analytical Report

Site 10

Phase I Groundwater Samples

DATALCP3
05/04/95

NAS PENSACOLA Site 10
Groundwater Samples
Phase I

METAL															
	SAMPLE ID →	010-G-GM06-00		010-G-GS01-00		010-G-GSO2-00		010-G-GSO3-00		010-G-GS04-00		010-G-GS05-00	
	ORIGINAL ID →	10GGM06		10GS01		10GS02		10GS03		10GS04		10GS05	
	LAB SAMPLE ID →	X26662		X26425		X26441		X26450		X26468		X26476	
	ID FROM REPORT →	10GGM06		10GS01		10GS02		10GS03		10GS04		10GS05	
	SAMPLE DATE →	02/14/94		02/14/94		02/14/94		02/14/94		02/14/94		02/14/94	
	MATRIX →	Water		Uater		Uater		Uater		Uatcr		Water	
	UNITS →	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	CT513	VAL	CT513	VAL	CT513	VAL	CT513	VAL	CT513	VAL	CT513	VAL
AL	Aluminum	31.a		179.		3820.		1170.		248.		97.7	
SB	Antimony	36.	UJ	36.	UJ	36.	UJ	36.	UJ	36.	UJ	36.	UJ
AS	Arsenic	4.	U	4.	U	4.4		4.	U	4.	U	4.	U
BA	Barium	7.4	U	4.3	U	12.6		7.4	U	6.7	U	6.5	U
BE	Beryllium	3.	U	3.	U	3.	U	3.	U	3.	U	3.	U
CD	Cadmium	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
CA	Calcium	22700.		9530.		15300.		15000.		17100.		18600.	
CR	Chromium	4.	UJ	4.	UJ	5.9	UJ	4.8	UJ	4.	UJ	4.	UJ
CO	Cobalt	6.	UJ	6.	UJ	6.	UJ	6.	UJ	6.	UJ	6.	UJ
CU	Copper	3.	UJ	3.	UJ	3.2	J	3.	UJ	3.	UJ	3.	UJ
CN	Cyanide	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
FE	Iron	27.3	U	101.		2020.		1550.		775.		65.7	
PB	Lead	2.	U	2.	U	3.8		2.1		2.	U	2.	U
MG	Magnesium	1720.		1300.		1980.		1930.		1810.		1940.	
MN	Manganese	4.	UJ	11.7	J	52.5	J	27.3	J	35.2	J	4.	UJ
HG	Mercury	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
NI	Nickel	15.	UJ	15.	UJ	15.	UJ	15.	UJ	15.	UJ	15.	UJ
K	Potassium	1110.	J	1080.	J	888.	J	715.	J	1330.	J	1070.	J
SE	Selenium	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
AG	Silver	6.	UJ	6.	UJ	6.	UJ	6.	UJ	6.	UJ	6.	UJ
NA	Sodium	6460.		4300.		4340.		8800.		12700.		7580.	
TL	Thallium	8.	U	8.	U	8.	U	8.	U	8.	U	8.	U
V	Vanadium	6.	U	6.	U	7.6		6.	U	6.	U	6.	U
ZN	Zinc	10.3	U	9.	U	17.	U	12.6	U	12.8	U	10.	U

*** Validation Complete ***

NAS PENSACOLA Site 10
Groundwater Samples
Phase I

PEST													
	SAMPLE ID →	010-G-GM06-00		010-G-GS01-00		010-G-GSO2-00		010-G-GS03-00		010-G-GSO4-00		010-G-GS05-00	
	ORIGINAL ID →	10GGM06		10GS01		10GS02		10GS03		10GS04		10GS05	
	LAB SAMPLE ID →	C21509		C21501		C21502		C21503		C21504		C21505	
	ID FROM REPORT →	10GGM06		10GS01		10GS02		10GS03		10GS04		10GS05	
	SAMPLE DATE →	02/14/94		02/14/94		02/14/94		02/14/94		02/14/94		02/14/94	
	DATE EXTRACTED →	02/15/94		02/15/94		02/15/94		02/15/94		02/15/94		02/15/94	
	DATE ANALYZED →	02/27/94		02/27/94		02/27/94		02/27/94		02/27/94		02/27/94	
	MATRIX →	Uater		Uater		Uater		Water		Uater		Uater	
	WITS →	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	CT513	VAL	CT513	VAL	CT513	VAL	CT513	VAL	CT513	VAL	CT513	VAL
319-84-6	alpha-BHC	0.051	UJ	0.054	UJ	0.057	UJ	0.053	UJ	0.054	UJ	0.056	UJ
319-85-7	beta-BHC	0.051	UJ	0.054	UJ	0.057	UJ	0.053	UJ	0.054	UJ	0.056	UJ
319-86-8	delta-BHC	0.051	UJ	0.054	UJ	0.057	UJ	0.053	UJ	0.054	UJ	0.056	UJ
58-89-9	gamma-BHC (Lindane)	0.051	UJ	0.054	UJ	0.057	UJ	0.053	UJ	0.054	UJ	0.056	UJ
76-44-8	Heptachlor	0.051	UJ	0.054	UJ	0.057	UJ	0.053	UJ	0.054	UJ	0.056	UJ
309-00-2	Aldrin	0.051	UJ	0.054	UJ	0.057	UJ	0.053	UJ	0.054	UJ	0.056	UJ
1024-57-3	Heptachlor epoxide	0.051	UJ	0.054	UJ	0.057	UJ	0.053	UJ	0.054	UJ	0.056	UJ
959-98-8	Endosulfan I	0.051	UJ	0.054	UJ	0.057	UJ	0.053	UJ	0.054	UJ	0.056	UJ
60-57-1	Dieldrin	0.1	UJ	0.11	UJ	0.11	UJ	0.11	UJ	0.11	UJ	0.11	UJ
72-55-9	4,4'-DDE	0.1	UJ	0.11	UJ	0.11	UJ	0.11	UJ	0.11	UJ	0.11	UJ
72-20-8	Endrin	0.1	UJ	0.11	UJ	0.11	UJ	0.11	UJ	0.11	UJ	0.11	UJ
33213-65-9	Endosulfan II	0.1	UJ	0.11	UJ	0.11	UJ	0.11	UJ	0.11	UJ	0.11	UJ
72-54-8	4,4'-DDD	0.1	UJ	0.11	UJ	0.11	UJ	0.11	UJ	0.11	UJ	0.11	UJ
1031-07-8	Endosulfan sulfate	0.1	UJ	0.11	UJ	0.11	UJ	0.11	UJ	0.11	UJ	0.11	UJ
50-29-3	4,4'-DDT	0.1	UJ	0.11	UJ	0.11	UJ	0.11	UJ	0.11	UJ	0.11	UJ
72-43-5	Methoxychlor	0.51	UJ	0.54	UJ	0.57	UJ	0.53	UJ	0.54	UJ	0.56	UJ
53494-70-5	Endrin ketone	0.1	UJ	0.11	UJ	0.11	UJ	0.11	UJ	0.11	UJ	0.11	UJ
7421-93-4	Endrin aldehyde	0.01	UJ	NR		0.11	UJ	0.11	UJ	0.11	UJ	0.11	UJ
5103-71-9	alpha-Chlordane	0.051	UJ	0.054	UJ	0.057	UJ	0.053	UJ	0.054	UJ	0.056	UJ
5103-74-2	gamma-Chlordane	0.051	UJ	0.054	UJ	0.057	UJ	0.053	UJ	0.054	UJ	0.056	UJ
8001-35-2	Toxaphene	5.1	UJ	5.4	UJ	5.7	UJ	5.3	UJ	5.4	UJ	5.6	UJ
12674-11-2	Aroclor-1016	1.	UJ	1.1	UJ	1.1	UJ	1.1	UJ	1.1	UJ	1.1	UJ
11104-28-2	Aroclor-1221	2.	UJ	2.2	UJ	2.3	UJ	2.1	UJ	2.2	UJ	2.2	UJ
11141-16-5	Aroclor-1232	1.	UJ	1.1	UJ	1.1	UJ	1.1	UJ	1.1	UJ	1.1	UJ
53469-21-9	Aroclor-1242	1.	UJ	1.1	UJ	1.1	UJ	1.1	UJ	1.1	UJ	1.1	UJ
12672-29-6	Aroclor-1248	1.	UJ	1.1	UJ	1.1	UJ	1.1	UJ	1.1	UJ	1.1	UJ
11097-69-1	Aroclor-1254	1.	UJ	1.1	UJ	1.1	UJ	1.1	UJ	1.1	UJ	1.1	UJ
11096-82-5	Aroclor-1260	1.	UJ	1.1	UJ	1.1	UJ	1.1	UJ	1.1	UJ	1.1	UJ

*** Validation Complete ***

NAS PENSACOLA Site 10
Groundwater Samples
Phase I

SVOA															
	SAMPLE ID →	010-G-GM06-00		010-G-GSOI-00		010-G-GS02-00		010-G-GS03-00		010-G-GS04-00		010-G-GS05-00	
	ORIGINAL ID →	10GGM06		10GS01		10GS02		10GS03		10GS04		10GS05	
	LAB SAMPLE ID →	2666.2		2642.5		2644.1		2645.0		2646.8		2647.6	
	ID FROM REPORT →	10GGM06		10GS01		10GS02		10GS03		10GS04		10GS05	
	SAMPLE DATE →	02/14/94		02/14/94		02/14/94		02/14/94		02/14/94		02/14/94	
	DATE EXTRACTED →	02/15/94		02/15/94		02/15/94		02/15/94		02/15/94		02/15/94	
	DATE ANALYZED →	02/26/94		02/26/94		02/26/94		02/26/94		02/26/94		02/26/94	
	MATRIX →	Water		Uater		Water		Water		Water		Water	
	UNIIS →	UG/L		UG/L		UG/L		UGiL		UGiL		UG/L	
CAS #	Parameter	CT513	VAL	CT513	VAL	CT513	VAL	CT513	VAL	CT513	VAL	CT513	VAL
120-82-1	1,2,4-Trichlorobenzene	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
95-50-1	1,2-Dichlorobenzene	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
541-73-1	1,3-Dichlorobenzene	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
106-46-7	1,4-Dichlorobenzene	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
95-95-4	2,4,5-Trichlorophenol	28.	U	27.	U	28.	U	28.	U	28.	U	26.	U
88-06-2	2,4,6-Tr ichlorophenol	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
120-83-2	2,4-Dichlorophenol	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
105-67-9	2,4-Dimethylphenol	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
51-28-5	2,4-Dinitrophenol	28.	U	27.	U	28.	U	28.	U	28.	U	26.	U
121-14-2	2,4-Dinitrotoluene	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
606-20-2	2,6-Dinitrotoluene	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
91-58-7	2-Chloronaphthalenc	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
95-57-8	2-Chlorophenol	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
91-57-6	2-nethylnaphthalene	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
95-48-7	2-Methylphenol (o-Cresol)	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
88-74-4	2-Nitroaniline	28.	U	27.	U	28.	U	28.	U	28.	U	26.	U
88-75-5	2-Nitrophenol	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
91-94-1	3,3'-Dichlorobenzidine	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
99-09-2	3-Nitroaniline	28.	U	27.	U	28.	U	28.	U	28.	U	26.	U
534-52-1	4,6-Dinitro-2-methylphenol	28.	U	27.	U	28.	U	28.	U	28.	U	26.	U
101-55-3	4-Bromophenyl-phenylether	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
59-50-7	4-Chloro-3-methylphenol	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
106-47-8	4-Chloroaniline	11:	U	11.	U	11.	U	11.	U	11.	U	10.	U
7005-72-3	4-Chlorophenyl-phenylcthcr	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
106-44-5	4-Mcthylphenol (p-Cresol)	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
100-01-6	4-Nitroaniline	28.	U	27.	U	28.	U	28.	U	28.	U	26.	U
100-02-7	4-Nitrophenol	28.	U	27.	U	28.	U	28.	U	28.	U	26.	U
83-32-9	Acenaphthene	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
208-96-8	Acenaphthylene	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
120-12-7	Anthracene	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
56-55-3	Benzo(a)anthracene	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
50-32-8	Benzo(a)pyrene	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
205-99-2	Benzo(b)fluoranthene	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
191-24-2	Benzo(g,h,i)perylene	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
207-08-9	Benzo(k)fluoranthene	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
85-68-7	Butylbenzylphthalate	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U

** Validation Complete ***

NAS PENSACOLA Site 10
Groundwater Samples
Phase I

SVOA													
	SAMPLE ID →	010-G-GM06-00		010-G-GS01-00		010-G-GS02-00		010-G-GS03-00		010-G-GS04-00		010-G-GS05-00	
	ORIGINAL ID →	10GGM06		10GS01		10GS02		10GS03		10GS04		10GS05	
	LAB SAMPLE ID →	2666.2		2642.5		2644.1		2645.0		2646.8		2647.6	
	ID FROM REPORT →	10GGM06		10GS01		10GS02		106503		10GS04		10GS05	
	SAMPLE DATE →	02/14/94		02/14/94		02/14/94		02/14/94		02/14/94		02/14/94	
	DATE EXTRACTED →	02/15/94		02/15/94		02/15/94		02/15/94		02/15/94		02/15/94	
	DATE ANALYZED →	02/26/94		02/26/94		02/26/94		02/26/94		02/26/94		02/26/94	
	MATRIX →	Uater		Uater		Uater		Uater		Uater		Uater	
	UNITS →	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	CT513	VAL	CT513	VAL	CT513	VAL	CT513	VAL	CT513	VAL	CT513	VAL
86-74-8	Carbazole	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
218-01-9	Chrysene	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
84-74-2	Di-n-butylphthalate	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
117-84-0	Di-n-octylphthalate	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
53-70-3	Dibenzo(a,h)anthracene	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
132-64-9	Dibenzofuran	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
84-66-2	Diethylphthalate	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
131-11-3	Dimethylphthalate	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
206-44-0	Fluoranthene	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
86-73-7	Fluorene	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
118-74-1	Hexachlorobmzme	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
87-68-3	Hexachlorobutadiene	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
77-47-4	Hexachlorocyclopentadiene	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
67-72-1	Hexachloroethane	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
78-59-1	Isophorone	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
621-64-7	N-Nitroso-di-n-propylamine	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
86-uF6	N-Nitrosodiphenylamine	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
91-20-3	Naphthalene	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
98-95-3	Nitrobenzene	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
87-86-5	Pentachlorophenol	28.	U	27.	U	28.	U	28.	U	28.	U	26.	U
85-01-8	Phenanthrene	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
108-95-2	Phenol	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
129-00-0	Pyrene	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
111-91-1	bis(2-Chloroethoxy)methane	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
111-44-4	bis(2-Chloroethyl)ether	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	11.	U	11.	U	11.	U	11.	U	11.	U	10.	U

*** Validation Complete ***

Phase I

VOA													
	SAMPLE ID →	010-G-GM06-00		010-G-GS01-00		010-G-GS02-00		010-G-GS03-00		010-G-GS04-00		010-G-GS05-00	
	ORIGINAL ID →	10GGM06		10GS01		10GS02		10GS03		10GS04		10GS05	
	LAB SAMPLE ID →	2666.2		2642.5		2644.1		2645.0		2646.8		2647.6	
	ID FROM REPORT →	10GGM06		10GS01		10GS02		10GS03		10GS04		10GS05	
	SAMPLE DATE →	02/14/94		02/11/94		02/11/94		02/14/94		02/11/94		02/11/94	
	DATE ANALYZED →	02/18/94		02/17/94		02/17/94		02/17/94		02/17/94		02/17/94	
	MATRIX →	Uater		Uater		Water		Water		Uater		Water	
	UNITS →	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	CT513	VAL	CT513	VAL	CT513	VAL	CT513	VAL	CT513	VAL	CT513	VAL
71-55-6	1,1,1-Trichloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-34-3	1,1-Dichloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-35-4	1,1-Dichloroethene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
107-06-2	1,2-Dichloroethane	10.	U	10.	U	10.	U	10.	U	IO.	U	10.	U
540-59-0	1,2-Dichloroethene (total)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
78-87-5	1,2-Dichloropropane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
78-93-3	2-Butanone (MEK)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
591-78-6	2-Hexanone	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
67-64-1	Acetone	10.	U	10.	U	3.	J	3.	J	10.	U	3.	J
71-43-2	Benzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-27-4	Bromodichloromethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-25-2	Bromoform	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
74-83-9	Bromomethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-15-0	Carbon disulfide	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
56-23-5	Carbon tetrachloride	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
108-90-7	Chlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-00-3	Chloroethane	IO.	U	10.	U	10.	U	10.	U	10.	U	10.	U
67-66-3	Chloroform	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
74-87-3	Chloromethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
124-48-1	Dibromochloromethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
100-41-4	Ethylbenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75-09-2	Methylene chloride	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
100-42-5	Styrene	10.	U	10.	U	10.	U	10.	U	10.	U	IO.	U
127-18-4	Tetrachloroethene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
108-88-3	Toluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
79-01-6	Trichloroethene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
75M-4	Vinyl chloride	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
1330-20-7	m+p-Xylenes	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
10061-01-5	cis-1,3-Dichloropropene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
10061-02-6	trans-1,3-Dichloropropene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

NAS PENSACOLA Site 10
Groundwater Samples
Phase I

METAL

SAMPLE ID →	010-H-GS05-00 D
ORIGINAL ID →	10GS05D
LAB SAMPLE ID →	X26484
ID FROM REPORT →	10GS05D
SAMPLE DATE →	02/14/94
MATRIX →	Water
UNITS →	UG/L

CAS #	Parameter	C1513	VAL
AL	Aluminum	99.6	
SB	Antimony	36.	UJ
AS	Arsenic	4.	U
BA	Barium	6.1	U
BE	Beryllium	3.	U
CD	Cadmium	5.	U
CA	Calcium	18600.	
CR	Chromium	4.	UJ
CO	Cobalt	6.	UJ
CU	Copper	3.	UJ
CN	Cyanide	10.	U
FE	Iron	66.	
PB	Lead	2.	U
RG	Magnesium	1930.	
RN	Manganese	4.4	J
HG	Mercury	0.2	U
N I	Nickel	15.	UJ
K	Potassium	1360.	J
SE	Selenium	5.	U
AG	Silver	6.	UJ
NA	Sodium	7400.	
TL	Thallium	8.	U
V	Vanadium	6.	U
ZN	Zinc	13.2	U

*** Validation Complete ***

NAS PENSACOLA Site 10
Groundwater Samples
Phase I

PEST

SAMPLE ID →	H10-H-GS05-00 D
ORIGINAL ID →	10GS05D
LAB SAMPLE ID →	C21506
ID FROM REPORT →	10GS05D
SAMPLE DATE →	02/14/94
DATE EXTRACTED →	02/15/94
DATE ANALYZED →	02/27/94
MATRIX →	Water
UNITS →	UG/L

CAS #	Parameter	CT513	VAL
319-84-6	alpha-BHC	0.054	UJ
319-85-7	beta-BHC	0.054	UJ
319-86-8	delta-BHC	0.054	UJ
58-89-9	gamma-BHC (Lindane)	0.054	UJ
76-44-8	Heptachlor	0.054	UJ
309-00-2	Aldrin	0.054	UJ
1024-57-3	Heptachlor epoxide	0.054	UJ
959-98-8	Endosulfan I	0.054	UJ
60-57-1	Dieldrin	0.11	UJ
72-55-9	4,4'-DDE	0.11	UJ
72-20-8	Endrin	0.11	UJ
33213-65-9	Endosulfan II	0.11	UJ
72-54-8	4,4'-DDD	0.11	UJ
1031-07-8	Endosulfan sulfate	0.11	UJ
50-29-3	4,4'-DDT	0.11	UJ
72-43-5	Methoxychlor	0.54	UJ
53494-70-5	Endrin ketone	0.11	UJ
7421-93-4	Endrin aldehyde	0.11	UJ
5103-71-9	a1pha-Chlordane	0.054	UJ
5103-74-2	gamma-Chlordane	0.054	UJ
8001-35-2	Toxaphene	5.4	UJ
12674-11-2	Aroclor-1016	1.1	UJ
11104-28-2	Aroclor-1221	2.2	UJ
11141-16-5	Aroclor-1232	1.1	UJ
53469-21-9	Aroclor-1242	1.1	UJ
12672-29-6	Aroclor-1248	1.1	UJ
11097-69-1	Aroclor-1254	1.1	UJ
11096-82-5	Aroclor-1260	1.1	UJ

*** Validation Complete ***

NAS PENSACOLA Site 10
Groundwater Samples
Phase I

		010-H-GS05-00 D 10GS05D 2648.4 10GS05D 02/14/94 02/15/94 02/26/94 Water					
	UNITS →	UG/L					
CAS #	Parameter	CT513	VAL				
120-82-1	1,2,4-Trichlorobenzene	10.	U				
95-50-1	1,2-Dichlorobenzene	10.	U				
541-73-1	1,3-Dichlorobenzene	10.	U				
106-46-7	1,4-Dichlorobenzene	10.	U				
95-95-4	2,4,5-Trichlorophenol	26.	U				
88-06-2	2,4,6-Trichlorophenol	10.	U				
120-83-2	2,4-Dichlorophenol	10.	U				
105-67-9	2,4-Dimethylphenol	10.	U				
51-28-5	2,4-Dinitrophenol	26.	U				
121-14-2	2,4-Dinitrotoluene	10.	U				
606-20-2	2,6-Dinitrotoluene	10.	U				
91-58-7	2-Chloronaphthalene	10.	U				
95-57-8	2-Chlorophenol	10.	U				
91-57-6	2-methylnaphthalene	10.	U				
95-48-7	2-methylphenol (o-Cresol)	10.	U				
88-74-4	2-Nitroaniline	26.	U				
88-75-5	2-Nitrophenol	10.	U				
91-94-1	3,3'-Dichlorobenzidine	10.	U				
99-09-2	3-Nitroaniline	26.	U				
534-52-1	4,6-Dinitro-2-methylphenol	26.	U				
101-55-3	4-Bromophenyl-phenylether	10.	U				
59-50-7	4-chloro-3-methylphenol	10.	U				
106-47-8	4-Chloroaniline	10.	U				
7005-72-3	4-Chlorophenyl-phenyl ether	10.	U				
106-44-5	4-Methylphenol (p-Cresol)	10.	U				
100-01-6	4-Nitroaniline	26.	U				
100-02-7	4-Nitrophenol	26.	U				
83-32-9	Acenaphthene	10.	U				
208-96-8	Acenaphthylene	10.	U				
120-12-7	Anthracene	10.	U				
56-55-3	Benzo(a)anthracene	10.	U				
50-32-8	Benzo(a)pyrene	10.	U				
205-99-2	Benzo(b)fluoranthene	10.	U				
191-24-2	Benzo(g,h,i)perylene	10.	U				
207-08-9	Benzo(k)fluoranthene	10.	U				
85-68-7	Butylbenzylphthalate	10.	U				

*** Validation Complete ***

NAS PENSACOLA Site 10
Groundwater Samples
Phase I

		010-H-GS05-00 D 10GS05D 2648.4 10GS05D 02/14/94 02/15/94 02/26/94 Water					
	UNITS →	UG/L					
CAS #	Parameter	CT513	VAL				
86-74-8	Carbazole	10.	U				
218-01-9	Chrysene	10.	U				
84-74-2	Di-n-butylphthalate	10.	U				
117-84-0	Di-n-octylphthalate	10.	U				
53-70-3	Dibenzo(a,h)anthracene	10.	U				
132-64-9	Dibenzofuran	10.	U				
84-66-2	Diethylphthalate	10.	U				
131-11-3	Dimethylphthalate	10.	U				
206-44-0	Fluoranthene	10.	U				
86-73-7	Fluorene	10.	U				
118-74-1	Hexachlorobenzene	10.	U				
87-68-3	Hexachlorobutadiene	10.	U				
77-47-4	Hexachlorocyclopentadiene	10.	U				
67-72-1	Hexachloroethane	10.	U				
193-39-5	Indeno(1,2,3-cd)pyrene	10.	U				
78-59-1	Isophorone	10.	U				
621-64-7	N-Nitroso-di-n-propylamine	10.	U				
86-30-6	N-Nitrosodiphenylamine	10.	U				
91-20-3	Naphthalene	10.	U				
98-95-3	Nitrobenzene	10.	U				
87-86-5	Pentachlorophenol	26.	U				
85-01-8	Phenanthrene	10.	U				
108-95-2	Phenol	10.	U				
129-00-0	Pyrene	10.	U				
111-91-1	bis(2-Chloroethoxy)methane	10.	U				
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	10.	U				
111-44-4	bis(2-Chloroethyl)ether	10.	U				
108-60-1	2,2'-oxybis(1-Chloropropane)	10.	U				

*** Validation Complete ***

NAS PENSACOLA Site 10
Groundwater Samples
Phase I

VOA

SAMPLE ID ——>	010-H-GS05-00
ORIGINAL ID ——>	10GS05D
LAB SAMPLE ID ——>	2648.4
ID FROM REPORT ——>	10GS05D
SAMPLE DATE ——>	02/11/94
DATE ANALYZED ——>	02/17/94
MATRIX ——>	Water
UNITS ——>	UG/L

CAS #	Parameter	CT513	VAL
71-55-6	1,1,1-Trichloroethane	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
75-34-3	1,1-Dichloroethane	10.	U
75-35-4	1,1-Dichloroethene	10.	U
107-06-2	1,2-Dichloroethane	10.	U
540-59-0	1,2-Dichloroethene (total)	10.	U
78-87-5	1,2-Dichloropropane	10.	U
78-93-3	2-Butenone (MEK)	10.	U
591-78-6	2-Hcxanonc	10.	U
108-10-1	4-Methyl-2-Pcntanonc (MIBK)	10.	U
67-64-1	Acetone	2.	J
71-43-2	Benzene	10.	U
75-27-4	Bromodichloromethane	10.	U
75-25-2	Bromoform	10.	U
74-83-9	Bromomethane	10.	U
75-15-0	Carbon disulfide	10.	U
56-23-5	Carbon tetrachloride	10.	U
108-90-7	Chlorobenzene	10.	U
75-00-3	Chloroethane	10.	U
67-66-3	Chloroform	10.	U
74-87-3	Chloromethanc	10.	U
124-48-1	Dibromochloromethane	10.	U
100-41-4	Ethylbenzene	10.	U
75-09-2	Methylene chloride	10.	U
100-42-5	Styrene	IO.	U
127-18-4	Tetrachloroethene	10.	U
108-88-3	Toluene	10.	U
79-01-6	Trichloroethene	10.	U
75-01-4	Vinyl chloride	10.	U
1330-20-7	m+p-Xylenes	10.	U
10061-01-5	cis-1,3-Dichloropropene	10.	U
10061-02-6	trans-I,3-Dichloropropene	10.	U

*** Validation Complete ***

Site 10

Phase I Soil Samples

NAS PENSACOLA Site 10
Soil Samples
Phase I

		010-S-0001-01 10S0101 39224-012 10S0101 02/04/94 Soi 1 MG/KG		010-C-OOOI-01 D 10S0101D 39224-013 10SOI01D 02/04/94 Soi 1 MG/KG		010-S-0001-03 10S0103 39224-014 10SOI03 32/04/94 Soi 1 MG/KG		010-S-0001-05 10S0105 39224-015 10SOI05 02/04/94 Soi 1 MG/KG			
CAS #	Parameter	CT506	VAL	CT506	VAL	CT506	VAL	CT506	VAL		
AL	Aluminum	752.	J	972.	J	1010.	J	1110.	J		
SB	Antimony	2.6	UJ	2.6	UJ	2.4	UJ	2.	UJ		
AS	Arsenic	0.48	U	0.48	U	0.44	U	0.36	U		
BA	Barium	2.4	U	2.5	U	1.1	U	1.4	U		
BE	Beryllium	0.07	U	0.07	U	0.06	U	0.05	U		
CD	Cadmium	0.35	U	0.35	U	0.32	U	0.26	U		
CA	Calcium	75.9		92.1		14.3	U	18.2	U		
CR	Chromium	1.7	J	1.7	J	0.84	J	2.	J		
CO	Cobalt	0.53	UJ	0.53	UJ	0.49	UJ	0.4	UJ		
CU	Copper	0.43	UJ	0.43	UJ	0.39	UJ	0.33	UJ		
CN	Cyanide	0.09		0.1	U	0.09		0.08	U		
FE	Iron	820.	J	8%.	J	1050.	J	1100.	J		
PB	Lead	23.4		24.9		1.7		0.72	U		
MG	Magnesium	26.7	J	31.1	J	22.5	J	37.4	J		
MN	Manganese	19.2		21.2		12.2		6.7			
HG	Mercury	0.03	UJ	0.02	UJ	0.15	J	0.02	UJ		
NI	Nickel	1.7	U	1.7	U	1.6	U	1.3	U		
K	Potassium	108.	UJ	108.	UJ	98.6	UJ	81.6	UJ		
SE	Selenium	0.28	UJ	0.28	UJ	0.26	UJ	0.21	UJ		
AG	Silver	0.6	U	0.6	UJ	0.55	UJ	0.45	UJ		
NA	Sodium	5.3		7.6		5.7		5.			
TL	Thallium	0.46	UJ	0.47	UJ	0.43	UJ	0.35	UJ		
V	Vanadium	2.	UJ	2.3	UJ	1.3	UJ	1.8	UJ		
ZN	Zinc	5.1	J	5.4	J	1.9	UJ	1.6	UJ		

*** Validation Complete ***

NAS PENSACOLA Site 10
Soil Samples
Phase I

PEST															
	SAMPLE ID →	010-S-0001-01		010-S-0001-01 DDL		010-S-0001-01 DL		010-C-0001-01 D		010-S-0001-03		MO-S-0001-05	
	ORIGINAL ID →	10S0101		10S0101DDL		10S0101DL		10S0101D		10S0103		10S0105	
	LAB SAMPLE ID →	39224-1		39224-2DL		39224-1DL		39224-2		39224-3		39224-4	
	ID FROM REPORT →	10S0101		10S0101DDL		10S0101DL		10S0101D		10S0103		10S0105	
	SAMPLE DATE →	02/04/94		02/04/94		02/04/94		02/04/94		02/04/94		02/04/94	
	DATE EXTRACTED →	02/08/94		02/08/94		02/08/94		02/08/94		02/08/94		02/08/94	
	DATE ANALYZED →	02/16/94		02/16/94		02/16/94		02/16/94		02/14/94		02/14/94	
	MATRIX →	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS →	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	CT506	VAL	CT506	VAL	CT506	VAL	CT506	VAL	CT506	VAL	CT506	VAL
319-84-6	alpha-BHC	8.8	UJ	89.	UJ	88.	UJ	8.9	U	1.8	U	1.8	U
319-85-7	beta-BHC	8.8	UJ	89.	UJ	88.	UJ	8.9	U	1.8	U	1.8	U
319-86-8	delta-BHC	8.8	UJ	89.	UJ	88.	UJ	8.9	U	1.8	U	1.8	U
58-89-9	gamma-BHC (Lindane)	8.8	UJ	89.	UJ	88.	UJ	8.9	U	1.8	U	1.8	U
76-44-8	Heptachlor	8.8	UJ	89.	UJ	88.	UJ	8.9	U	1.8	U	1.8	U
309-00-2	Aldrin	8.8	UJ	89.	UJ	88.	UJ	8.9	U	1.8	U	1.8	U
1024-57-3	Heptachlor epoxide	8.8	UJ	89.	UJ	88.	UJ	8.9	U	1.8	U	1.8	U
959-98-8	Endosulfan I	8.8	UJ	89.	UJ	88.	UJ	8.9	U	1.8	U	1.8	U
60-57-1	Dieldrin	710.	J	710.	J	650.	J	790.		3.4	U	3.5	U
72-55-9	4,4'-DDE	23.	J	170.	UJ	170.	UJ	24.		3.4	U	3.5	U
72-20-8	Endrin	17.	UJ	170.	UJ	170.	UJ	17.	U	3.4	U	3.5	U
33213-65-9	Endosulfan II	17.	UJ	170.	UJ	170.	UJ	17.	U	3.4	U	3.5	U
72-54-8	4,4'-DDD	17.	UJ	170.	UJ	170.	UJ	17.	U	3.4	U	3.5	U
1031-07-8	Endosulfan sulfate	17.	UJ	170.	UJ	170.	UJ	17.	U	3.4	U	3.5	U
50-29-3	4,4'-DDT	16.	J	170.	UJ	170.	UJ	17.	J	3.4	U	3.5	U
72-43-5	Methoxychlor	88.	UJ	890.	UJ	880.	UJ	89.	U	18.	U	18.	U
53494-70-5	Endrin ketone	17.	UJ	170.	UJ	170.	UJ	17.	U	3.4	U	3.5	U
7421-93-4	Endrin aldehyde	17.	UJ	170.	UJ	170.	UJ	17.	U	3.4	U	3.5	U
5103-71-9	alpha-Chlordane	8.8	UJ	89.	UJ	88.	UJ	8.9	U	1.8	U	1.8	U
5103-74-2	gamma-Chlordane	8.8	UJ	89.	UJ	88.	UJ	8.9	U	1.8	U	1.8	U
8001-35-2	Toxaphene	880.	UJ	8900.	UJ	8800.	UJ	890.	U	180.	U	180.	U
12674-11-2	Aroclor-1016	170.	UJ	1700.	UJ	1700.	UJ	170.	U	34.	U	35.	U
11104-28-2	Aroclor-1221	350.	UJ	3500.	UJ	3500.	UJ	350.	U	70.	U	71.	U
11141-16-5	Aroclor-1232	170.	UJ	1700.	UJ	1700.	UJ	170.	U	34.	U	35.	U
53469-21-9	Aroclor-1242	170.	UJ	1700.	UJ	1700.	UJ	170.	U	34.	U	35.	U
12672-29-6	Aroclor-1248	170.	UJ	1700.	UJ	1700.	UJ	170.	U	34.	U	35.	U
11097-69-1	Aroclor-1254	170.	UJ	1700.	UJ	1700.	UJ	170.	U	34.	U	35.	U
11096-82-5	Aroclor-1260	170.	UJ	1700.	UJ	1700.	UJ	170.	U	34.	U	35.	U

*** Validation Complete ***

NAS PENSACOLA Site 10
Soil Samples
Phase I

SVOA									
	SAMPLE ID ——>	010-S-0001-01		010-C-0001-01 D		010-S-0001-03		010-S-0001-05	
	ORIGINAL ID ——>	10S0101		10S0101D		10S0103		10S0105	
	LAB SAMPLE ID ——>	39224-1		39224-2		39224-3		39224-4	
	ID FROM REPORT ——>	10S0101		10S0101D		10S0103		10S0105	
	SAMPLE DATE ——>	02/04/94		02/04/94		02/04/94		02/04/94	
	DATE EXTRACTED ——>	02/08/94		02/08/94		02/08/94		02/08/94	
	DATE ANALYZED ——>	02/12/94		02/12/94		02/12/94		02/12/94	
	MATRIX ——>	Soil		Soil		Soil		Soil	
	UNITS ——>	UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	CT506	VAL	CT506	VAL	CT506	VAL	CT506	VAL
120-82-1	1,2,4-Trichlorobenzene	340.	U	350.	U	340.	U	350.	U
95-50-1	1,2-Dichlorobenzene	340.	U	350.	U	340.	U	350.	U
541-73-1	1,3-Dichlorobenzene	340.	U	350.	U	340.	U	350.	U
106-46-7	1,4-Dichlorobenzene	340.	U	350.	U	340.	U	350.	U
95-95-4	2,4,5-Trichlorophenol	830.	U	840.	U	830.	U	850.	U
88-06-2	2,4,6-Trichlorophenol	340.	U	350.	U	340.	U	350.	U
120-83-2	2,4-Dichlorophenol	340.	U	350.	U	340.	U	350.	U
105-67-9	2,4-Dimethylphenol	340.	U	350.	U	340.	U	350.	U
51-28-5	2,4-Dinitrophenol	830.	U	840.	U	830.	U	850.	U
121-14-2	2,4-Dinitrotoluene	340.	U	350.	U	340.	U	350.	U
606-20-2	2,6-Dinitrotoluene	340.	U	350.	U	340.	U	350.	U
91-58-7	2-Chloronaphthalene	340.	U	350.	U	340.	U	350.	U
95-57-8	2-Chlorophenol	340.	U	350.	U	340.	U	350.	U
91-57-6	2-Methy l~phthalene	340.	U	350.	U	340.	U	350.	U
95-48-7	2-Methylphenol (o-Cresol)	340.	U	350.	U	340.	U	350.	U
88-74-4	2-Nitroaniline	830.	U	840.	U	830.	U	850.	U
88-75-5	2-Nitrophenol	340.	U	350.	U	340.	U	350.	U
91-94-1	3,3'-Dichlorobenzidine	340.	U	350.	U	340.	U	350.	U
99-09-2	3-Nitroaniline	830.	U	840.	U	830.	U	850.	U
534-52-1	4,6-Dinitro-2-methylphenol	830.	U	840.	U	830.	U	850.	U
101-55-3	4-Bromophenyl-phenylether	340.	U	350.	U	340.	U	350.	U
59-50-7	4-Chloro-3-methylphenol	340.	U	350.	U	340.	U	350.	U
106-47-8	4-Chloroaniline	340.	U	350.	U	340.	U	350.	U
7005-72-3	4-Chlorophenyl-phenylether	340.	U	350.	U	340.	U	350.	U
106-44-5	4-Rethylphenol (p-Cresol)	340.	U	350.	U	340.	U	350.	U
100-01-6	4-Nitromiline	830.	U	840.	U	830.	U	850.	U
100-02-7	4-Nitrophenol	830.	U	840.	U	830.	U	850.	U
83-32-9	Acenaphthene	340.	U	350.	U	340.	U	350.	U
208-96-8	Acenaphthylene	340.	U	350.	U	340.	U	350.	U
120-12-7	Anthracene	340.	U	350.	U	340.	U	350.	U
56-55-3	Benzo(a)anthracene	340.	U	350.	U	340.	U	350.	U
50-32-8	Benzo(a)pyrene	340.	U	350.	U	340.	U	350.	U
205-99-2	Benzo(b)flwranthene	340.	U	350.	U	340.	U	350.	U
191-24-2	Benzo(g,h,i)perylene	340.	U	350.	U	340.	U	350.	U
207-08-9	Benzo(k)fluoranthene	340.	U	350.	U	340.	U	350.	U
85-68-7	Butylbenzylphthalate	340.	U	350.	U	340.	U	350.	U

NAS PENSACOLA Site 10
Soil Samples
Phase I

SVOA									
SAMPLE ID →	010-S-0001-01		010-C-0001-01 D		010-S-0001-03		010-S-0001-05		
ORIGINAL ID →	10S0101		10S0101D		10S0103		10S0105		
LAB SAMPLE ID →	39224-1		39224-2		39224-3		39224-4		
ID FROM REPORT →	10S0101		10S0101D		10S0103		10S0105		
SAMPLE DATE →	02/04/94		02/04/94		02/04/94		02/04/94		
DATE EXTRACTED →	02/08/94		02/08/94		02/08/94		02/08/94		
DATE ANALYZED →	02/12/94		02/12/94		02/12/94		02/12/94		
MATRIX →	Soil		Soil		Soil		Soil		
UNITS →	UG/KG		UG/KG		UG/KG		UG/KG		
CAS # Parameter	CT506	VAL	CT506	VAL	CT506	VAL	CT506	VAL	
86-74-8 Carbazole	340.	U	350.	U	340.	U	350.	U	
218-01-9 Chrysene	340.	U	350.	U	340.	U	350.	U	
84-74-2 Di-n-butylphthalatc	340.	U	350.	U	340.	U	350.	U	
117-84-0 Di-n-octylphthalatc	340.	U	350.	U	340.	U	350.	U	
53-70-3 Dibenzo(a,h)anthracene	340.	U	350.	U	340.	U	350.	U	
132-64-9 Dibenzofuran	340.	U	350.	U	340.	U	350.	U	
84-66-2 Diethylphthalate	340.	U	350.	U	340.	U	350.	U	
131-11-3 Dincthylphthalatc	340.	U	350.	U	340.	U	350.	U	
206-44-0 Fluoranthenc	340.	U	350.	U	340.	U	350.	U	
86-73-7 Fluorene	340.	U	350.	U	340.	U	350.	U	
118-74-1 Hexachlorobenzene	340.	U	350.	U	340.	U	350.	U	
87-68-3 Hcxachlorobutadiene	340.	U	350.	U	340.	U	350.	U	
77-47-4 Hexachlorocyclopentadiene	340.	U	350.	U	340.	U	350.	U	
67-72-1 Hexachloroethane	340.	U	350.	U	340.	U	350.	U	
193-39-5 Indeno(1,2,3-cd)pyrene	340.	U	350.	U	340.	U	350.	U	
78-59-1 Isophorone	340.	U	350.	U	340.	U	350.	U	
621-64-7 N-Nitroso-di-n-prupylaninc	340.	U	350.	U	340.	U	350.	U	
86-30-6 N-Nitrosodiphenylamine	340.	U	350.	U	340.	U	350.	U	
91-20-3 Naphthalene	340.	U	350.	U	340.	U	350.	U	
98-95-3 Nitrobenzene	340.	U	350.	U	340.	U	350.	U	
87-86-5 Pentachlorophenol	830.	U	840.	U	830.	U	850.	U	
85-01-8 Phenanthrene	340.	U	350.	U	340.	U	350.	U	
108-95-2 Phenol	340.	U	350.	U	340.	U	350.	U	
129-00-0 Pyrmc	340.	U	350.	U	340.	U	350.	U	
111-91-1 bis(2-Chloroethoxy)methane	340.	U	350.	U	340.	U	350.	U	
117-81-7 bis(2-Ethylhexyl)phthalate (BEHP)	340.	U	350.	U	340.	U	350.	U	
111-44-4 bis(2-Chlorocthy l)ether	340.	U	350.	U	340.	U	350.	U	
108-60-1 2,2'-oxybis(1-Chloropropane)	340.	U	350.	U	340.	U	350.	U	

*** Validation Complete ***

NAS PENSACOLA Site 10
Soil Samples
Phase I

VOA									
	SMPLE ID →	010-S-0001-01		010-C-0001-01 D		010-S-0001-03		010-S-0001-05	
	ORIGINAL ID →	10S0101		10S0101D		10S0103		10S0105	
	LAB SAMPLE ID →	39224-23		39224-24		39224-25		39224-26	
	ID FROM REPORT →	10S0101		10S0101D		10S0103		10S0105	
	SAMPLE DATE →	02/04/94		02/04/94		02/04/94		02/04/94	
	DATE EXTRACTED →	02/08/94		02/08/94		02/08/94		02/08/94	
	DATE ANALYZED →	02/11/94		02/11/94		02/11/94		02/11/94	
	MATRIX →	Soil		Soil		Soil		Soil	
	UNITS →	UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	CT506	VAL	CT506	VAL	CT506	VAL	CT506	VAL
71-55-6	1,1,1-Trichloroethane	10.	U	10.	U	10.	U	11.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U	10.	U	10.	U	11.	U
79-00-5	1,1,2-Trichloroethane	10.	U	10.	U	10.	U	11.	U
75-34-3	1,1-Dichloroethane	10.	U	10.	U	10.	U	11.	U
75-35-4	1,1-Dichloroethene	10.	U	10.	U	10.	U	11.	U
107-06-2	1,2-Dichloroethane	10.	U	10.	U	10.	U	11.	U
540-59-0	1,2-Dichloroethene (total)	10.	U	10.	U	10.	U	11.	U
78-87-5	1,2-Dichloropropane	10.	U	10.	U	10.	U	11.	U
78-93-3	2-Butanone (MEK)	10.	U	10.	U	10.	U	11.	U
591-78-6	2-Hexanone	10.	U	10.	U	10.	U	11.	U
108-10-1	4-Hethy 1-2-pent anone (MIBK)	10.	U	10.	U	10.	U	11.	U
67-64-1	Acetone	10.	UJ	23.	U	34.	U	27.	U
71-43-2	Benzene	10.	U	10.	U	10.	U	11.	U
75-27-4	Bromodichloromethane	10.	U	10.	U	10.	U	11.	U
75-25-2	Bromoform	10.	U	10.	U	10.	U	11.	U
74-83-9	Bromomethane	10.	U	10.	U	10.	U	11.	U
75-15-0	Carbon disulfide	10.	U	10.	U	10.	U	11.	U
56-23-5	Carbon tetrachloridt	10.	U	10.	U	10.	U	11.	U
108-90-7	Chlorobenzene	10.	U	10.	U	10.	U	11.	U
75-00-3	Chloroethane	10.	U	10.	U	10.	U	11.	U
67-66-3	Chloroform	10.	U	10.	U	10.	U	11.	U
74-87-3	Chloromethane	10.	U	10.	U	10.	U	11.	U
124-48-1	Dibromochloromethane	10.	U	10.	U	10.	U	11.	U
100-41-4	Ethylbenzene	10.	U	10.	U	10.	U	11.	U
75-09-2	nethylene chloride	10.	U	10.	U	10.	U	11.	U
100-42-5	Styrene	10.	U	10.	U	10.	U	11.	U
127-18-4	Tetrachloroethene	10.	U	10.	U	10.	U	11.	U
108-88-3	Toluene	10.	U	10.	U	10.	U	11.	U
79-01-6	Trichloroethene	10.	U	10.	U	10.	U	11.	U
75-01-4	Vinyl chloride	10.	U	10.	U	10.	U	11.	U
1330-20-7	m+p-Xylenes	10.	U	10.	U	10.	U	11.	U
10061-01-5	cis-1,3-Dichloropropene	10.	U	10.	U	10.	U	11.	U
10061-02-6	trans-1,3-Dichloropropene	10.	U	10.	U	10.	U	11.	U

*** Validation Complete ***

NAS PENSACOLA Site 10
Soil Samples
Phase I

METAL													
	SAMPLE ID →	010-S-0001-07		010-S-0001-09		010-S-0001-11		010-S-0001-13		010-S-0001-15		010-C-0001-15	
	ORIGINAL ID →	10S0107		10S0109		10S0111		10S0113		10S0115		10S0115D	
	LAB SAMPLE ID →	39224-016		39224-017		39224-018		39224-019		39224-020		39224-021	
	ID FROM REPORT →	10S0107		10S0109		10S0111		10S0113		10S0115		10S0115D	
	SAMPLE DATE →	02/04/94		02/04/94		02/04/94		02/04/94		02/04/94		02/04/94	
	MATRIX →	Soil		soil		Soil		soil		Soil		Soil	
	UNITS →	MG/KG		MG/KG		MG/KG		HG/KG		MG/KG		MG/KG	
CAS #	Parameter	CT506	VAL	CT506	VAL	CT506	VAL	CT506	VAL	CT506	VAL	CT506	VAL
AL	Aluminum	1010.	J	913.	J	165.	J	208.	J	624.	J	666.	J
SB	Antimony	2.6	UJ	2.7	U	2.1	UJ	3.	UJ	3.1	UJ	3.2	UJ
AS	Arsenic	0.48	U	0.5	U	0.39	U	0.57	U	0.57	U	0.59	U
BA	Barium	2.	U	1.9	U	0.32	U	0.62	U	1.2	U	1.3	U
BE	Beryllium	0.07	U	0.07	U	0.05	U	0.08	U	0.08	U	0.08	U
CD	Cadmium	0.35	U	0.36	U	0.28	U	0.41	U	0.41	U	0.43	U
CA	Calcium	18.1	U	19.3	U	4.6	U	6.	U	13.1	U	13.9	U
CR	Chromium	1.4	J	3.	J	2.	J	3.8	J	12.9		18.1	
CO	Cobalt	0.53	UJ	0.55	UJ	0.43	U	0.63	UJ	0.63	UJ	0.65	UJ
CU	Copper	0.43	UJ	0.45	U	0.35	UJ	0.51	UJ	0.51	UJ	0.53	UJ
CN	Cyanide	0.08	U	0.09	U	0.08	U	0.09	U	0.1	U	0.08	U
FE	Iron	1070.	J	981.	J	179.		221.	J	839.	J	903.	J
PB	Lead	1.4		1.3		0.3	U	0.25	U	0.62	U	0.81	U
MG	Magnesium	49.4	J	52.4	J	3.6	J	5.6	J	15.7	J	15.9	J
MN	Hanganesc	5.9		7.5		1.7	U	2.8		8.7		9.3	
HG	Mercury	0.03	UJ	0.03	U	0.03	UJ	0.02	UJ	0.03	UJ	0.04	UJ
NI	Nickel	1.7	U	1.8	U	1.4	U	2.	U	2.1	U	2.4	
K	Potassium	108.	UJ	112.	UJ	86.7	UJ	127.	UJ	128.	UJ	132.	UJ
SE	Selenium	0.28	UJ	0.29	UJ	0.23	UJ	0.41	UJ	0.34	UJ	0.35	UJ
AG	Silver	0.6	UJ	0.62	UJ	0.48	UJ	0.7	UJ	0.71	UJ	0.73	UJ
NA	Sodium	7.		3.9	U	3.	U	4.4	U	4.4	U	4.8	
TL	Thallium	0.47	UJ	0.48	UJ	0.37	UJ	0.55	UJ	0.55	UJ	0.57	UJ
V	Vanadium	2.1	UJ	2.	UJ	0.52	UJ	0.64	UJ	1.4	UJ	1.4	UJ
ZN	Zinc	1.7	UJ	2.	UJ	0.51	UJ	0.67	UJ	1.4	UJ	1.6	UJ

*** Validation Complete ***

PEST													
	SAMPLE ID →	010-s-0001-07		010-s-Oool -09		010-5-OOOI -11		010-s-0001-13		010-s-0001-15		010-c-0001-15	
	ORIGINAL ID →	10S0107		10S0109		10S0111		10S0113		10S0115		10S0115D	
	LAB SAMPLE ID →	39224-5		39224-6		39224-7		39224-8		39224-9		39224-10	
	ID FROM REPORT →	10S0107		10S0109		10S0111		10S0113		10S0115		10S0115D	
	SAMPLE DATE →	02/04/94		02/04/94		02/04/94		02/04/94		02/04/94		02/04/94	
	DATE EXTRACTED →	02/08/94		02/08/94		02/08/94		02/08/94		02/08/94		02/08/94	
	DATE ANALYZED →	02/15/94		02/15/94		02/15/94		02/15/94		02/15/94		02/15/94	
	MATRIX →	Soil		soi 1		Soi 1		Soi 1		Soi 1		Soi 1	
	WITS →	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	CT506	VAL	CT506	VAL	CT506	VAL	CT506	VAL	CT506	VAL	CT506	VAL
319-84-6	alpha-BHC	1.8	U	1.8	UJ	1.8	U	1.8	U	1.8	UJ	1.8	UJ
319-85-7	beta-BHC	1.8	U	1.8	UJ	1.8	U	1.8	U	1.8	UJ	1.8	UJ
319-86-8	delta-BHC	1.8	U	1.8	UJ	1.8	U	1.8	U	1.8	UJ	1.8	UJ
58-89-9	gamma-BHC (Lindane)	1.8	U	1.8	UJ	1.8	U	1.8	U	1.8	UJ	1.8	UJ
76-44-8	Heptachlor	1.8	U	1.8	UJ	1.8	U	1.8	U	1.8	UJ	1.8	UJ
309-00-2	Aldrin	1.8	U	1.8	UJ	1.8	U	1.8	U	1.8	UJ	1.8	UJ
1024-57-3	Heptachlor epoxide	1.8	U	1.8	UJ	1.8	U	1.8	U	1.8	UJ	1.8	UJ
959-98-8	Endosulfan I	1.8	U	1.8	UJ	1.8	U	1.8	U	1.8	UJ	1.8	UJ
60-57-1	Dieldrin	19.		7.6	J	3.5	U	3.4	U	3.7	J	5.8	J
72-55-9	4,4'-DDE	3.5	U	3.5	UJ	3.5	U	3.4	U	3.4	UJ	3.5	UJ
72-20-8	Endrin	3.5	U	3.5	UJ	3.5	U	3.4	U	3.4	UJ	3.5	UJ
33213-65-9	Endosulfan II	3.5	U	3.5	UJ	3.5	U	3.4	U	3.4	UJ	3.5	UJ
72-54-8	4,4'-DDD	3.5	U	3.5	UJ	3.5	U	3.4	U	3.4	UJ	3.5	UJ
1031-07-8	Endosulfan sulfate	3.5	U	3.5	UJ	3.5	U	3.4	U	3.4	UJ	3.5	UJ
50-29-3	4,4'-DDT	3.5	U	3.5	UJ	3.5	U	3.4	U	3.4	UJ	3.5	UJ
72-43-5	Methoxychlor	18.	U	18.	UJ	18.	U	18.	U	18.	UJ	18.	UJ
53494-70-5	Endrin ketone	3.5	U	3.5	UJ	3.5	U	3.4	U	3.4	UJ	3.5	UJ
7421-93-4	Endrin aldehyde	. 3.5	U	3.5	UJ	3.5	U	3.4	U	3.4	UJ	3.5	UJ
5103-71-9	alpha-Chlordane	1.8	U	1.8	UJ	1.8	U	1.8	U	1.8	UJ	1.8	UJ
5103-74-2	gamma-Chlordane	1.8	U	1.8	UJ	1.8	U	1.8	U	1.8	UJ	1.8	UJ
8001-35-2	Toxaphene	180.	U	180.	UJ	180.	U	180.	U	180.	UJ	180.	UJ
12674-11-2	Aroclor-1016	35.	U	35.	UJ	35.	U	34.	U	34.	UJ	35.	UJ
11104-28-2	Aroclor-1221	70.	U	71.	UJ	71.	U	70.	U	70.	UJ	71.	UJ
11141-16-5	Aroclor-1232	35.	U	35.	UJ	35.	U	34.	U	34.	UJ	35.	UJ
53469-21-9	Aroclor-1242	35.	U	35.	UJ	35.	U	34.	U	34.	UJ	35.	UJ
12672-29-6	Aroclor-1248	35.	U	35.	UJ	35.	U	34.	U	34.	UJ	35.	UJ
11097-69-1	Aroclor-1254	35.	U	35.	UJ	35.	U	34.	U	34.	UJ	35.	UJ
11096-82-5	Aroclor-1260	35.	U	35.	UJ	35.	U	34.	U	34.	UJ	35.	UJ

NAS PENSACOLA Site 10
Soil Samples
Phase I

SVOA													
	SAMPLE ID →	010-S-0001-07		010-S-0001-09		010-S-0001-11		010-S-0001-13		010-S-0001-15		010-C-0001-15	
	ORIGINAL ID →	10S0107		10S0109		10S0111		10S0113		10S0115		10S0115D	
	LAB SAMPLE ID →	39224-5		39224-6		39224-7		39224-8		39224-9		39224-10	
	ID FROM REPORT →	10S0107		10S0109		10S0111		10S0113		10S0115		10S0115D	
	SAMPLE DATE →	02/04/94		02/04/94		02/04/94		02/04/94		02/04/94		02/04/94	
	DATE EXTRACTED →	02/08/94		02/08/94		02/08/94		02/08/94		02/08/94		02/08/94	
	DATE ANALYZED →	02/12/94		02/12/94		02/12/94		02/12/94		02/12/94		02/12/94	
	MATRIX →	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS →	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	CT506	VAL	CT506	VAL	CT506	VAL	CT506	VAL	CT506	VAL	CT506	VAL
120-82-1	1,2,4-Trichlorobenzene	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
95-50-1	1,2-Dichlorobenzene	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
541-73-1	1,3-Dichlorobenzene	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
106-46-7	1,4-Dichlorobenzene	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
95-95-4	2,4,5-Trichlorophenol	840.	U	850.	U	840.	U	830.	U	830.	U	850.	U
88-06-2	2,4,6-Trichlorophenol	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
120-83-2	2,4-Dichlorophenol	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
105-67-9	2,4-Dimethylphenol	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
51-28-5	2,4-Dinitrophenol	840.	U	850.	U	840.	U	830.	U	830.	U	850.	U
121-14-2	2,4-Dinitrotoluenc	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
606-20-2	2,6-Dinitrotoluene	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
91-58-7	2-Chloronaphthalene	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
95-57-8	2-Chlorophenol	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
91-57-6	2-Methylnaphthalene	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
95-48-7	2-Methylphenol (o-Cresol)	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
88-74-4	2-Nitroaniline	840.	U	850.	U	840.	U	830.	U	830.	U	850.	U
88-75-5	2-Nitrophenol	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
91-94-1	33 '- Dichlorobenzidine	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
99-09-2	3-Nitroaniline	840.	U	850.	U	840.	U	830.	U	830.	U	850.	U
534-52-1	4,6-Dinitro-2-methylphenol	840.	U	850.	U	840.	U	830.	U	830.	U	850.	U
101-55-3	4-Bromophenyl-phenylether	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
59-50-7	4-Chloro-3-methylphenol	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
106-47-8	4-Chloroaniline	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
7005-72-3	4-Chlorophenyl-phenyle ther	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
106-44-5	4-Methylphenol (p-Cresol)	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
100-01-6	4-Nitroaniline	840.	U	850.	U	840.	U	830.	U	830.	U	850.	U
100-02-7	4-Nitrophenol	840.	U	850.	U	840.	U	830.	U	830.	U	850.	U
83-32-9	Acenaphthene	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
208-96-8	Acenaphthylene	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
120-12-7	Anthracene	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
56-55-3	Benzo(a)anthracene	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
50-32-8	Benzo(a)pyrene	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
205-99-2	Benzo(b)fluoranthenc	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
191-24-2	Benzo(g,h,i)perylene	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
207-08-9	Benzo(k)fluoranthenc	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
85-68-7	Butylbenzylphthalate	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U

*** Validation Complete ***

NAS PENSACOLA Site 10
Soil Samples
Phase I

SVOA													
	SAMPLE ID →	010-S-0001-07		010-S-0001-09		010-S-0001-11		010-S-0001-13		010-S-0001-15		010-C-0001-15	
	ORIGINAL ID →	10S0107		10S0109		10S0111		10S0113		10S0115		39224-10	
	LAB SAMPLE ID →	39224-5		39224-6		39224-7		39224-8		39224-9			
	ID FROM REPORT →	10S0107		10S0109		10S0111		10S0113		10S0115		10S01150	
	SAMPLE DATE →	02/04/94		02/04/94		02/04/94		02/04/94		02/04/94		02/04/94	
	DATE EXTRACTED →	02/08/94		02/08/94		02/08/94		02/08/94		02/08/94		02/08/94	
	DATE ANALYZED →	02/12/94		02/12/94		02/12/94		02/12/94		02/12/94		02/12/94	
	MATRIX →	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS →	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	CT506	VAL	CT506	VAL	CT506	VAL	CT506	VAL	CT506	VAL	CT506	VAL
86-74-8	Carbazole	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
218-01-9	Chrysene	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
84-74-2	Di-n-butylphthalate	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
117-84-0	Di-n-octylphthalate	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
53-70-3	Dibenzo(a,h)anthracene	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
132-64-9	Dibenzofuran	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
84-66-2	Diethylphthalate	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
131-11-3	Dimthylphthalate	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
206-44-0	Fluoranthene	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
86-73-7	Fluorene	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
118-74-1	Hexachlorobenzene	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
87-68-3	Hexachlorobutadiene	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
77-47-4	Hexachlorocyclopentadiene	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
67-72-1	Hexachloroethane	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
193-39-5	Indeno(1,2,3-cd)pyrene	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
78-59-1	Isophorone	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
621-64-7	N-Nitroso-di-n-propylamine	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
86-30-6	N-Nitrosodiphenylamine	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
91-20-3	Naphthalene	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
98-95-3	Nitrobenzene	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
87-86-5	Pentachlorophenol	840.	U	850.	U	840.	U	830.	U	830.	U	850.	U
85-01-8	Phenanthrene	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
108-95-2	Phenol	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
129-00-0	Pyrene	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
111-91-1	bis(2-Chloroethoxy)methane	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
111-44-4	bis(2-Chloroethyl)ether	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	350.	U	350.	U	350.	U	340.	U	340.	U	350.	U

*** Validation Complete ***

NAS PENSACOLA Site 10
Soil Samples
Phase I

VOA													
	SMPLE ID →	010-S-0001-07		010-S-0001-09		010-S-0001-11		010-S-0001-13		010-S-0001-15		010-C-0001-15	
	ORIGINAL ID →	10S0107		10S0109		10S0111		10S0113		10S0115		10S0115D	
	LAB SMPLE ID →	39224-27		39224-28		39224-29		39224-30		39224-31		39224-32	
	ID FROM REPORT →	10S0107		10S0109		10S0111		10S0113		10S0115		10S0115D	
	SMPLE DATE →	02/04/94		02/04/94		02/04/94		02/04/94		02/04/94		02/04/94	
	DATE EXTRACTED →	02/08/94		02/06/94		02/08/94		02/08/94		02/08/94		02/08/94	
	DATE ANALYZED →	02/11/94		02/11/94		02/11/94		02/11/94		02/11/94		02/11/94	
	MATRIX →	Soil		Soil		Soil		Soil		soil		Soil	
	UNITS →	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	CT506	VAL	CT506	VAL	CT506	VAL	CT506	VAL	CT506	VAL	CT506	VAL
71-55-t	1,1,1-Trichloroethane	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U
79-00-5	1,1,2-Trichloroethane	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U
75-34-3	1,1-Dichloroethane	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U
75-35-4	1,1-Dichloroethene	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U
107-06-2	1,2-Dichloroethane	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U
540-59-0	1,2-Dichloroethene (total)	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U
78-87-5	1,2-Dichloropropane	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U
78-93-3	2-Butanone (MEK)	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U
591-78-6	2-Hexanone	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U
67-64-1	Acetone	47.	U	18.	U	13.	U	10.	UJ	19.	U	10.	UJ
71-43-2	Benzene	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U
75-27-4	Bromodichloromethane	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U
75-25-2	Bromoform	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U
74-83-9	Bromomethane	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U
75-15-0	Carbon disulfide	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U
56-23-5	Carbon tetrachloride	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U
108-90-7	Chlorobenzene	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U
75-00-3	Chloroethane	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U
67-66-3	Chloroform	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U
74-87-3	Chloromethane	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U
124-48-1	Dibromochloromethane	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U
100-41-4	Ethylbenzene	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U
75-09-2	Methylene chloride	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U
100-42-5	Styrene	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U
127-18-4	Tetrachloroethene	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U
108-88-3	roluenc	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U
79-01-6	rrichloroethene	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U
75-01-4	Yinyl chloride	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U
1330-20-7	m+p-Xylenes	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U
10061-07-5	cis-1,3-Dichloropropene	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U
10061-02-6	trans-1,3-Dichloropropene	11.	U	10.	U	11.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

NAS PENSACOLA Site 10
Soil samples
Phase I

CAS #	Parameter	010-S-0001-16 10S0116 39224-022 10S0116 02/04/94 Soil MG/KG		010-S-0002-01 10S0201 39220-015 10S0201 02/03/94 Soil MG/KG		010-S-0002-03 10S0203 39220-016 10S0203 02/03/94 Soil MG/KG		010-S-0002-05 10S0205 39220-017 10S0205 02/03/94 soil MG/KG		010-S-0002-07 10S0207 39220-018 10S0207 02/03/94 soil MG/KG	
		CT506	VAL	CT505	VAL	CT505	VAL	CT505	VAL	CT505	VAL
AL	Aluminum	456.	J	785.		192.		679.		1030.	
SB	Antimony	2.7	UJ	3.1	UJ	2.9	UJ	2.9	UJ	3.1	UJ
AS	Arsenic	0.5	U	0.58	U	0.53	U	0.54	U	0.58	U
BA	Barium	1.	U	6.1	J	1.2	J	3.3	UJ	5.2	J
BE	Beryllium	0.07	U	0.08	U	0.07	U	0.07	U	0.08	U
CD	Cadmium	0.36	U	0.42	U	0.39	U	0.39	U	0.42	U
CA	Calcium	31.2	U	652.	J	111.	J	561.	J	557.	J
CR	Chromium	29.1		3.3	J	1.9		4.	J	3.5	J
CO	Cobalt	0.55	UJ	0.64	U	0.59	U	0.6	U	0.63	U
CU	Copper	0.45	UJ	1.4	J	0.48	UJ	0.48	UJ	1.	J
CN	Cyanide	0.1	U	0.12		3.5		0.33		0.69	
FE	Iron	671.	J	724.	J	147.	J	903.	J	993.	J
PB	Lead	0.38	U	92.4	J	15.8	J	26.1	J	67.7	J
MG	Magnesium	12.3	J	55.9	J	8.3	J	36.6	J	66.1	J
MN	Manganese	5.9		42.1		4.3		31.8		51.4	
HG	Mercury	0.02	UJ	0.03	UJ	0.04	UJ	0.03	UJ	0.03	U
NI	Nickel	3.7		2.1	U	1.9	U	1.9	U	2.1	U
K	Potassium	111.	UJ	130.	UJ	119.	UJ	121.	UJ	129.	UJ
SE	Selenium	0.29	UJ	0.34	UJ	0.31	UJ	0.32	UJ	0.34	UJ
AG	Silver	0.62	UJ	0.72	UJ	0.66	UJ	0.67	UJ	0.71	UJ
NA	Sodium	5.		4.5	U	4.1	U	4.2	U	4.6	
TL	Thallium	0.48	UJ	0.56	UJ	0.51	UJ'	0.52	UJ	0.56	UJ
V	Vanadium	0.73	UJ	2.3	UJ	0.71	UJ	1.3	UJ	2.4	UJ
ZN	Zinc	1.2	UJ	19.9		3.5	UJ	8.4		18.	

*** Validation Complete ***

NAS PENSACOLA Site 10
Soil Samples
Phase I

CAS #	Parameter	010-S-0001-16 10S0116 39224-1 10S0116 02/04/94 02/08/94 02/15/94 Soil UG/KG		010-S-0002-01 10S0201 39220-3 10S0201 02/03/94 02/05/94 02/09/94 Soil UG/KG		010-S-0002-01 10S0201DL 39220-30L 10S0201DL 02/03/94 02/05/94 02/09/94 Soil UG/KG		010-S-0002-03 10S0203 39220-4 10S0203 02/03/94 02/05/94 02/09/94 Soil UG/KG		010-S-0002-05 10S0205 39220-5 10S0205 02/03/94 02/05/94 02/09/94 soil UG/KG		010-S-0002-07 10S0207 39220-6 10S0207 02/03/94 02/05/94 02/09/94 Soil UG/KG	
		CT506	VAL	CT505	VAL	CT505	VAL	CT505	VAL	CT505	VAL	CT505	VAL
319-84-6	alpha-BHC	2.	UJ	1.7	U	17.	UJ	1.7	UJ	1.7	U	1.8	U
319-85-7	beta-BHC	2.	UJ	1.7	U	17.	UJ	1.7	UJ	1.7	U	1.8	U
319-86-8	delta-BHC	2.	UJ	1.7	U	17.	UJ	1.7	UJ	1.7	U	1.8	U
58-89-9	gamma-BHC (Lindane)	2.	UJ	1.7	U	17.	UJ	1.7	UJ	1.7	U	1.8	U
76-44-8	Heptachlor	2.	UJ	1.7	U	17.	UJ	1.7	UJ	1.7	U	1.8	U
309-00-2	Aldrin	2.	UJ	1.7	U	17.	UJ	1.7	UJ	1.7	U	1.8	U
1024-57-3	Heptachlor epoxide	2.	UJ	1.7	U	17.	UJ	1.7	UJ	1.7	U	1.8	U
959-98-8	Endosulfan I	2.	UJ	1.7	U	17.	UJ	1.7	UJ	1.7	U	1.8	U
60-57-1	Dieldrin	3.8	UJ	69.		62.	J	4.5	J	6.5		74.	
72-55-9	4,4'-DDE	3.8	UJ	35.		34.	J	2.	J	4.7		43.	
72-20-8	Endrin	3.8	UJ	3.4	U	34.	UJ	3.4	UJ	3.4	U	3.5	U
33213-65-9	Endosulfan II	3.8	UJ	3.4	U	34.	UJ	3.4	UJ	3.4	U	3.5	U
72-54-8	4,4'-DDD	3.8	UJ	3.4	U	34.	UJ	3.4	UJ	3.4	U	3.5	U
1031-07-8	Endosulfan sulfate	3.8	UJ	3.4	U	34.	UJ	3.4	UJ	3.4	U	3.5	U
50-29-3	4,4'-DDT	3.8	UJ	42.		41.	J	2.2	J	8.4		65.	
72-43-5	Methoxychlor	20.	UJ	17.	U	170.	UJ	17.	UJ	17.	U	18.	U
53494-70-5	Endrin ketone	3.8	UJ	3.4	U	34.	UJ	3.4	UJ	3.4	U	3.5	U
7421-93-4	Endrin aldehyde	3.8	UJ	3.4	U	34.	UJ	3.4	UJ	3.4	U	3.5	U
5103-71-9	alpha-Chlordane	2.	UJ	1.7	U	17.	UJ	1.7	UJ	1.7	U	1.8	U
5103-74-2	gamma-Chlordane	2.	UJ	1.7	U	17.	UJ	1.?	UJ	1.7	U	1.8	U
8001-35-2	Toxaphene	200.	UJ	170.	U	1700.	UJ	170.	UJ	170.	U	180.	U
12674-11-2	Aroclor-1016	38.	UJ	34.	U	340.	UJ	34.	UJ	34.	U	35.	U
11104-28-2	Aroclor-1221	77.	UJ	68.	U	680.	UJ	69.	UJ	69.	U	71.	U
11141-16-5	Aroclor-1232	38.	UJ	34.	U	340.	UJ	34.	UJ	34.	U	35.	U
53469-21-9	Aroclor-1242	38.	UJ	34.	U	340.	UJ	34.	UJ	34.	U	35.	U
12672-29-6	Aroclor-1248	38.	UJ	34.	U	340.	UJ	34.	UJ	34.	U	35.	U
11097-69-1	Amclor-1254	38.	UJ	34.	U	340.	UJ	34.	UJ	34.	U	35.	U
11096-82-5	Aroclor-1260	38.	UJ	49.		340.	UJ	34.	UJ	34.	U	37.	

*** Validation Complete ***

NAS PENSACOLA Site 10
Soil Samples
Phase I

SVOA											
	SAMPLE ID →	010-S-0001-16		010-S-OOO2-01		010-S-0002-03		010-S-0002-05		010-S-0002-07	
	ORIGINAL ID →	10S0116		10S0201		10S0203		10S0205		10S0207	
	LAB SAMPLE ID →	39224-11		39220-3		39220-4		39220-5		39220-6	
	ID FROM REPORT →	10S0116		10S0201		10S0203		10S0205		10S0207	
	SAMPLE DATE →	02/04/94		02/03/94		02/03/94		02/03/94		02/03/94	
	DATE EXTRACTED →	02/08/94		02/06/94		02/06/94		02/06/94		02/06/94	
	DATE ANALYZED →	02/12/94		02/07/94		02/07/94		02/07/94		02/07/94	
	MATRIX →	Soi1		Soi1		Soi1		Soi1		Soi1	
	UNITS →	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	CT506	VAL	CT505	VAL	CT505	VAL	CT505	VAL	CT505	VAL
120-82-1	1,2,4-Trichlorobenzene	380.	U	340.	U	340.	U	340.	U	340.	U
95-50-1	1,2-Dichlorobenzene	380.	U	340.	U	340.	U	340.	U	340.	U
541-73-1	1,3-Dichlorobenzene	380.	U	340.	U	340.	U	340.	U	340.	U
106-46-7	1,4-Dichlorobenzene	380.	U	340.	U	340.	U	340.	U	340.	U
95-95-4	2,4,5-Trichlorophenol	930.	U	830.	U	820.	U	810.	U	830.	U
88-06-2	2,4,6-Trichlorophenol	380.	U	340.	U	340.	U	340.	U	340.	U
120-83-2	2,4-Dichlorophenol	380.	U	340.	U	340.	U	340.	U	340.	U
105-67-9	2,4-Dimethylphenol	380.	U	340.	U	340.	U	340.	U	340.	U
51-28-5	2,4-Dinitrophenol	930.	U	830.	U	820.	U	810.	U	830.	U
121-14-2	2,4-Dinitrotoluene	380.	U	340.	U	340.	U	340.	U	340.	U
606-20-2	2,6-Dinitrotoluene	380.	U	340.	U	340.	U	340.	U	340.	U
91-58-7	2-Chloranaphthalenc	380.	U	340.	U	340.	U	340.	U	340.	U
95-57-8	2-Chlorophenol	380.	U	340.	U	340.	U	340.	U	340.	U
91-57-6	2-Methylnaphthalene	380.	U	340.	U	340.	U	340.	U	340.	U
95-48-7	2-Methylphenol (o-Cresol)	380.	U	340.	U	340.	U	340.	U	340.	U
88-74-4	2-Nitroaniline	930.	U	830.	U	820.	U	810.	U	830.	U
88-75-5	2-Nitrophenol	380.	U	340.	U	340.	U	340.	U	340.	U
91-94-1	3,3'-Dichlorobenzidine	380.	U	340.	U	340.	U	340.	U	340.	U
99-09-2	3-NitroaniLine	930.	U	830.	U	820.	U	810.	U	830.	U
534-52-1	4,6-Dinitro-2-methylphenol	930.	U	830.	U	820.	U	810.	U	830.	U
101-55-3	4-Bromophenyl-phenylether	380.	U	340.	U	340.	U	340.	U	340.	U
59-50-7	4-Chloro-3-methylphenol	380.	U	340.	U	340.	U	340.	U	340.	U
106-47-8	4-ChlorcaniLine	380.	U	340.	U	340.	U	340.	U	340.	U
7005-72-3	4-Chlorophenyl-phenylether	380.	U	340.	U	340.	U	340.	U	340.	U
106-44-5	4-Methylphcnol (p-Cresol)	380.	U	340.	U	340.	U	340.	U	340.	U
100-01-6	4-Nitroaniline	930.	U	830.	U	820.	U	810.	U	830.	U
100-02-7	4-Nitrophenol	930.	U	830.	U	820.	U	810.	U	830.	U
83-32-9	Acenaphthene	380.	U	340.	U	340.	U	340.	U	340.	U
208-96-8	Acenaphthylene	380.	U	340.	U	340.	U	340.	U	340.	U
120-12-7	Anthracene	380.	U	340.	U	340.	U	340.	U	340.	U
56-55-3	Benzo(a)anthracene	380.	U	340.	U	340.	U	340.	U	340.	U
50-32-8	Benzo(a)pyrene	380.	U	340.	U	340.	U	340.	U	340.	U
205-99-2	Benzo(b)flwranthenc	380.	U	340.	U	340.	U	340.	U	340.	U
191-24-2	Benzo(g,h,i)perylene	380.	U	340.	U	340.	U	340.	U	340.	U
207-08-9	Benzo(k)flwranthenc	380.	U	340.	U	340.	U	340.	U	340.	U
85-68-7	Butylbenzylphthalate	380.	U	340.	U	340.	U	340.	U	340.	U

+ Validation Complete ***

SVOA											
	SAMPLE ID →	010-S-0001-16		010-S-0002-01		010-S-0002-03		010-S-0002-05		010-S-0002-07	
	ORIGINAL ID →	10S0116		10S0201		10S0203		10S0205		10S0207	
	LAB SAMPLE ID →	39224-11		39220-3		39220-4		39220-5		39220-6	
	ID FROM REPORT →	10S0116		10S0201		10S0203		10S0205		10S0207	
	SAMPLE DATE →	02/04/94		02/03/94		02/03/94		02/03/94		02/03/94	
	DATE EXTRACTED →	02/08/94		02/06/94		02/06/94		02/06/94		02/06/94	
	DATE ANALYZED →	02/12/94		02/07/94		02/07/94		02/07/94		02/07/94	
	MATRIX →	Soil		Soil		Soil		Soil		Soil	
	UNITS →	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	CT506	VAL	CT505	VAL	CT505	VAL	CT505	VAL	CT505	VAL
86-74-8	Carbazole	380.	U	340.	U	340.	U	340.	U	340.	U
218-01-9	Chrysene	380.	U	340.	U	340.	U	340.	U	340.	U
84-74-2	Di-n-butylphthalate	380.	U	85.	U	340.	U	340.	U	340.	U
117-84-0	Di-n-octylphthalate	380.	U	340.	U	340.	U	340.	U	340.	U
53-70-3	Dibenzo(a,h)anthracene	380.	U	340.	U	340.	U	340.	U	340.	U
132-64-9	Dibenzofuran	380.	U	340.	U	340.	U	340.	U	340.	U
84-66-2	Diethylphthalate	380.	U	340.	U	340.	U	340.	U	340.	U
131-11-3	Dimthylphthalatc	380.	U	340.	U	340.	U	340.	U	340.	U
206-44-0	Fluoranthene	380.	U	340.	U	340.	U	340.	U	70.	J
86-73-7	Fluorene	380.	U	340.	U	340.	U	340.	U	340.	U
118-74-1	Hexachlorobenzene	380.	U	340.	U	340.	U	340.	U	340.	U
87-68-3	Hcxachlorobutadiene	380.	U	340.	U	340.	U	340.	U	340.	U
77-47-4	Hexachlorocyclopentadiene	380.	U	340.	U	340.	U	340.	U	340.	U
67-72-1	Hexachloroethane	380.	U	340.	U	340.	U	340.	U	340.	U
193-39-5	Indeno(1,2,3-cd)pyrene	380.	U	340.	U	340.	U	340.	U	340.	U
78-59-1	Isophorone	380.	U	340.	U	340.	U	340.	U	340.	U
621-64-7	N-Nitroso-di-n-propylamine	380.	U	340.	U	340.	U	340.	U	340.	U
86-30-6	N-Nitrosodiphenylamine	380.	U	340.	U	340.	U	340.	U	340.	U
91-20-3	Naphthalene	380.	U	340.	U	340.	U	340.	U	340.	U
98-95-3	Nitrobenzene	380.	U	340.	U	340.	U	340.	U	340.	U
87-86-5	Pentachlorophenol	930.	U	830.	U	820.	U	810.	U	830.	U
85-01-8	Phenanthrene	380.	U	340.	U	340.	U	340.	U	340.	U
108-95-2	Phenol	380.	U	340.	U	340.	U	340.	U	340.	U
129-00-0	Pyrene	380.	U	340.	U	340.	U	340.	U	340.	U
111-91-1	bis(2-Chloroethoxy)methane	380.	U	340.	U	340.	U	340.	U	340.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	380.	U	340.	U	340.	U	340.	U	340.	U
111-44-4	bis(2-Chloroethyl)ether	380.	U	340.	U	340.	U	340.	U	340.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380.	U	340.	U	340.	U	340.	U	340.	U

*** Validation Complete ***

NAS PENSACOLA Site 10
Soil Samples
Phase I

VOA											
	SAMPLE ID →	010-S-0001-16		010-S-0002-01		010-S-0002-03		010-S-0002-05		010-S-0002-07	
	ORIGINAL ID →	10S0116		10S0201		10S0203		10S0205		10S0207	
	LAB SAMPLE ID →	39224-33		39220-27		39220-28		39220-29		39220-30	
	ID FROM REPORT →	10S0116		10S0201		10S0203		10S0205		10S0207	
	SAMPLE DATE →	02/04/94		02/03/94		02/03/94		02/03/94		02/03/94	
	DATE EXTRACTED →	02/08/94		02/06/94		02/06/94		02/06/94		02/06/94	
	DATE ANALYZED →	02/11/94		02/07/94		02/08/94		02/09/94		02/08/94	
	MATRIX →	Sail		Soi1		Soi1		Soi1		Soi1	
	WITS →	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	CT506	VAL	CT505	VAL	CT505	VAL	CT505	VAL	CT505	VAL
71-55-6	1,1,1-Trichloroethane	11.	U	11.	U	52.	U	40.	U	11.	U
79-34-5	1,1,2,2-Tetrachloroethane	11.	U	11.	U	52.	U	40.	U	11.	U
79-00-5	1,1,2-Trichloroethane	11.	U	11.	U	52.	U	40.	U	11.	U
75-34-3	1,1-Dichloroethane	11.	U	11.	U	52.	U	40.	U	11.	U
75-35-4	1,1-Dichloroethene	11.	U	11.	U	52.	U	40.	U	11.	U
107-06-2	1,2-Dichloroethane	11.	U	11.	U	52.	U	40.	U	11.	U
540-59-0	1,2-Dichloroethenc (total?	11.	U	11.	U	52.	U	40.	U	11.	U
78-87-5	1,2-Dichloropropane	11.	U	11.	U	52.	U	40.	U	11.	U
78-93-3	2-Butanone (MEK)	11.	U	11.	U	52.	U	40.	U	11.	U
591-78-6	2-Hexanone	11.	U	11.	U	52.	U	40.	U	11.	U
108-10-1	4-Hethy1-2-pent anone (MIBK)	11.	U	11.	U	52.	U	40.	U	11.	U
67-64-1	Acetone	14.	U	100.	U	910.	U	280.	U	980.	U
71-43-2	Benzene	11.	U	11.	U	52.	U	40.	U	11.	U
75-27-4	Bromodichloromethane	11.	U	11.	U	52.	U	40.	U	11.	U
75-25-2	Bromoform	11.	U	11.	U	52.	U	40.	U	11.	U
74-83-9	Bromomethane	11.	U	11.	U	52.	U	40.	U	11.	U
75-15-0	Carbon disulfide	11.	U	11.	U	52.	U	40.	U	11.	U
56-23-5	Carbon tctrachloride	11.	U	11.	U	52.	U	40.	U	11.	U
108-90-7	Chlorobenzene	11.	U	11.	U	52.	U	40.	U	11.	U
75-00-3	Chloroethane	11.	U	11.	U	52.	U	40.	U	11.	U
67-66-3	Chloroform	11.	U	11.	U	52.	U	40.	U	11.	U
74-87-3	Chloromethane	11.	U	11.	U	52.	U	40.	U	11.	U
124-48-1	Dibromochloromethane	11.	U	11.	U	52.	U	40.	U	11.	U
100-41-4	Ethylbenzene	11.	U	11.	U	52.	U	40.	U	11.	U
75-09-2	Hcthylenc chloride	10.	U	11.	U	52.	U	40.	U	11.	U
100-42-5	Styrene	11.	U	11.	U	52.	U	40.	U	11.	U
127-18-4	Tetrachloroethene	11.	U	11.	U	52.	U	40.	U	11.	U
108-88-3	Toluene	11.	U	11.	U	52.	U	40.	U	11.	U
79-01-6	Trichloroethene	11.	U	11.	U	52.	U	40.	U	11.	U
75-01-4	Vinyl chloride	11.	U	11.	U	52.	U	40.	U	11.	U
1330-20-7	m+p-Xylenes	11.	U	11.	U	52.	U	40.	U	11.	U
10061-01-5	cis-1,3-Dichloropropene	11.	U	11.	U	52.	U	40.	U	11.	U
10061-02-6	trans-1,3-Dichloropropene	11.	U	11.	U	52.	U	40.	U	11.	U

*** Validation Complete ***

DATALCP3
05/04/95

NAS PENSACOLA Site 10
Soil Samples
Phase I

Time: 11:35

METAL									
	SAMPLE ID →	010-S-0002-09		010-S-0003-01		010-S-0003-03		010-S-0004-01	
	ORIGINAL ID →	10S0209		10S0301		10S0303		10S0401	
	LAB SAMPLE ID →	39220-019		39220-023		39220-024		39220-020	
	ID FROM REPORT →	10S0209		1OS0301		1OS0303		10S0401	
	SAMPLE DATE →	02/03/94		02/03/94		02/03/94			
	MATRIX →	Soil		Soil		Soil		Soil	
	UNITS →	MG/KG		MG/KG		MG/KG		MG/KG	
CAS #	Parameter	CT505	VAL	CT505	VAL	CT505	VAL	CT505	VAL
AL	Aluminum	628.		320.		270.		363.	
SB	Antimony	3.	UJ	2.9	UJ	3.2	UJ	2.9	UJ
AS	Arsenic	0.55	U	0.54	U	0.59	U	0.54	U
BA	Barium	4.1	J	1.1	U	0.91	U	0.9	U
BE	Beryllium	0.08	U	0.07	U	0.08	U	0.07	U
CD	Cadmium	0.4	U	0.39	U	0.43	U	0.39	U
CA	Calcium	189.	J	162.	J	146.	J	48.4	J
CR	Chromium	2.7	J	0.84	J	1.3	J	1.3	J
CO	Cobalt	0.61	U	0.59	U	0.66	U	0.6	U
CU	Copper	0.5	UJ	0.48	UJ	0.53	UJ	0.49	UJ
CN	Cyanide	5.6		0.11		0.11	U	0.32	
FE	Iron	488.	J	286.	J	164.	J	526.	J
PB	Lead	12.7	J	5.5	J	3.5	J	9.	J
MG	Magnesium	33.7	J	9.3	J	10.6	J	30.3	J
MN	Manganese	11.		2.4		0.95	U	3.6	
HG	Mercury	0.03	UJ	0.02	UJ	0.75		0.03	UJ
NI	Nickel	2.	U	1.9	U	2.1	U	1.9	U
K	Potassium	124.	UJ	120.	UJ	133.	UJ	121.	UJ
SE	Selenium	0.32	UJ	0.32	UJ	0.35	UJ	0.32	UJ
AG	Silver	0.69	UJ	0.67	UJ	0.74	UJ	0.67	UJ
NA	Sodium	4.3	U	4.2	U	4.6	U	4.2	U
TL	Thallium	0.53	UJ	0.52	UJ	0.57	UJ	0.52	UJ
V	Vanadium	1.2	UJ	0.61	UJ	0.94	UJ	1.4	UJ
ZN	Zinc	4.8	J	4.7	J	3.4	UJ	4.6	J

*** Validation Complete ***

NAS PENSACOLA Site 10
Soil Samples
Phase I

PEST												
	SAMPLE ID →	010-S-0002-07		010-S-0002-09		010-S-OOO3-01		010-S-0003-03		010-S-0004-01		
	ORIGINAL ID →	10S0207DL		10S0209		10S0301		1OS0303		10S0401		
	LAB SAMPLE ID →	39220-6DL		39220-7		39220-11		39220-12		39220-8		
	ID FROM REPORT →	10S0207DL		1os0209		10S0301		10S0303		10S0401		
	SAMPLE DATE →	02/03/94		02/03/94		02/03/94		02/03/94				
	DATE EXTRACTED →	02/05/94		02/05/94		02/05/94		02/05/94		02/05/94		
	DATE ANALYZED →	02/09/94		02/09/94		02/09/94		02/09/94		02/09/94		
	MATRIX →	Soi1		Soi1		soil		Soi1		Soil		
	UNITS →	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		
CAS #	Parameter	CT505	VAL	CT505	VAL	CT505	VAL	CT505	VAL	CT505	VAL	
319-84-6	alpha-BHC	18.	UJ	2.	UJ	1.8	UJ	2.	UJ	1.8	UJ	
319-85-7	beta-BHC	18.	UJ	2.	UJ	1.8	UJ	2.	UJ	1.8	UJ	
319-86-8	delta-BHC	18.	UJ	2.	UJ	1.8	UJ	2.	UJ	1.8	UJ	
58-89-9	gamma-BHC (Lindane)	18.	UJ	2.	UJ	1.8	UJ	2.	UJ	1.8	UJ	
76-44-8	Heptachlor	18.	UJ	2.	UJ	1.8	UJ	2.	UJ	1.8	UJ	
309-00-2	Aldrin	18.	UJ	2.	UJ	1.8	UJ	2.	UJ	1.8	UJ	
1024-57-3	Heptachlor epoxide	18.	UJ	2.	UJ	1.8	UJ	2.	UJ	1.8	UJ	
959-98-8	Endosulfan I	18.	UJ	2.	UJ	1.8	UJ	2.	UJ	1.8	UJ	
60-57-1	Dieldrin	66.	J	11.	J	3.3	J	15.	J	41.		
72-55-9	4,4'-DDE	40.	J	6.4	J	3.6	UJ	2.4	J	3.4	UJ	
72-20-8	Endrin	35.	UJ	3.8	UJ	3.6	UJ	3.9	UJ	3.4	UJ	
33213-65-9	Endosulfan If	35.	UJ	3.8	UJ	3.6	UJ	3.9	UJ	3.4	UJ	
72-54-8	4,4'-DDD	35.	UJ	3.8	UJ	3.6	UJ	3.9	UJ	3.4	UJ	
1031-07-8	Endosulfan sulfate	35.	UJ	3.8	UJ	3.6	UJ	3.9	UJ	3.4	UJ	
50-29-3	4,4'-DDT	64.	J	9.7	J	3.6	UJ	3.9	UJ	3.4	UJ	
72-43-5	Methoxychlor	180.	UJ	20.	UJ	18.	UJ	20.	UJ	18.	UJ	
53494-70-5	Endrin ketone	35.	UJ	3.8	UJ	3.6	UJ	3.9	UJ	3.4	UJ	
7421-93-4	Endrin aldehyde	35.	UJ	3.8	UJ	3.6	UJ	3.9	UJ	3.4	UJ	
5103-71-9	alpha-Chlordane	18.	UJ	2.	UJ	1.8	UJ	2.	UJ	1.8	UJ	
5103-74-2	gamma-Chlordane	18.	UJ	2.	UJ	1.8	UJ	2.	UJ	1.8	UJ	
8001-35-2	Toxaphene	1800.	UJ	200.	UJ	180.	UJ	200.	UJ	180.	UJ	
12674-11-2	Aroclor-1016	350.	UJ	38.	UJ	36.	UJ	39.	UJ	34.	UJ	
11104-28-2	Aroclor-1221	710.	UJ	78.	UJ	72.	UJ	79.	UJ	70.	UJ	
11141-16-5	Aroclor-1232	350.	UJ	38.	UJ	36.	UJ	39.	UJ	34.	UJ	
53469-21-9	Aroclor-1242	350.	UJ	38.	UJ	36.	UJ	39.	UJ	34.	UJ	
12672-29-6	Aroclor-1248	350.	UJ	38.	UJ	36.	UJ	39.	UJ	34.	UJ	
11097-69-1	Aroclor-1254	350.	UJ	38.	UJ	36.	UJ	39.	UJ	34.	UJ	
11096-82-5	Aroclor-1260	350.	UJ	38.	UJ	60.	J	40.	J	34.	UJ	

*** Validation Complete ***

NAS PENSACOLA Site 10
Soil Samples
Phase I

SVOA											
	SAMPLE ID →	010-S-0002-09		010-S-0003-01		010-S-0003-03		010-S-0004-01			
	ORIGINAL ID →	10S0209		10S0301		10S0303		10S0401			
	LAB SAMPLE ID →	39220-7		39220-11		39220-12		39220-8			
	ID FROM REPORT →	10S0209		10S0301		10S0303		10S0401			
	SAMPLE DATE →	02/03/94		02/03/94		02/03/94		02/03/94			
	DATE EXTRACTED →	02/06/94		02/06/94		02/06/94		02/06/94			
	DATE ANALYZED →	02/07/94		02/07/94		02/07/94		02/07/94			
	MTRIX →	Sail		Soi1		Soi1		Soi1			
	UNITS →	UG/KG		UG/KG		UG/KG		UG/KG			
CAS #	Parameter	CT505	VAL	CT505	VAL	CT505	VAL	CT505	VAL		
120-82-1	1,2,4-Trichlorobenzene	380.	U	350.	U	390.	U	350.	U		
95-50-1	1,2-Dichlorobenzene	380.	U	350.	U	390.	U	350.	U		
541-73-1	1,3-Dichlorobenzene	380.	U	350.	U	390.	U	350.	U		
106-46-7	1,4-Dichlorobenzene	380.	U	350.	U	390.	U	350.	U		
95-95-4	2,4,5-Trichlorophenol	930.	U	840.	U	940.	U	850.	U		
88-06-2	2,4,6-Trichlorophenol	380.	U	350.	U	390.	U	350.	U		
120-83-2	2,4-Dichlorophenol	380.	U	350.	U	390.	U	350.	U		
105-67-9	2,4-Dimethylphenol	380.	U	350.	U	390.	U	350.	U		
51-28-5	2,4-Dinitrophenol	930.	U	840.	U	940.	U	850.	U		
121-14-2	2,4-Dinitrotoluene	380.	U	350.	U	390.	U	350.	U		
606-20-2	2,6-Dinitrotoluene	380.	U	350.	U	390.	U	350.	U		
91-58-7	2-Chloronaphthalenc	380.	U	350.	U	390.	U	350.	U		
95-57-8	2-Chlorophenol	380.	U	350.	U	390.	U	350.	U		
91-57-6	2-Methylnaphthalene	380.	U	350.	U	390.	U	350.	U		
95-48-7	2-Hethylphenol (o-Cresol)	380.	U	350.	U	390.	U	350.	U		
88-74-4	2-Nitroaniline	930.	U	840.	U	940.	U	850.	U		
88-75-5	2-Nitrophenol	380.	U	350.	U	390.	U	350.	U		
		380.	U	350.	U	390.	U	350.	U		
		930.	U	840.	U	940.	U	850.	U		
		930.	U	840.	U	940.	U	850.	U		
		380.	U	350.	U	390.	U	350.	U		
		380.	U	350.	U	390.	U	350.	U		
		380.	U	350.	U	390.	U	350.	U		
		380.	U	350.	U	390.	U	350.	U		
		380.	U	350.	U	390.	U	350.	U		
		930.	U	840.	U	940.	U	850.	U		
		930.	U	840.	U	940.	U	850.	U		
		380.	U	350.	U	390.	U	350.	U		
		380.	U	350.	U	390.	U	350.	U		
		380.	U	350.	U	390.	U	350.	U		
		380.	U	350.	U	390.	U	350.	U		
		380.	U	350.	U	390.	U	350.	U		
		380.	U	350.	U	390.	U	350.	U		
		380.	U	350.	U	390.	U	350.	U		
		380.	U	350.	U	390.	U	350.	U		
		380.	U	350.	U	390.	U	350.	U		

+++ Validation Complete ***

NAS PENSACOLA Site 10

SVOA											
	SAMPLE ID →	010-S-0002-09		010-S-0003-01		010-S-0003-03		010-S-0004-01			
	ORIGINAL ID →	10S0209		10S0301		10S0303		10S0401			
	LAB SMPLE ID →	39220-7		39220-11		39220-12		39220-8			
	ID FROM REPORT →	10S0209		10S0301		10S0303		10S0401			
	SAMPLE DATE →	02/03/94		02/03/94		02/03/94		02/03/94			
	DATE EXTRACTED →	02/06/94		02/06/94		02/06/94		02/06/94			
	DATE ANALYZED →	02/07/94		02/07/94		02/07/94		02/07/94			
	MATRIX →	Soil		Soil		Soil		Soil			
	UNITS →	UG/KG		UG/KG		UG/KG		UG/KG			
CAS #	Parameter	CT505	VAL	CT505	VAL	CT505	VAL	CT505	VAL		
86-74-8	Carbazole	380.	U	350.	U	390.	U	350.	U		
218-01-9	Chrytene	380.	U	350.	U	390.	U	350.	U		
84-74-2	Di-n-butylphthalatc	380.	U	350.	U	390.	U	350.	U		
117-84-0	Di-n-octylphthalate	380.	U	350.	U	390.	U	350.	U		
53-70-3	Dibenzo(a,h)anthracene	380.	U	350.	U	390.	U	350.	U		
132-64-9	Dibenzofuran	380.	U	350.	U	390.	U	350.	U		
84-66-2	Diethylphthalate	380.	U	350.	U	390.	U	350.	U		
131-11-3	Dimethylphthalate	380.	U	350.	U	390.	U	350.	U		
206-44-0	Fluoranthenc	380.	U	350.	U	390.	U	350.	U		
86-73-7	Fluorene	380.	U	350.	U	390.	U	350.	U		
118-74-1	Hcxachlorobenzcnc	380.	U	350.	U	390.	U	350.	U		
87-68-3	Hexachlorobutadiene	380.	U	350.	U	390.	U	350.	U		
77-47-4	Hexachlorocyclopcntadicnc	380.	U	350.	U	390.	U	350.	U		
67-72-1	Hexachloroethane	380.	U	350.	U	390.	U	350.	U		
193-39-5	Indeno(1,2,3-cd)pyrene	380.	U	350.	U	390.	U	350.	U		
78-59-1	Isophorone	380.	U	350.	U	390.	U	350.	U		
621-64-7	N-Nitroso-di-n-propylamine	380.	U	350.	U	390.	U	350.	U		
86-30-6	N-Nitrosodiphenylamine	380.	U	350.	U	390.	U	350.	U		
91-20-3	Naphthalene	380.	U	350.	U	390.	U	350.	U		
98-95-3	Nitrobenzene	380.	U	350.	U	390.	U	350.	U		
87-86-5	Pentachlorophenol	930.	U	840.	U	940.	U	850.	U		
85-01-8	Phenanthrene	380.	U	350.	U	390.	U	350.	U		
108-95-2	Phenol	380.	U	350.	U	390.	U	350.	U		
129-00-0	Pyrene	380.	U	350.	U	390.	U	350.	U		
111-91-1	bis(2-Chloroethoxy)methane	380.	U	350.	U	390.	U	350.	U		
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	380.	U	350.	U	390.	U	350.	U		
111-44-4	bis(2-Chloroethyl)ether	380.	U	350.	U	390.	U	350.	U		
108-60-1	2,2'-oxybis(1-Chloropropane)	380.	U	350.	U	390.	U	350.	U		

*** Validation Complete ***

NAS PENSACOLA Site 10
Soil Samples
Phase I

VOA															
	SAMPLE ID	010-S-0002-07		010-S-0002-09		010-S-0003-01		010-S-WO3-01		010-S-0003-03		000-S-0004-01	
	ORIGINAL ID	10S0207DL		1os0209		10S0301		10S0301DL		1OS0303			
	LAB SAMPLE ID	39220-30DL		39220-31		39220-35		39220-35DL		39220-36		39220-32	
	ID FROM REPORT	10S0207DL		1os0209		1OS0301		10S0301DL		10S0303		10S0401	
	SAMPLE DATE	02/03/94		02/03/94		02/03/94		02/03/94		02/03/94			
	DATE EXTRACTED	02/06/94		02/06/94		02/06/94		02/06/94		02/06/94		02/06/94	
	DATE ANALYZED	02/09/94		02/10/94		02/08/94		02/09/94		02/09/94		02/07/94	
	MATRIX	Soi1		Soi1		Soi1		Soi1		Soi1		soi1	
	UNITS	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	CT505	VAL	CT505	VAL	CT505	VAL	CT505	VAL	CT505	VAL	CT505	VAL
71-55-6	1,1,1-Trichloroethane	35.	U	1300.	U	11.	U	45.	U	37.	U	11.	U
79-34-5	1,1,2,2-Tetrachloroethane	35.	U	1300.	U	11.	U	45.	U	37.	U	11.	U
79-00-5	1,1,2-Trichloroethane	35.	U	1300.	U	11.	U	45.	U	37.	U	11.	U
75-34-3	1,1-Dichloroethane	35.	U	1300.	U	11.	U	45.	U	37.	U	11.	U
75-35-4	1,1-Dichloroethene	35.	U	1300.	U	11.	U	45.	U	37.	U	11.	U
107-06-2	1,2-Dichloroethane	35.	U	1300.	U	11.	U	45.	U	37.	U	11.	U
540-59-0	1,2-Dichlorocthene (total)	35.	U	1300.	U	11.	U	45.	U	37.	U	11.	U
78-87-5	1,2-Dichloropropane	35,	U	1300.	U	11.	U	45.	U	37.	U	11.	U
78-93-3	2-Butanone (MEK)	35.	U	1300.	U	11.	U	45.	U	37.	U	11.	U
591-78-6	2-Hexanone	35.	U	1300.	U	11.	U	45.	U	37.	U	11.	U
108-10-1	4-Hethyl-2-Pentanone (MIBK)	35.	U	1300.	U	11.	U	45.	U	37.	U	11.	U
67-64-1	Acetone	1200.	U	2700.	U	480.	U	630.	U	670.	U	210.	U
71-43-2	Benzene	35.	U	1300.	U	11.	U	45.	U	37.	U	11.	U
75-27-4	Bromodichloromethane	35.	U	1300.	U	11.	U	45.	U	37.	U	11.	U
75-25-2	Bromoform	35.	U	1300.	U	11.	U	45.	U	37.	U	11.	U
74-83-9	Bromomethane	35.	U	1300.	U	11.	U	45.	U	37.	U	11.	U
75-15-0	Carbon disulfide	35.	U	1300.	U	11.	U	45.	U	37.	U	11.	U
56-23-5	Carbon tetrachloride	35.	U	1300.	U	11.	U	45.	U	37.	U	11.	U
108-90-7	Chlorobenzene	35.	U	1300.	U	11.	U	45.	U	37.	U	11.	U
75-00-3	Chloroethane	35.	U	1300.	U	11.	U	45.	U	37.	U	11.	U
67-66-3	Chloroform	35.	U	1300.	U	11.	U	45.	U	37.	U	11.	U
74-87-3	Chloromethane	35.	U	1300.	U	11.	U	45.	U	37.	U	11.	U
124-48-1	Dibromochloromethane	35.	U	1300.	U	11.	U	45.	U	37.	U	11.	U
100-41-4	Ethylbenzene	35.	U	1300.	U	11.	U	45.	U	37.	U	11.	U
75-09-2	Methylene chloride	35.	U	1300.	U	11.	U	45.	U	37.	U	11.	U
100-42-5	Styrene	35.	U	1300.	U	11.	U	45.	U	37.	U	11.	U
127-18-4	Tetrachlorocthenc	35.	U	1300.	U	11.	U	45.	U	37.	U	11.	U
108-88-3	Toluene	35.	U	1300.	U	11.	U	45.	U	37.	U	11.	U
79-01-6	Trichlorocthenc	35.	U	1300.	U	11.	U	45.	U	37.	U	11.	U
75-01-4	Vinyl chloride	35.	U	1300.	U	11.	U	45.	U	37.	U	11.	U
1330-20-7	m+p-Xylenes	35.	U	1300.	U	11.	U	45.	U	37.	U	11.	U
10061-01-5	cis-1,3-Dichloropropene	35.	U	1300.	U	11.	U	45.	U	37.	U	11.	U
10061-02-6	trans-1,3-Dichloropropene	35.	U	1300.	U	11.	U	45.	U	37.	U	11.	U

*** Validation Complete ***

NAS PENSACOLA Site 10
Soil Samples
Phase I

		010-S-0004-03 10S0403 39220-021 10S0403		010-C-0004-03 10S0403D 39220-022 10S0403D		010-S-0005-01 10S0501 39220-013 10S0501 02/03/94		010-S-0005-03 10S0503 39220-014 10S0503 02/03/94			
		Soil		Soil		Soil		Soil			
UNITS →		MG/KG		MG/KG		MG/KG		MG/KG			
CAS #	Parameter	CTSM	VAL	CT505	VAL	CT505	VAL	CTSM	VAL		
AL	Aluminum	271.		390.		230.		71.8			
SB	Antimony	3.5	UJ	3.3	UJ	2.8	UJ	2.4	UJ		
AS	Arsenic	0.65	U	0.62	U	0.51	U	0.44	U		
BA	Barium	1.4	U	1.1	U	2.2	U	0.37	U		
BE	Beryllium	0.09	U	0.08	U	0.07	U	0.06	U		
CD	Cadmium	0.47	U	0.45	U	0.37	U	0.32	U		
CA	Calcium	116.	J	128.	J	138.	J	19.4	U		
CR	Chromium	1.7	J	1.1	J	1.5	J	0.4	J		
CO	Cobalt	0.72	U	0.68	U	0.57	UJ	0.49	U		
CU	Copper	0.59	UJ	0.55	UJ	2.4		0.4	UJ		
CN	Cyanide	1.5		0.11	U	0.1	U	0.08	U		
FE	Iron	333.	J	438.	J	294.	J	44.6	J		
PB	Lead	4.5	J	5.4	J	15.9	J	1.2	UJ		
MG	Magnesium	37.	J	40.9	J	18.	J	3.9	J		
MN	Manganese	3.		2.9		5.7	J	0.33	U		
HG	Mercury	0.06	UJ	4.7		0.03	UJ	0.05	U		
NI	Nickel	2.3	U	2.2	U	1.8	U	1.6	U		
K	Potassium	146.	UJ	138.	UJ	115.	UJ	99.6	J		
SE	Selenium	0.47	J	0.36	UJ	0.3	UJ	0.26	J		
AG	Silver	0.81	UJ	0.76	UJ	0.64	UJ	0.55	UJ		
NA	Sodium	9.7		6.3		4.	U	3.4	U		
TL	Thallium	0.63	UJ	0.59	UJ	0.5	UJ	0.43	UJ		
V	Vanadium	1.3	UJ	1.3	UJ	0.88	UJ	0.51	UJ		
ZN	Zinc	3.6	UJ	3.3	UJ	12.7		3.9	UJ		

*** Validation Complete ***

NAS PENSACOLA Site 10
Soil Samples
Phase I

PEST											
	SMPLE ID →	010-S-0004-03		010-C-0004-03		010-S-0005-01		010-S-0005-03			
	ORIGINAL ID →	10S0403		10S0403D		10S0501		1050503			
	LAB SAMPLE ID →	39220-9		39220-10		39220-1		39220-2			
	ID FROM REPORT →	10S0403		10S0403D		10S0501		10S0503			
	SMPLE DATE →					02/03/94		02/03/94			
	DATE EXTRACTED →	02/05/94		02/05/94		02/05/94		02/05/94			
	DATE ANALYZED →	02/09/94		02/09/94		02/09/94		02/09/94			
	MATRIX →	Soil		soil		Soil		Soil			
	UNITS →	UG/KG		UG/KG		UG/KG		UG/KG			
CAS #	Parameter	CT505	VAL	CT505	VAL	CT505	VAL	CT505	VAL		
319-84-6	alpha-BHC	2.1	UJ	2.1	UJ	1.8	U	1.9	U		
319-85-7	beta-BHC	2.1	UJ	2.1	UJ	1.8	U	1.9	U		
319-86-8	delta-BHC	2.1	UJ	2.1	UJ	1.8	U	1.9	U		
58-89-9	gamma-BHC (Lindane)	2.1	UJ	2.1	UJ	1.8	U	1.9	U		
76-44-8	Heptachlor	2.1	UJ	2.1	UJ	1.8	U	1.9	U		
309-00-2	Aldrin	2.1	UJ	2.1	UJ	1.8	U	1.9	U		
1024-57-3	Heptachlor epoxide	2.1	UJ	2.1	UJ	1.8	U	1.9	U		
959-98-8	Endosulfan I	2.1	UJ	2.1	UJ	1.8	U	1.9	U		
60-57-1	Dieldrin	7.2	J	7.	J	4.8		3.8	U		
72-55-9	4,4'-DDE	4.	UJ	4.	UJ	31.		3.8	U		
72-20-8	Endrin	4.	UJ	4.	UJ	3.4	U	3.8	U		
33213-65-9	Endosulfan II	4.	UJ	4.	UJ	3.4	U	3.8	U		
72-54-8	4,4'-DDD	4.	UJ	4.	UJ	1.4	J	3.8	U		
1031-07-8	Endosulfan sulfate	4.	UJ	4.	UJ	3.4	U	3.8	U		
50-29-3	4,4'-DDT	4.	UJ	4.	UJ	26.		3.8	U		
72-43-5	Methoxychlor	21.	UJ	21.	UJ	18.	U	19.	U		
53494-70-5	Endrin ketone	4.	UJ	4.	UJ	3.4	U	3.8	U		
7421-93-4	Endrin aldehyde	4.	UJ	4.	UJ	3.4	U	3.8	U		
5103-71-9	alpha-Chlordanc	2.1	UJ	2.1	UJ	1.8	U	1.9	U		
5103-74-2	gamma-Chlordane	2.1	UJ	2.1	UJ	1.8	U	1.9	U		
8001-35-2	Toxaphene	210.	UJ	210.	UJ	180.	U	190.	U		
12674-11-2	Aroclor-1016	40.	UJ	40.	UJ	34.	U	38.	U		
11104-28-2	Aroclor-1221	81.	UJ	81.	UJ	70.	U	77.	U		
11141-16-5	Aroclor-1232	40.	UJ	40.	UJ	34.	U	38.	U		
53469-21-9	Aroclor-1242	40.	UJ	40.	UJ	34.	U	38.	U		
12672-29-6	Aroclor-1248	40.	UJ	40.	UJ	34.	U	38.	U		
11097-69-1	Aroclor-1254	40.	UJ	40.	UJ	34.	U	38.	U		
11096-82-5	Aroclor-1260	40.	UJ	40.	UJ	34.	U	38.	U		

*** Validation Complete ***

NAS PENSACOLA Site 10
Soil samples
Phase I

SVOA									
	SAMPLE ID →	010-S-0004-03		010-C-0004-03		010-S-0005-01		010-S-0005-03	
	ORIGINAL ID →	10S0403		10S0403D		10S0501		10S0503	
	LAB SAMPLE ID →	39220-9		39220-10		39220-1		39220-2	
	ID FROM REPORT →	10S0403		10S0403D		10S0501		10S0503	
	SAMPLE DATE →	02/03/94		02/03/94		02/03/94		02/03/94	
	DATE EXTRACTED →	02/06/94		02/06/94		02/06/94		02/06/94	
	DATE ANALYZED →	02/07/94		02/08/94		02/07/94		02/07/94	
	MATRIX →	Soil		Soil		Soil		Soil	
	UNITS →	UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	CT505	VAL	CT505	VAL	CT505	VAL	CT505	VAL
120-82-1	1,2,4-Trichlorobenzene	390.	U	400.	U	340.	U	370.	U
95-50-1	1,2-Dichlorobenzene	390.	U	400.	U	340.	U	370.	U
541-73-1	1,3-Dichlorobenzene	390.	U	400.	U	340.	U	370.	U
106-46-7	1,4-Dichlorobenzene	390.	U	400.	U	340.	U	370.	U
95-95-4	2,4,5-Trichlorophenol	960.	U	970.	U	820.	U	910.	U
88-06-2	2,4,6-Trichlorophenol	390.	U	400.	U	340.	U	370.	U
120-83-2	2,4-Dichlorophenol	390.	U	400.	U	340.	U	370.	U
105-67-9	2,4-Dimethylphenol	390.	U	400.	U	340.	U	370.	U
51-28-5	2,4-Dinitrophenol	960.	U	970.	U	820.	U	910.	U
121-14-2	2,4-Dinitrotoluene	390.	U	400.	U	340.	U	370.	U
606-20-2	2,6-Dinitrotoluene	390.	U	400.	U	340.	U	370.	U
91-58-7	2-Chloronaphthalent	390.	U	400.	U	340.	U	370.	U
95-57-8	2-Chlorophenol	390.	U	400.	U	340.	U	370.	U
91-57-6	2-Methylnaphthalent	390.	U	400.	U	340.	U	370.	U
95-48-7	2-Methylphenol (o-Cresol)	390.	U	400.	U	340.	U	370.	U
88-74-4	2-Nitroaniline	960.	U	970.	U	820.	U	910.	U
88-75-5	2-Nitrophenol	390.	U	400.	U	340.	U	370.	U
91-94-1	3,3'-Dichlorobenzidine	390.	U	400.	U	340.	U	370.	U
99-09-2	3-Nitroaniline	960.	U	970.	U	820.	U	910.	U
534-52-1	4,6-Dinitro-2-methylphenol	960.	U	970.	U	820.	U	910.	U
101-55-3	4-Bromophenyl-phenylether	390.	U	400.	U	340.	U	370.	U
59-50-7	4-Chloro-3-methylphenol	390.	U	400.	U	340.	U	370.	U
106-47-8	4-Chloroaniline	390.	U	400.	U	340.	U	370.	U
7005-72-3	4-Chlorophenyl-phenylether	390.	U	400.	U	340.	U	370.	U
106-44-5	4-Methylphenol (p-Cresol)	390.	U	400.	U	340.	U	370.	U
100-01-6	4-Nitroaniline	960.	U	970.	U	820.	U	910.	U
100-02-7	4-Nitrophenol	960.	U	970.	U	820.	U	910.	U
83-32-9	Acenaphthene	390.	U	400.	U	340.	U	370.	U
208-96-8	Acenaphthylene	390.	U	400.	U	340.	U	370.	U
120-12-7	Anthracene	390.	U	400.	U	340.	U	370.	U
56-55-3	Benzo(a)anthracene	390.	U	400.	U	340.	U	370.	U
50-32-8	Benzo(a)pyrene	390.	U	400.	U	340.	U	370.	U
205-99-2	Benzo(b)fluoranthene	390.	U	400.	U	340.	U	370.	U
191-24-2	Benzo(g,h,i)perylene	390.	U	400.	U	340.	U	370.	U
207-08-9	Benzo(k)fluoranthene	390.	U	400.	U	340.	U	370.	U
85-68-7	Butylbenzylphthalate	390.	U	400.	U	340.	U	370.	U

*** Validation Complete ***

NAS PENSACOLA Site 10
Soil samples
Phase I

SVOA									
	SAMPLE ID →	010-S-0004-03		010-C-0004-03		010-S-oO05-01		010-S-0005-03	
	ORIGINAL ID →	10S0403		10S0403D		10S0501		10S0503	
	LAB SAMPLE ID →	39220-9		39220-10		39220-1		39220-2	
	ID FROM REPORT →	10S0403		10S0403D		10S0501		10S0503	
	SAMPLE DATE →	02/03/94		02/03/94		02/03/94		02/03/94	
	DATE EXTRACTED →	02/06/94		02/06/94		02/06/94		02/06/94	
	DATE ANALYZED →	02/07/94		02/08/94		02/07/94		02/07/94	
	MATRIX →	Soil		Soil		Soil		Soil	
	UNITS →	UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	CT505	VAL	CT505	VAL	CT505	VAL	CT505	VAL
86-74-8	Carbazole	390.	U	400.	U	340.	U	370.	U
218-M-9	Chrysene	390.	U	400.	U	340.	U	370.	U
84-74-2	Di-n-butylphthalate	390.	U	400.	U	340.	U	370.	U
117-84-0	Di-n-octylphthalate	390.	U	400.	U	340.	U	370.	U
53-70-3	Dibenzo(a,h)anthracene	390.	U	400.	U	340.	U	370.	U
132-64-9	Dibenzofuran	390.	U	400.	U	340.	U	370.	U
84-66-2	Diethylphthalate	390.	U	400.	U	340.	U	370.	U
131-11-3	Dimethylphthalate	390.	U	400.	U	340.	U	370.	U
206-44-0	Fluoranthene	390.	U	400.	U	340.	U	370.	U
86-73-7	Fluorene	390.	U	400.	U	340.	U	370.	U
118-74-1	Hexachlorobenzene	390.	U	400.	U	340.	U	370.	U
87-68-3	Hexachlorobutadiene	390.	U	400.	U	340.	U	370.	U
77-47-4	Hexachlorocyclopentadiene	390.	U	400.	U	340.	U	370.	U
67-72-1	Hexachloroethane	390.	U	400.	U	340.	U	370.	U
193-39-5	Indeno(1,2,3-cd)pyrene	390.	U	400.	U	340.	U	370.	U
78-59-1	Isophorone	390.	U	400.	U	340.	U	370.	U
621-64-7	N-Nitroso-di-n-propylamine	390.	U	400.	U	340.	U	370.	U
86-30-6	N-Nitrosodiphenylamine	390.	U	400.	U	340.	U	370.	U
91-20-3	Naphthalene	390.	U	400.	U	340.	U	370.	U
98-95-3	Nitrobenzene	390.	U	400.	U	340.	U	370.	U
87-86-5	Pentachlorophenol	960.	U	970.	U	820.	U	910.	U
85-01-8	Phenanthrene	390.	U	400.	U	340.	U	370.	U
108-95-2	Phenol	390.	U	400.	U	340.	U	370.	U
129-00-0	Pyrw	390.	U	400.	U	340.	U	370.	U
111-91-1	bis(2-Chloroethoxy)methane	390.	U	400.	U	340.	U	370.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	390.	U	400.	U	340.	U	370.	U
111-44-4	bis(2-Chloroethyl)ether	390.	U	400.	U	340.	U	370.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	3w.	U	400.	U	340.	U	370.	U

*** Validation Complete ***

NAS PENSACOLA Site 10
Soil Samples
Phase I

VOA											
	SAMPLE ID	010-S-0004-03		010-S-0004-03		010-C-0004-03		010-S-0005-03			
	ORIGINAL ID	10S0403		10S0403DL		10S0403D		10S0503			
	LAB SAMPLE ID	39220-33		39220-33DL		39220-34		39220-26			
	ID FROM REPORT	10S0403		10S0403DL		10S0403D		10S0503			
	SAMPLE DATE							02/03/94			
	DATE EXTRACTED	02/06/94		02/06/94		02/06/94		02/06/94			
	DATE ANALYZED	02/08/94		02/09/94		02/09/94		02/07/94			
	MATRIX	Soil		Soil		soil		Soil			
	UNITS	UG/KG		UG/KG		UG/KG		UG/KG			
CAS #	Parameter	CT505	VAL	CT505	VAL	CT505	VAL	CT505	VAL		
71-55-6	1,1,1-Trichloroethane	12.	U	55.	U	55.	U	11.	U		
79-34-5	1,1,2,2-Tetrachloroethane	12.	U	55.	U	55.	U	11.	U		
79-00-5	1,1,2-Trichloroethane	12.	U	55.	U	55.	U	11.	U		
75-34-3	1,1-Dichlorocthane	12.	U	55.	U	55.	U	11.	U		
75-35-4	1,1-Dichloroethene	12.	U	55.	U	55.	U	11.	U		
107-06-2	1,2-Dichloroethane	12.	U	55.	U	55.	U	11.	U		
540-59-0	1,2-Dichlorocthene (total)	12.	U	55.	U	55.	U	11.	U		
78-87-5	1,2-Dichloropropane	12.	U	55.	U	55.	U	11.	U		
78-93-3	2-Butanone (MEK)	12.	U	55.	U	55.	U	11.	U		
591-78-6	2-Hexanone	12.	U	55.	U	55.	U	11.	U		
108-10-1	4-Methyl-2-Pentanone (MIBK)	12.	U	55.	U	55.	U	11.	U		
67-64-1	Acetone	610.	U	1400.	U	910.	U	200.	U		
71-43-2	Benzene	12.	U	55.	U	55.	U	11.	U		
75-27-4	Bromodichloromethane	12.	U	55.	U	55.	U	11.	U		
75-25-2	Bromoform	12.	U	55.	U	55.	U	11.	U		
74-83-9	Bromomethane	12.	U	55.	U	55.	U	11.	U		
75-15-0	Carbon disulfide	12.	U	55.	U	55.	U	11.	U		
56-23-5	Carbon tetrachloride	12.	U	55.	U	55.	U	11.	U		
108-90-7	Chlorobenzene	12.	U	55.	U	55.	U	11.	U		
75-00-3	Chloroethane	12.	U	55.	U	55.	U	11.	U		
67-66-3	Chloroform	12.	U	55.	U	55.	U	11.	U		
74-87-3	Chloromethane	12.	U	55.	U	55.	U	11.	U		
124-48-1	Dibromochloromethane	12.	U	55.	U	55.	U	11.	U		
100-41-4	Ethylbenzene	12.	U	55.	U	55.	U	11.	U		
75-09-2	Methylene chloride	12.	U	55.	U	55.	U	11.	U		
100-42-5	Styrene	12.	U	55.	U	55.	U	11.	U		
127-18-4	Tetrachloroethene	12.	U	55.	U	55.	U	11.	U		
108-88-3	Toluene	12.	U	55.	U	55.	U	11.	U		
79-01-6	Trichlorocthene	12.	U	55.	U	55.	U	11.	U		
75-01-4	Vinyl chloride	12.	U	55.	U	55.	U	11.	U		
1330-20-7	m+p-Xylenes	12.	U	55.	U	55.	U	11.	U		
10061-01-5	cis-1,3-Dichloropropene	12.	U	55.	U	55.	U	11.	U		
10061-02-6	trans-1,3-Dichloropropene	12.	U	55.	U	55.	U	11.	U		

*** Validation Complete ***

NAS PENSACOLA SITE 10
Soil Samples
Phase I

VOA

SAMPLE ID -------->	010-S-0005-01
ORIGINAL ID ----->	10S0501
LAB SAMPLE ID --->	39220-25
ID FROM REPORT -->	10S0501
SAMPLE DATE ----->	02/03/94
DATE ANALYZED --->	02/07/94
MATRIX ---------->	Soil
UNITS ---------->	UG/KG

CAS #	Parameter	CT505	VAL
71-55-6	1,1,1-Trichloroethane	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
75-34-3	1,1-Dichloroethane	10.	U
75-35-4	1,l-Oichloroethene	10.	U
107-06-2	1,2-Dichloroethane	10.	U
540-59-0	1,2-Dichloroethene (total)	10.	U
78-87-5	1,2-Dichloropropane	10.	U
78-93-3	2-Butanone (MEK)	10.	U
591-78-6	2-Hexanone	10.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	10.	U
67-64-1	Acetone	83.	U
71-43-2	Benzene	10.	U
75-27-4	Bromodichloromethane	10.	U
75-25-2	Bromoform	10.	U
74-83-9	Bromomethane	10.	U
75-15-0	Carbon disulfide	10.	U
56-23-5	Carbon tetrachloride	10.	U
108-90-7	Chlorobenzene	10.	U
75-00-3	Chloroethane	10.	U
67-66-3	Chloroform	10.	U
74-87-3	Chloromethane	10.	U
124-48-1	Dibromochloromethane	10.	U
100-41-4	Ethylbenzene	10.	U
75-09-2	Methylene chloride	10.	U
100-42-5	Styrene	10.	U
127-18-4	Tetrechloroethene	10.	U
108-88-3	Toluene	10.	U
79-01-6	Trichloroethene	10.	U
75-01-4	Vinyl chloride	10.	U
1330-20-7	Xylene (Total)	10.	U
10061-01-5	cis-1,3-Dichloropropene	10.	U
10061-02-6	trans-1,3-Dichloropropene	10.	U

*** Validation Complete ***

Site 10

Phase I Sediment Sample

NAS PENSACOLA SITE 10
Sediment Sample
Phase I

METAL

SAMPLE ID ------->	010-H-0001-01
ORIGINAL ID ----->	10M0101
LAB SAMPLE ID --->	39496-051
ID FROM REPORT -->	10M0101
SAMPLE DATE ----->	
MATRIX ---------->	Sediment
UNITS ----------->	MG/KG

CAS #	Parameter	C1520	VAL
AL	Aluminum	313.	J
SB	Antimony	3.8	U
AS	Arsenic	0.71	U
BA	Barium	2.4	U
BE	Beryllium	0.1	U
CD	Cadmium	0.65	U
CA	Calcium	731.	J
CR	Chromium	1.8	U
CO	Cobalt	20.7	J
CU	Copper	14.2	J
CN	Cyanide	0.12	UJ
FE	Iron	402.	J
PB	Lead	31.4	
MG	Magnesium	42.5	UJ
MN	Manganese	1.2	UJ
HG	Mercury	0.03	U
NI	Nickel	4.3	
K	Potassium	158.	U
SE	Selenium	0.41	UJ
AG	Silver	0.88	U
NA	Sodium	10.	U
TL	Thallium	0.68	U
V	Vanadiun	1.1	J
ZN	Zinc	59.6	J

*** Validation Complete **+

NAS PENSACOLA SITE 10
Sediment Sample
Phase I

PEST							
	SAMPLE ID -------:	010-M-0001-01					
	ORIGINAL ID -----:	10M0101					
	LAB SAMPLE ID ---:	39496-34					
	ID FROM REPORT --:	10M0101					
	SAMPLE DATE -----:						
	DATE EXTRACTED --:	03/07/94					
	DATE ANALYZED ---:	03/ 12/94					
	MATRIX ----------:	Sediment					
	UNITS ----------:	UG/KG					
CAS #	Parameter	CT520	VAL				
319-84-6	alpha-BHC	2.2	UJ				
319-85-7	beta-BHC	2.2	UJ				
319-86-8	delta-BHC	2.2	UJ				
58-89-9	gamma-BHC (Lindane)	2.2	UJ				
76-44-8	Heptachlor	2.2	UJ				
309-00-2	Aldrin	2.2	UJ				
1024-57-3	Heptachlor epoxide	2.2	UJ				
959-98-8	Endosulfan I	22	UJ				
60-57-1	Dieldrin	4.2	UJ				
72-55-9	4,4'-DDE	29.	J				
72-20-8	Endrin	4.2	UJ				
33213-65-9	Endosulfan II	4.2	UJ				
72-54-8	4,4'-DDD	37.	J				
1031-07-8	Endosulfan sulfate	4.2	UJ				
50-29-3	4,4'-DDT	11.	J				
72-43-5	Methoxychlor	22.	UJ				
53494-70-5	Endrin ketone	4.2	UJ				
7421-93-4	Endrin aldehyde	4.2	UJ				
5103-71-9	alpha-Chlordane	2.2	UJ				
5103-74-2	gamma-Chlordane	2.2	UJ				
8001-35-2	Toxaphene	220.	UJ				
12674-11-2	Aroclor-1016	42.	UJ				
11104-28-2	Aroclor-1221	86.	UJ				
11141-16-5	Aroclor-1232	42.	UJ				
53469-21-9	Aroclor-1242	42.	UJ				
12672-29-6	Aroclor-1248	42.	UJ				
11097-69-1	Aroclor-1254	42.	UJ				
11096-82-5	Aroclor-1260	42.	UJ				

*** Validation Complete ***

NAS PENSACOLA SITE 10
Sediment Sample
Phase I

		010-M-0001-01 10M0101 39496-34 10M0101 03/08/94 03/10/94 Sediment		010-M-0001-01 RE 10M0101RE 39496-34RE 10M0101RE 03/08/94 03/14/94 Sediment					
	UNITS ---------->	UG/KG		UG/KG					
CAS #	Parameter	CT520	VAL	CT520	VAL				
120-82-1	1,2,4-Trichlorobenzene	420.	UJ	420.	UJ				
95-50-1	1,2-Dichlorobenzene	420.	UJ	420.	UJ				
541-73-1	1,3-Dichlorobenzene	420.	UJ	420.	UJ				
106-46-7	1,4-Dichlorobenzene	420.	UJ	420.	UJ				
95-95-4	2,4,5-Trichlorophenol	1000.	UJ	1000.	UJ				
88-06-2	2,4,6-Trichlorophenol	420.	UJ	420.	UJ				
120-83-2	2,4-Dichlorophenol	420.	UJ	420.	UJ				
105-67-9	2,4-Dimethylphenol	420.	UJ	420.	UJ				
51-28-5	2,4-Dinitrophenol	1000.	UJ	1000.	UJ				
121-14-2	2,4-Dinitrotoluene	420.	UJ	420.	UJ				
606-20-2	2,6-Dinitrotoluene	420.	UJ	420.	UJ				
91-58-7	2-Chloranaphthalene	420.	UJ	420.	UJ				
95-57-8	2-Chlorophenol	420.	UJ	420.	UJ				
91-57-6	2-Methylnaphthalene	420.	UJ	420.	UJ				
95-48-7	2-Methylphenol (o-Cresol)	420.	UJ	420.	UJ				
88-74-4	2-Nitroaniline	1000.	UJ	1000.	UJ				
88-75-5	2-Nitrophenol	420.	UJ	420.	UJ				
91-94-1	3,3'-Dichlorobenzidine	420.	UJ	420.	UJ				
99-09-2	3-Nitroaniline	1000.	UJ	1000.	UJ				
534-52-1	4,6-Dinitro-2-methylphenol	1000.	UJ	1000.	UJ				
101-55-3	4-Bromophenylphenylether	420.	UJ	420.	UJ				
59-50-7	4-Chloro-3-methylphmal	420.	UJ	420.	UJ				
106-47-8	4-Chloroaniline	420.	UJ	420.	UJ				
7005-72-3	4-Chlorophenylphenylether	420.	UJ	420.	UJ				
106-44-5	4-Methylphenol (p-Cresol)	420.	UJ	420.	UJ				
100-01-6	4-Nitroaniline	1000.	UJ	1000.	UJ				
100-02-7	4-Nitrophenol	1000.	UJ	1000.	UJ				
83-32-9	Acenaphthene	420.	UJ	420.	UJ				
208-96-8	Acenaphthylene	420.	UJ	420.	UJ				
120-12-7	Anthracene	420.	UJ	420.	UJ				
56-55-3	Benzo(a)anthracene	420.	UJ	420.	UJ				
50-32-8	Benzo(a)pyrene	420.	UJ	420.	UJ				
205-99-2	Benzo(b)fluoranthene	420.	UJ	420.	UJ				
191-24-2	Benzo(g,h,i)perylene	420.	UJ	420.	UJ				
207-08-9	Benzo(k)fluoranthene	420.	UJ	420.	UJ				
85-68-7	Butylbenzylphthalate	420.	UJ	420.	UJ				

*** Validation Complete +++

NAS PENSACOLA SITE 10
Sediment Sample
Phase I

SVOA								
	SAMPLE ID ------->	010-M-0001-01		010-M-0001-01 RE				
	ORIGINAL ID ----->	10M0101		10M0101RE				
	LAB SAMPLE ID --->	39496-34		39496-34RE				
	ID FROM REPORT -->	10M0101		10M0101RE				
	SAMPLE DATE ----->							
	DATE EXTRACTED -->	03/08/94		03/08/94				
	DATE ANALYZED --->	03/10/94		03/14/94				
	MATRIX ---------->	Sediment		Sediment				
	UNITS ---------->	UG/KG		UG/KG				
CAS I	parameter	CT520	VAL	CT520	VAL			
86-74-8	Carbazole	420.	UJ	420.	UJ			
218-01-9	Chrysene	420.	UJ	420.	UJ			
84-74-2	Di-n-butylphthalate	420.	UJ	420.	UJ			
117-84-0	Di-n-octylphthalate	420.	UJ	420.	UJ			
53-70-3	Dibenzo(a,h)anthracene	420.	UJ	420.	UJ			
132-64-9	Dibenzofuran	420.	UJ	420.	UJ			
84-66-2	Diethylphthalate	420.	UJ	420.	UJ			
131-11-3	Dimethylphthalate	420.	UJ	420.	UJ			
206-44-0	Fluoranthene	420.	UJ	420.	UJ			
86-73-7	Fluorene	420.	UJ	420.	UJ			
118-74-1	Hexachlorobenzene	420.	UJ	420.	UJ			
87-68-3	Hexachlorobutadiene	420.	UJ	420.	UJ			
77-47-4	Hexachlorocyclopentadiene	420.	UJ	420.	UJ			
67-72-1	Hexachloroethane	420.	UJ	420.	UJ			
193-39-5	Indeno(1,2,3-cd)pyrene	420.	UJ	420.	UJ			
78-59-1	Isophorone	420.	UJ	420.	UJ			
621-64-7	N-Nitroso-di-n-propyl amine	420.	UJ	420.	UJ			
86-30-6	N-Nitrosodiphenylamine	420.	UJ	420.	UJ			
91-20-3	Naphthalene	420.	UJ	420.	UJ			
98-95-3	Nitrobenzene	420.	UJ	420.	UJ			
87-86-5	Pentachlorophenol	1000.	UJ	1000.	UJ			
85-01-8	Phenanthrene	420.	UJ	420.	UJ			
108-95-2	Phenol	420.	UJ	420.	UJ			
129-00-0	Pyrene	420.	UJ	420.	UJ			
111-91-1	Bis(2-Chloroethoxy)methane	420.	UJ	420.	UJ			
117-81-7	Bis(2-Ethylhexyl)phthalate (BEHP)	420.	UJ	420.	UJ			
111-44-4	Bis(2-Chloroethyl)ether	420.	UJ	420.	UJ			
108-60-1	2,2'-oxybis(1-Chloropropane)	420.	UJ	420.	UJ			

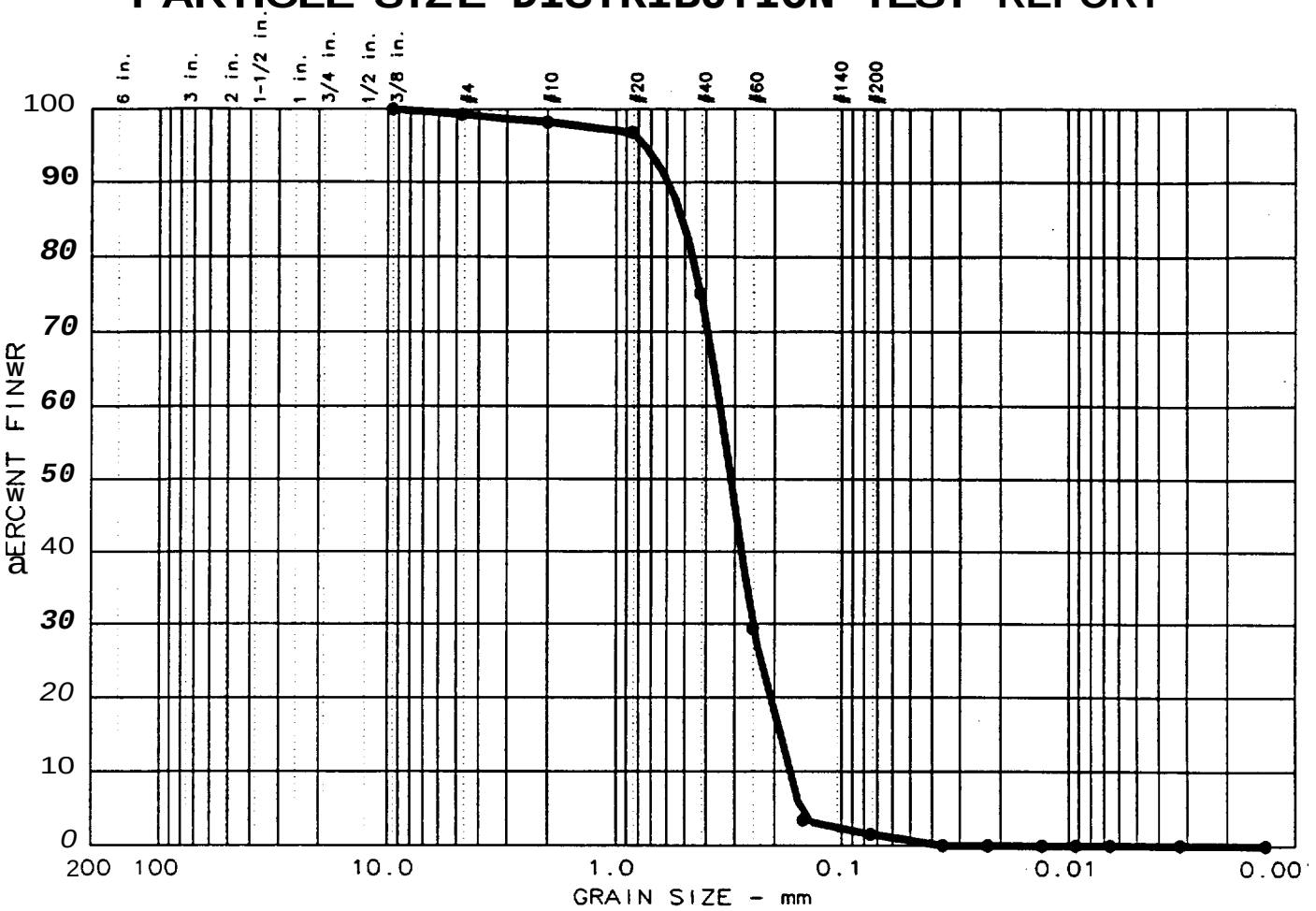
*** Validation Complete ***

NAS PENSACOLA SITE 10
Sediment Sample
Phase I

VOA							
	SAMPLE ID -------	010-M-0001-01					
	ORIGINAL ID -----	10M0101					
	LAB SAMPLE ID ---	39496-17					
	ID FROM REPORT --	10M0101					
	SAMPLE DATE -----						
	DATE ANALYZED ---	03/11/94					
	MATRIX ----------	Sediment					
	UNITS ----------	UG/KG					
CAS #	Parameter	CT520	VAL				
71-55-6	1,1,1-Trichloroethane	13.	U				
79-34-5	1,1,2,2-Tetrachloroethane	13.	U				
79-00-5	1,1,2-Trichloroethane	13.	U				
75-34-3	1,1-Dichloroethane	13.	U				
75-35-4	1,1-Dichloroethene	13.	U				
107-06-2	1,2-Dichloroethane	13.	U				
540-59-0	1,2-Dichloroethene (total)	13.	U				
78-87-5	1,2-Dichloropropane	13.	U				
78-93-3	2-Butanone (MEK)	13.	U				
591-78-6	2-Hexanone	13.	U				
108-10-1	4-Methyl-2-Pentanone (MIBK)	13.	U				
67-64-1	Acetone	150.	U				
71-43-2	Benzene	t3.	U				
75-27-4	Bromodichloromethane	13.	U				
75-25-2	Bromoform	13.	U				
74-83-9	Bromomethanc	13.	U				
75-15-0	Carbon disulfide	13.	U				
56-23-5	Carbon tetrachloride	13.	U				
108-90-7	Chlorobenzene	13.	U				
75-00-3	Chloroethane	13.	U				
67-66-3	Chloroform	13.	U				
74-87-3	Chloromethane	13.	U				
124-48-1	Dibromochloromethane	13.	U				
100-41-4	Ethylbenzene	13.	U				
75-09-2	Methylene chloride	13.	U				
100-42-5	Styrene	13.	U				
127-18-4	Tetrachloroethene	13.	U				
108-88-3	Toluene	13.	U				
79-01-6	Trichloroethene	13.	U				
75-01-4	Vinyl chloride	13.	U				
1330-20-7	Xylene (Total)	13.	U				
10061-01-5	cis-1,3-Dichloropropene	13.	U				
10061-02-6	trans-1,3-Dichloropropene	13.	U				

*** Validation Complete ***

PARTICLE SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY	USCS	LL	PI
0.0	0.6	97.8	1.6		(SP)	- - -	- - -

SIEVE inches size	PERCENT FINER ●		
0.375	100.0		
	GRAIN SIZE		
D_{60}	0.35		
D_{30}	0.25		
D_{10}	0.17		
	COEFFICIENTS		
C_c	1.07		
C_u	2.0		

SIEVE number size	PERCENT FINER ●		
4	99.4		
10	98.3		
20	96.9		
40	75.1		
60	29.4		
100	3.5		
200	1.5		

Sample information:

● 10M0101
MEDIUM TO FINE SAND

Remarks:
CLIENT: ENSAFE / ALLEN & HOSHALL

THOMPSON ENGINEERING

Project No.: P94008
Project: #007000030

Date: 03/22/94 Data Sheet No. ____

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 18

Date: 03/22/94
Project No.: P94008
Project: #007000030

Sample Data

Location of Sample: 10M0101
Sample Description 1: MEDIUM TO FINE SAND
Sample Description 2:
USCS Class: (SP) Liquid limit: - - - Plasticity index: - - -

Notes

Remarks: CLIENT: ENSAFE / ALLEN & HOSHALL

Data Sheet No.:

Mechanical Analysis Data

	Initial	After wash
Dry sample and tare=	100.00	98.47
Tare =	0.00	0.00
Dry sample weight =	100.00	98.47

Minus #200 from wash= 1.5 %
Tare for cumulative weight retained= 0

Sieve	Cumul. Wt. retained	Percent finer
0.375 inches	0.00	100.0
# 4	0.63	99.4
# 10	1.73	98.3
# 20	3.13	96.9
# 40	24.87	75.1
# 60	70.56	29.4
# 100	96.55	3.5
# 200	98.47	1.5

Hydrometer Analysis Data

Separation sieve is number 200
Percent -#200 based on complete sample= 1.5
Weight of hydrometer sample: 100
Calculated biased weight= % 6535.94771242
Automatic temperature correction
Composite correction at 20 deg C =-6

Meniscus correction only= 0
Specific gravity of solids= 2.66
Specific gravity correction factor= 0.998

Hydrometer type: 152H Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
2.0	23.5	7.0	1.8	0.0130	7.0	15.1	0.0359	0.0
5.0	23.5	7.0	1.8	0.0130	7.0	15.1	0.0227	0.0
15.0	23.4	7.0	1.8	0.0131	7.0	15.1	0.0131	0.0
30.0	23.2	7.0	1.7	0.0131	7.0	15.1	0.0093	0.0
60.0	23.2	7.0	1.7	0.0131	7.0	15.1	0.0066	0.0
250.0	23.2	7.0	1.7	0.0131	7.0	15.1	0.0032	0.0
1440.0	22.9	7.0	1.6	0.0131	7.0	15.1	0.0013	0.0

Fractional Components

Gravel/Sand based on #4 sieve
Sand/Fines based on 8200 sieve
% + 3 in. = 0.0 % GRAVEL = 0.6 % SAND = 97.8
% FINES = 1.6

D85= 0.51 D60= 0.347 D50= 0.311
D30= 0.2515 D15= 0.18815 D10= 0.17061
Cc = 1.0678 Cu = 2.0347

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES. INC.

900 Lakeside Drive • Mobile, Alabama 36693-5118 • (205) 666-6633 • Fax (205) 666-6696

LOG NO: M4-11331

Received: 09 MAR 94

Purchase Order: E-0148/94

Mr. Henry Biero
EnSafe/Allen & Hoshall
P.O. Box 341315
Memphis, TN 38134

RECEIVED APR 11 1994

Project: CTO-0070-00030
Sampled By: Client

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE SAMPLED	SDG#
11331-16	09M0101	03-02-94	EAH023
11331-17	10M0101	03-02-94	EAH023

PARAMETER	11331-16	11331-17
Total Organic Carbon (EPA 415.1)		
Organic Carbon, mg/kg dw	410	1000
Sample Preparation	03.28.94	03.28.94
Date Analyzed	03.29.94	03.29.94
Analyst	SR	SR

Site 10

Phase I QA/QC Samples

NAS PENSACOLA Site 10
QA/QC Samples
Phase I

PEST													
	SAMPLE ID →	010-S-0001-16		010-S-0001-16		010-S-0003-01		010-S-0003-01		010-G-GS01-00 MS		010-G-GS01-00 MSD	
	ORIGINAL ID →	10S0116MS		10S0116MSD		10S0301MS		10S0301MSD		10GS01MS		10GS01MSD	
	LAB SAMPLE ID →	39224-11MS		39224-11MSD		39220-11MS		39220-11MSD		c21501MS		C21501MSD	
	ID FROM REPORT →	10S0116MS		10S0116MSD		10S0301MS		10S0301MSD		10GS01MS		10GS01MSD	
	SAMPLE DATE →	02/04/94		02/04/94		02/03/94		02/03/94		02/14/94		02/14/94	
	DATE EXTRACTED →	02/08/94		02/08/94		02/05/94		02/05/94		02/15/94		02/15/94	
	DATE ANALYZED →	02/15/94		02/15/94		02/09/94		02/09/94		02/27/94		02/27/94	
	MATRIX →	Soil		Soil		Soil		Soil		Water		Water	
	UNITS →	UG/KG		UG/KG		UG/KG		UG/KG		UG/L		UG/L	
CAS #	Parameter	CT506	VAL	CT506	VAL	CT505	VAL	CT505	VAL	CT513	VAL	CT513	VAL
319-84-6	alpha-BHC	2.	U	1.9	U	1.8	U	1.8	U	0.053	U	0.054	U
319-85-7	beta-BHC	2.	U	1.9	U	1.8	U	1.8	U	0.053	U	0.054	U
319-86-8	delta-BHC	2.	U	1.9	U	1.8	U	1.8	U	0.053	U	0.054	U
58-89-9	gamma-BHC (Lindane)	13.		14.		10.		11.		0.46		0.44	
76-44-8	Heptachlor	12.		14.		10.		11.		0.42		0.41	
309-00-2	Aldrin	12.		13.		10.		11.		0.41		0.38	
1024-57-3	Heptachlor epoxide	2.	U	1.9	U	1.8	U	1.8	U	0.053	U	0.054	U
959-98-8	Endosulfan I	2.	U	1.9	U	1.8	U	1.8	U	0.053	U	0.054	U
60-57-1	Dieldrin	29.		33.		24.		26.		0.97		1.	
72-55-9	4,4'-DDE	3.8	U	3.7	U	3.5	U	3.5	U	0.03	J	0.03	J
72-20-8	Endrin	28.		32.		22.		23.		0.99		1.	
33213-65-9	Endosulfan II	3.8	U	3.7	U	3.5	U	3.5	U	0.11	U	0.11	U
72-54-8	4,4'-DDD	3.8	U	3.7	U	3.5	U	3.5	U	0.03	J	0.03	J
1031-07-8	Endosulfan sulfate	3.8	U	3.7	U	3.5	U	3.5	U	0.11	U	0.11	U
50-29-3	4,4'-DDT	28.		32.		22.		24.		1.		1.	
72-43-5	Methoxychlor	20.	U	19.	U	18.	U	18.	U	0.53	U	0.54	U
53494-70-5	Endrin ketone	3.8	U	3.7	U	3.5	U	3.5	U	0.11	U	0.11	U
7421-93-4	Endrin aldehyde	3.8	U	3.7	U	3.5	U	3.5	U	0.11	U	0.11	U
5103-71-9	alpha-Chlordane	2.	U	1.9	U	1.8	U	1.8	U	0.053	U	0.054	U
5103-74-2	gamma-Chlordane	2.	U	1.9	U	1.8	U	1.8	U	0.053	U	0.054	U
8001-35-2	Toxaphene	200.	U	190.	U	180.	U	180.	U	5.3	U	5.4	U
12674-11-2	Aroclor-1016	38.	U	37.	U	35.	U	35.	U	1.1	U	1.1	U
11104-28-2	Aroclor-1221	78.	U	76.	U	72.	U	72.	U	2.1	U	2.2	U
11141-16-5	Aroclor-1232	38.	U	37.	U	35.	U	35.	U	1.1	U	1.1	U
53469-21-9	Aroclor-1242	38.	U	37.	U	35.	U	35.	U	1.1	U	1.1	U
12672-29-6	Aroclor-1248	38.	U	37.	U	35.	U	35.	U	1.1	U	1.1	U
11097-69-1	Aroclor-1254	38.	U	37.	U	35.	U	35.	U	1.1	U	1.1	U
11096-82-5	Aroclor-1260	38.	U	37.	U	47.		47.		1.1	U	1.1	U

+ Validation Complete ***

NAS PENSACOLA Site 10
QA/QC Samples
Phase I

SVOA													
	SAMPLE ID →	010-S-0001-16		010-S-0001-16		010-S-0003-01		010-S-OOO3-01		010-G-GS01-00 MS		010-G-GS01-00 MSD	
	ORIGINAL ID →	10S0116MS		10S0116MSD		10S0301MS		10S0301MSD		10GS01MS		10GS01MSD	
	LAB SAMPLE ID →	39224-11MS		39224-11MSD		39220-11MS		39220-11MSD		2642.5MS		2642.5MSD	
	ID FROM REPORT →	10S0116MS		10S0116MSD		10S0301MS		10S0301MSD		10GS01MS		10GS01MSD	
	SAMPLE DATE →	02/04/94		02/04/94		02/03/94		02/03/94		02/14/94		02/14/94	
	DATE EXTRACTED →	02/08/94		02/08/94		02/06/94		02/06/94		02/15/94		02/15/94	
	DATE ANALYZED →	02/12/94		02/12/94		02/07/94		02/07/94		02/26/94		02/26/94	
	MATRIX →	Soil		Soil		Soil		Soil		Water		Water	
	WITS →	UG/KG		UG/KG		UG/KG		UG/KG		UG/L		UG/L	
CAS #	Parameter	CT506	VAL	CT506	VAL	CT505	VAL	CT505	VAL	CT513	VAL	CT513	VAL
120-82-1	1,2,4-Trichlorobenzene	1200.		1100.		1200.		1200.		39.		40.	
95-50-1	1,2-Dichlorobenzene	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
541-73-1	1,3-Dichlorobenzene	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
106-46-7	1,4-Dichlorobenzene	1000.		980.		960.		970.		35.		37.	
95-95-4	2,4,5-Trichlorophenol	910.	U	910.	U	860.	U	860.	U	28.	U	29.	U
88-06-2	2,4,6-Trichlorophenol	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
120-83-2	2,4-Dichlorophenol	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
105-67-9	2,4-Dimethylphenol	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
51-28-5	2,4-Dinitrophenol	910.	U	910.	U	860.	U	860.	U	28.	U	29.	U
121-14-2	2,4-Dinitrotoluene	1300.		1300.		1400.		1300.		46.		48.	
606-20-2	2,6-Dinitrotoluene	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
91-58-7	2-Chloronaphthalene	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
95-57-8	2-Chlorophenol	1600.		1600.		1600.		1600.		60.		62.	
91-57-6	2-Methylnaphthalene	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
95-48-7	2-Methylphenol (o-Cresol)	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
88-74-4	2-Nitroaniline	910.	U	910.	U	860.	U	860.	U	28.	U	29.	U
88-75-5	2-Nitrophenol	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
91-94-1	3,3'-Dichlorobenzidine	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
99-09-2	3-Nitroaniline	910.	U	910.	U	860.	U	860.	U	28.	U	29.	U
534-52-1	4,6-Dinitro-2-methylphenol	910.	U	910.	U	860.	U	860.	U	28.	U	29.	U
101-55-3	4-Bromophenyl-phenyl ether	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
59-50-7	4-Chloro-3-methylphenol	1700.		1800.		1900.		1900.		62.		63.	
106-47-8	4-Chloroaniline	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
7005-72-3	4-Chlorophenyl-phenylether	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
106-44-5	4-Methylphenol (p-Cresol)	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
100-01-6	4-NitromiLine	910.	U	910.	U	860.	U	860.	U	28.	U	29.	U
100-02-7	4-Nitrophenol	2000.		2000.		2100.		2100.		63.		70.	
83-32-9	Acenaphthene	1200.		1300.		1200.		1200.		40.		42.	
208-96-8	Acenaphthylene	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
120-12-7	Anthracene	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
56-55-3	Benzo(a)anthracene	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
50-32-8	Benzo(a)pyrene	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
205-99-2	Benzo(b)fluoranthene	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
191-24-2	Benzo(g,h,i)perylene	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
207-08-9	Benzo(k)fluoranthene	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
85-68-7	Butylbenzylphthalate	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U

*** Validation Complete ***

NAS PENSACOLA Site 10
QA/QC samples
Phase I

SVOA													
	SAMPLE ID →	010-5-OOOI-I6		010-S-0001-16		010-S-0003-01		010-S-0003-01		010-G-GS01-00 MS		010-G-GS01-00 MSD	
	ORIGINAL ID →	10S0116MS		10S0116MSD		10S0301MS		10S0301MSD		10GS01MS		10GS01MSD	
	LAB SAMPLE ID →	39224-11MS		39224-11HSD		39220-11MS		39220-11MSD		2642.5MS		2642.5MSD	
	ID FROM REPORT →	10S0116MS		10S0116MSD		10S0301MS		10S0301MSD		10GS01MS		10GS01MSD	
	SAMPLE DATE →	02/04/94		02/04/94		02/03/94		02/03/94		02/14/94		02/14/94	
	DATE EXTRACTED →	02/08/94		02/08/94		02/06/94		02/06/94		02/15/94		02/15/94	
	DATE ANALYZED →	02/12/94		02/12/94		02/07/94		02/07/94		02/26/94		02/26/94	
	MATRIX →	Soi1		Soi1		Soil		Soi1		Uater		Uater	
	UNITS →	UG/KG		UG/KG		UG/KG		UG/KG		UG/L		UG/L	
CAS #	Parameter	CT506	VAL	CT506	VAL	CT505	VAL	CT505	VAL	CT513	VAL	CT513	VAL
86-74-8	Carbazole	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
218-01-9	Chrysene	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
84-74-2	Di-n-butylphthalate	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
117-84-0	Di-n-octy1phthalate	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
53-70-3	Dibenzo(a,h)anthracene	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
132-64-9	Dibenzofuran	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
84-66-2	Diethylphthalate	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
131-11-3	Diwthylphthalate	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
206-44-0	Fluoranthene	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
86-73-7	Fluorene	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
118-74-1	Hcxachlorobenzcne	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
87-68-3	Hexachlorobutadiene	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
77-47-4	Hcxachlorocyclopentadiene	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
67-72-1	Hexachloroethane	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
193-39-5	Indeno(1,2,3-cd)pyrene	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
78-59-1	Isophorone	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
621-64-7	N-Nitroso-di-n-propylamine	1100.		1100.		1100.		1100.		47.		51.	
86-30-6	N-Nitrosodiphenylamine	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
91-20-3	Naphthalene	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
98-95-3	Nitrobenzene	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
87-86-5	Pentachlorophenol	1900.		2000.		2200.		2200.		57.		61.	
85-01-8	Phenanthrene	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
108-95-2	Phenol	1500.		1600.		1600.		1600.		60.		62.	
129-00-0	Pyrene	1400.		1300.		1400.		1300.		41.		42.	
111-91-1	bis(2-Chloroethoxy)methane	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
117-81-7	bis(2-Ethy1hexyl)phthalate (BEHP)	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
111-44-4	bis(2-Chloroethy1)ether	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380.	U	370.	U	360.	U	350.	U	11.	U	11.	U

*** Validation Complete ***

Phase I

VOA													
	SAMPLE ID →	010-S-0001-16		010-S-0001-16		010-S-0002-09		010-S-0002-09		010-S-0003-01		010-S-0003-01	
	ORIGINAL ID →	10S0116MS		10S0116MSD		10S0209MS		10S0209MSD		10S0301MS		10S0301MSD	
	LAB SAMPLE ID →	39224-33HS		39224-33MSD		39220-31MS		39220-31MSD		39220-35MS		39220-11MSD	
	ID FROM REPORT →	10S0116MS		10S0116MSD		10S0209MS		10S0209MSD		10S0301MS		10S0301MSD	
	SAMPLE DATE →	02/04/94		02/04/94		02/03/94		02/03/94		02/03/94		02/03/94	
	DATE EXTRACTED →	02/08/94		02/08/94		02/06/94		02/06/94		02/06/94		02/06/94	
	DATE ANALYZED →	02/11/94		02/11/94		02/10/94		02/10/94		02/08/94		02/07/94	
	MATRIX →	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS →	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
CAS #	Parameter	CT506	VAL	CT506	VAL	CT505	VAL	CT505	VAL	CT505	VAL	CT505	VAL
71-55-6	1,1,1-Trichloroethane	11.	U	11.	U	1300.	U	1300.	U	11.	U	10.	U
79-34-5	1,1,2,2-Tetrachlorocthsnc	11.	U	11,	U	1300.	U	1300.	U	11.	U	10.	U
79-00-5	1,1,2-Trichloroethane	11.	U	11.	U	1300.	U	1300.	U	11.	U	10.	U
75-34-3	1,1-Dichloroethane	11.	U	11.	U	1300.	U	1300.	U	11.	U	10.	U
75-35-4	1,1-Dichloroethene	51.		50.		7400.		7000.		53.		10.	U
107-06-2	1,2-Dichloroethane	11.	U	11,	U	1300.	U	1300.	U	11.	U	10.	U
540-59-0	1,2-Dichloroethene (total)	11.	U	11.	U	1300.	U	1300.	U	11.	U	10.	U
78-87-5	1,2-Dichloropropane	11.	U	11.	U	1300.	U	1300.	U	11.	U	10.	U
78-93-3	2-Butanone (MEK)	11.	U	11.	U	1300.	U	1300.	U	11.	U	10.	U
591-78-6	2-Hexanone	11.	U	11.	U	1300.	U	1300.	U	11.	U	10.	U
108-10-1	4-Hethyl-2-Pentanone (MIBK)	11.	U	11.	U	1300.	U	1300.	U	11.	U	10.	U
67-64-1	Acetone	15.	U	22.	U	2400.	U	2500.	U	160.	U	83.	U
71-43-2	Benzene	59.		56.		6900.		6500.		57.		10.	U
75-27-4	Bromodichloromethane	11.	U	11.	U	1300.	U	1300.	U	11.	U	10.	U
75-25-2	Bromoform	11.	U	11.	U	1300.	U	1300.	U	11.	U	10.	U
74-83-9	Bromomethane	11.	U	11.	U	1300.	U	1300.	U	11.	U	10.	U
75-15-0	Carbon disulfide	11.	U	11.	U	1300.	U	1300.	U	11.	U	10.	U
56-23-5	Carbon tetrachloride	11.	U	11.	U	1300.	U	1300.	U	11.	U	10.	U
108-90-7	Chlorobenzene	61.		59.		7000.		6800.		60.		10.	U
75-00-3	Chloroethane	11.	U	11.	U	1300.	U	1300.	U	11.	U	10.	U
67-66-3	Chloroform	11.	U	11.	U	1300.	U	1300.	U	11.	U	10.	U
74-87-3	Chloromethane	11.	U	11.	U	1300.	U	1300.	U	11.	U	10.	U
124-48-1	Dibromochloromethane	11.	U	11.	U	1300.	U	1300.	U	11.	U	10.	U
100-41-4	Ethylbenzene	11.	U	11.	U	1300.	U	1300.	U	11.	U	10.	U
75-09-2	Methylene chloride	6.	U	5.	U	870.	U	630.	U	9.	U	6.	U
100-42-5	Styrene	11.	U	11.	U	1300.	U	1300.	U	11.	U	10.	U
127-18-4	Tetrachloroethene	11.	U	11.	U	1300.	U	1300.	U	11.	U	10.	U
108-88-3	Toluene	56.		54.		6700.		6500.		60.		10.	U
79-01-6	Trichloroethene	56.		55.		6500.		6200.		53.		10.	U
75-01-4	Vinyl chloride	11.	U	11.	U	1300.	U	1300.	U	11.	U	10.	U
1330-20-7	m+p-Xylenes	11.	U	11.	U	1300.	U	1300.	U	11.	U	10.	U
10061-01-5	cis-1,3-Dichloropropene	11.	U	11.	U	1300.	U	1300.	U	11.	U	10.	U
10061-02-6	trans-1,3-Dichloropropene	11.	U	11.	U	1300.	U	1300.	U	11.	U	10.	U

*** Validation Complete ***

NAS PENSACOLA Site 10
QA/QC Samples
Phase I

VOA											
	SAMPLE ID →	010-S-0003-01		010-G-GS01-00 MS		010-G-GS01-00 MSD					
	ORIGINAL ID →	10S0301MSD		10GS01MS		10GS01MSD					
	LAB SAMPLE ID →	39220-35MSD		2642.5MS		2642.5MSD					
	ID FROM REPORT →	10S0301MSD		10GS01MS		10GS01MSD					
	SAMPLE DATE →	02/03/94		02/11/94		02/11/94					
	DATE EXTRACTED →	02/06/94									
	DATE ANALYZED →	02/08/94		02/17/94		02/17/94					
	MATRIX →	Soil		Water		Water					
	UNITS →	UG/KG		UG/L		UG/L					
CAS #	Paramter	CT505	VAL	CT513	VAL	CT513	VAL				
71-55-6	1,1,1-Trichloroethane	11.	U	10.	U	10.	U				
79-34-5	1,1,2,2-Tetrachloroethane	11.	U	10.	U	10.	U				
79-00-5	1,1,2-Trichloroethane	11.	U	10.	U	10.	U				
75-34-3	1,1-Dichloroethane	11.	U	10.	U	10.	U				
75-35-4	1,1-Dichloroethene	53.		50.		49.					
107-06-2	1,2-Dichloroethane	71.	U	10.	U	10.	U				
540-59-0	1,2-Dichloroethene (total)	11.	U	10.	U	10.	U				
78-87-5	1,2-Dichloropropane	11.	U	10.	U	10.	U				
78-93-3	2-Butanone (MEK)	11.	U	10.	U	10.	U				
591-78-6	2-Hexanone	11.	U	10.	U	10.	U				
108-10-1	4-Methy1-2-Pentame (MIBK)	11.	U	10.	U	10.	U				
67-64-1	Acetone	1400.	U	10.	U	2.	J				
71-43-2	Benzene	57.		49.		50.					
75-27-4	Bromodichloromethane	11.	U	10.	U	10.	U				
75-25-2	Bromoform	11.	U	10.	U	10.	U				
74-83-9	Bromomethane	11.	U	10.	U	10.	U				
75-15-0	Carbon disulfide	11.	U	10.	U	10.	U				
56-23-5	Carbon tetrachloride	11.	U	10.	U	10.	U				
108-90-7	Chlorobenzene	59.		47.		49.					
75-00-3	Chloroethane	11.	U	10.	U	10.	U				
67-66-3	Chloroform	11.	U	10.	U	10.	U				
74-87-3	Chloromethane	11.	U	10.	U	10.	U				
124-48-1	Dibromochloromethane	11.	U	10.	U	10.	U				
100-41-4	Ethylbenzene	11.	U	10.	U	10.	U				
75-09-2	Methylene chloride	9.	U	10.	U	10.	U				
100-42-5	Styrene	11.	U	10.	U	10.	U				
127-18-4	Tetrachlorocthenc	11.	U	10.	U	10.	U				
108-88-3	Toluene	60.		48.		50.					
79-01-6	Trichloroethene	51.		49.		50.					
75-01-4	Vinyl chloride	11.	U	10.	U	10.	U				
1330-20-7	m+p-Xylenes	11.	U	10.	U	10.	U				
10061-01-5	cis-1,3-Dichloropropene	11.	U	10.	U	10.	U				
10061-02-6	trans-1,3-Dichloropropene	11.	U	10.	U	10.	U				

*** Validation Complete ***

NAS PENSACOLA Site 10
QA/QC samples
Phase I

METAL													
	SAMPLE ID ——>	010-E-0002-00		010-E-GE01-00		010-E-SEOI -00		070-F-FB05-00					
	ORIGINAL ID ——>	10SE02		10GE01		10SE01		70FB05					
	LAB SAMPLE ID —>	39224-039		X26492		39220-041		39224-040					
	ID FROM REPORT —>	10SE02		10GE01		10SE01		70FB05					
	SAMPLE DATE ——>	02/04/94		02/14/94		02/03/94		02/04/94					
	MATRIX ——>	Water		Uatcr		Water		Water					
	UNITS ——>	UG/L		UG/L		UG/L		UG/L					
CAS #	Parameter	CT506	VAL	CT513	VAL	CT505	VAL	CT506	VAL				
AL	Aluminum	17.9	U	29.	U	17.9	U	17.9	U				
SB	Antimony	15.6	UJ	36.	U	15.6	U	15.6	UJ				
AS	Arsenic	2.9	U	4.	U	2.9	U	2.9	U				
BA	Barium	2.4	U	2.	U	2.4	U	2.4	U				
BE	Beryllium	0.4	U	3.	U	0.4	U	0.4	U				
CD	Cadmium	2.1	U	5.	U	2.1	U	2.1	U				
CA	Calcium	19.	U	114.		19.	U	25.					
CR	Chromium	2.3	UJ	4.	U	2.3	U	2.3	UJ				
CO	Cobalt	3.2	UJ	6.	U	3.2	U	3.2	UJ				
CU	Copper	2.6	UJ	3.	U	2.6	U	2.6	UJ				
CN	Cyanide	1.	U	10.	U	1.	U	1.	U				
FE	Iron	29.3		7.2		28.1		24.5					
PB	Lead	0.7	U	2.	U	0.7	U	0.7	U				
HG	Magnesium	22.	U	19.	U	22.	U	22.	U				
MN	Manganese	1.	U	4.	U	1.	U	1.	U				
HG	Mercury	0.1	UJ	0.2	U	0.1	U	0.1	UJ				
NI	Nickel	10.4	U	15.	U	10.4	U	10.4	U				
K	Potassium	649.	UJ	469.	U	649.	U	649.	UJ				
SE	Selenium	1.7	UJ	5.	U	1.7	U	1.7	UJ				
AG	Silver	3.6	UJ	6.	U	3.6	U	3.6	UJ				
NA	Sodium	22.4	U	56.5		103.		22.4	U				
TL	Thallium	2.8	UJ	8.	U	2.8	U	2.8	UJ				
V	Vanadium	3.3	U	6.	U	3.3	U	3.3	U				
ZN	Zinc	3.1	J	9.9		1.7	U	1.7	UJ				

*** Validation Complete ***

NAS PENSACOLA Site 10
QA/QC Samples
Phase I

PEST											
	SAMPLE ID →	010-E-0002-00		010-F-0005-00		010-E-GEOI-00		010-E-SE01-00			
	ORIGINAL ID →	10SE02		70FB05		10GE01		10SE01			
	LAB SAMPLE ID →	39224-37		39224-38		C21507		39220-40			
	ID FROM REPORT →	10SE02		70FB05		10GE01		10SE01			
	SAMPLE DATE →	02/04/94		02/04/94		02/14/94		02/03/94			
	DATE EXTRACTED →	02/07/94		02/07/94		02/17/94		02/07/94			
	DATE ANALYZED →	02/04/94		02/04/94		02/28/94		02/09/94			
	MTRIX →	Uatcr		Uatcr		Uatcr		Water			
	UNITS →	UG/L		UG/L		UG/L		UG/L			
CAS #	Parameter	CT506	VAL	CT506	VAL	CT513	VAL	CT505	VAL		
319-84-6	alpha-BHC	0.056	UJ	0.06	UJ	0.058	U	0.051	UJ		
319-85-7	beta-BHC	0.056	UJ	0.06	UJ	0.058	U	0.051	UJ		
319-86-8	delta-BHC	0.056	UJ	0.06	UJ	0.058	U	0.051	UJ		
58-89-9	gamma-BHC (Lindane)	0.056	UJ	0.06	UJ	0.058	U	0.051	UJ		
76-44-8	Heptachlor	0.056	UJ	0.06	UJ	0.058	U	0.081	J		
309-00-2	Aldrin	0.056	UJ	0.06	UJ	0.058	U	0.051	UJ		
1024-57-3	Heptachlor epoxide	0.056	UJ	0.06	UJ	0.058	U	0.051	UJ		
959-98-8	Endosulfan I	0.056	UJ	0.06	UJ	0.058	U	0.051	UJ		
60-57-1	Dieldrin	0.11	UJ	0.12	UJ	0.12	U	0.1	UJ		
72-55-9	4,4'-DDE	0.11	UJ	0.12	UJ	0.12	U	0.1	UJ		
72-20-8	Endrin	0.11	UJ	0.12	UJ	0.12	U	0.1	UJ		
33213-65-9	Endosulfan II	0.11	UJ	0.12	UJ	0.12	U	0.1	UJ		
72-54-8	4,4'-DDD	0.11	UJ	0.12	UJ	0.12	U	0.1	UJ		
1031-07-8	Endosulfan sulfate	0.11	UJ	0.12	UJ	0.12	U	0.1	UJ		
50-29-3	4,4'-DDT	0.11	UJ	0.12	UJ	0.12	U	0.1	UJ		
72-43-5	Methoxychlor	0.56	UJ	0.6	UJ	0.58	U	0.51	UJ		
53494-70-5	Endrin ketone	0.11	UJ	0.12	UJ	0.12	U	0.1	UJ		
7421-93-4	Endrin aldehyde	0.11	UJ	0.12	UJ	0.12	U	0.1	UJ		
5103-71-9	alpha-Chlordane	0.056	UJ	0.06	UJ	0.058	U	0.051	UJ		
5103-74-2	gamma-Chlordane	0.056	UJ	0.06	UJ	0.058	U	0.051	UJ		
8001-35-2	Toxaphene	5.6	UJ	6.	UJ	5.8	U	5.1	UJ		
12674-11-2	Aroclor-1016	1.1	UJ	1.2	UJ	1.2	U	1.	UJ		
11104-28-2	Aroclor-1221	2.2	UJ	2.4	UJ	2.3	U	2.	UJ		
11141-16-5	Aroclor-1232	1.1	UJ	1.2	UJ	1.2	U	1.	UJ		
53469-21-9	Aroclor-1242	1.1	UJ	1.2	UJ	1.2	U	1.	UJ		
12672-29-6	Aroclor-1248	1.1	UJ	1.2	UJ	1.2	U	1.	UJ		
11097-69-1	Aroclor-1254	1.1	UJ	1.2	UJ	1.2	U	1.	UJ		
11096-82-5	Aroclor-1260	1.1	UJ	1.2	UJ	1.2	U	1.	UJ		

*** Validation Complete ***

NAS PENSACOLA Site 10
QA/QC Samples
Phase I

SVOA											
	SAMPLE ID →	010-E-0002-0		010-F-0005-00		010-E-GE01-00		010-E-SE01-00			
	ORIGINAL ID →	10SE02		70FB05		10GE01		10SE01			
	LAB SAMPLE ID →	39224-37		39224-38		2649.2		39220-40			
	ID FROM REPORT →	10SE02		70fB05		10GE01		10SE01			
	SAMPLE DATE →	02/04/94		02/04/94		02/14/94		02/03/94			
	DATE EXTRACTED →	02/07/94		02/07/94		02/17/94		02/07/94			
	DATE ANALYZED →	02/08/94		02/08/94		02/28/94		02/08/94			
	MATRIX →	Water		Water		Water		Water			
	UNITS →	UG/L		UG/L		UG/L		UG/L			
CAS #	Parameter	CT506	VAL	CT506	VAL	CT513	VAL	CT505	VAL		
120-82-1	1,2,4-Trichlorobenzene	11.	U	11.	U	12.	U	13.	U		
95-50-1	1,2-Dichlorobenzene	11.	U	11.	U	12.	U	13.	U		
541-73-1	1,3-Dichlorobenzene	11.	U	11.	U	12.	U	13.	U		
106-46-7	1,4-Dichlorobenzene	11.	U	11.	U	12.	U	13.	U		
95-95-4	2,4,5-Trichlorophenol	27.	U	27.	U	29.	U	32.	U		
88-06-2	2,4,6-Trichlorophenol	11.	U	11.	U	12.	U	13.	U		
120-83-2	2,4-Dichlorophenol	11.	U	11.	U	12.	U	13.	U		
105-67-9	2,4-Dimethylphenol	11.	U	11.	U	12.	U	13.	U		
51-28-5	2,4-Dinitrophenol	27.	U	27.	U	29.	U	32.	U		
121-14-2	2,4-Dinitrotoluene	11.	U	11.	U	12.	U	13.	U		
606-20-2	2,6-Dinitrotoluene	11.	U	11.	U	12.	U	13.	U		
91-58-7	2-Chloransphthalenc	11.	U	11.	U	12.	U	13.	U		
95-57-8	2-Chlorophenol	11.	U	11.	U	12.	U	13.	U		
91-57-6	2-Hethylnaphthalene	11.	U	11.	U	12.	U	13.	U		
95-48-7	2-Hethylpheno1 (o-Cresol)	11.	U	11.	U	12.	U	13.	U		
88-74-4	2-Nitroani Line	27.	U	27.	U	29.	U	32.	U		
88-75-5	2-Nitrophenol	11.	U	11.	U	12.	U	13.	U		
91-94-1	3,3'-Dichlorobenzidine	11.	U	11.	U	12.	U	13.	U		
99-09-2	3-Nitroaniline	27.	U	27.	U	29.	U	32.	U		
534-52-1	4,6-Dinitro-2-methylphenol	21.	U	27.	U	29.	U	32.	U		
101-55-3	4-Bromophenyl-phenylether	11.	U	11.	U	12.	U	13.	U		
59-50-7	4-Chloro-3-methylphenol	11.	U	11.	U	12.	U	13.	U		
106-47-8	4-Chloroaniline	11.	U	11.	U	12.	U	13.	U		
7005-72-3	4-Chlorophenyl-phenylether	11.	U	11.	U	12.	U	13.	U		
106-44-5	4-Methylphenol (p-Cresol)	11.	U	11.	U	12.	U	13.	U		
100-01-6	4-Nitroaniline	27.	U	27.	U	29.	U	32.	U		
100-02-7	4-Nitrophenol	27.	U	27.	U	29.	U	32.	U		
83-32-9	Acenaphthene	11.	U	11.	U	12.	U	13.	U		
208-96-8	Acenaphthylene	11.	U	11.	U	12.	U	13.	U		
120-12-7	Anthracene	11.	U	11.	U	12.	U	13.	U		
56-55-3	Benzo(a)anthracene	11.	U	11.	U	12.	U	13.	U		
50-32-8	Benzo(a)pyrene	11.	U	11.	U	12.	U	13.	U		
205-99-2	Benzo(b)fluoranthene	11.	U	11.	U	12.	U	13.	U		
191-24-2	Benzo(g,h,i)perylene	11.	U	11.	U	12.	U	13.	U		
207-08-9	Benzo(k)fluoranthene	11.	U	11.	U	12.	U	13.	U		
85-68-7	Butylbenzylphthalate	11.	U	11.	U	12.	U	13.	U		

*** Validation Complete ***

NAS PENSACOLA Site 10
QA/QC Samples
Phase I

SVOA											
	SAMPLE ID →	310-E-0002-00		310-F-0005-00		010-E-GE01-00		010-E-SE01-00			
	ORIGINAL ID →	10SE02		70FB05		10GE01		10SE01			
	LAB SAMPLE ID →	39224-37		39224-38		2649.2		39220-40			
	ID FROM REPORT →	10SE02		70FB05		10GE01		10SE01			
	SAMPLE DATE →	32/04/94		02/04/94		02/14/94		02/03/94			
	DATE EXTRACTED →	02/07/94		02/07/94		02/17/94		02/07/94			
	DATE ANALYZED →	02/08/94		02/08/94		02/28/94		02/08/94			
	MATRIX →	Yater		Water		Uater		Water			
	UNITS →	UG/L		UG/L		UG/L		UG/L			
CAS #	Parameter	CT506	VAL	CT506	VAL	CT513	VAL	CT505	VAL		
86-74-8	Carbazole	11.	U	11.	U	12.	U	13.	U		
218-01-9	Chrysene	11.	U	11.	U	12.	U	13.	U		
84-74-2	Di-n-butylphthalate	11.	U	11.	U	12.	U	13.	U		
117-84-0	Di-n-octylphthalate	11.	U	11.	U	12.	U	13.	U		
53-70-3	Dibenzo(a,h)anthracene	11.	U	11.	U	12.	U	13.	U		
132-64-9	Dibenzofuran	11.	U	11.	U	12.	U	13.	U		
84-66-2	Diethylphthalate	11.	U	11.	U	12.	U	13.	U		
131-11-3	Dimethylphthalate	11.	U	11.	U	12.	U	13.	U		
206-44-0	Fluoranthene	11.	U	11.	U	12.	U	13.	U		
86-73-7	Fluorene	11.	U	11.	U	12.	U	13.	U		
118-74-1	Hexachlorobenzene	11.	U	11.	U	12.	U	13.	U		
87-68-3	Hexachlorobutadiene	11.	U	11.	U	12.	U	13.	U		
77-47-4	Hexachlorocyclopentadiene	11.	U	11.	U	12.	U	13.	U		
67-72-1	Hexachloroethane	11.	U	11.	U	12.	U	13.	U		
193-39-5	Indeno(1,2,3-cd)pyrene	11.	U	11.	U	12.	U	13.	U		
78-59-1	Isophorone	11.	U	11.	U	12.	U	13.	U		
621-64-7	N-Nitroso-di-n-propylamine	11.	U	11.	U	12.	U	13.	U		
86-30-6	N-Nitrosodiphenylamine	11.	U	11.	U	12.	U	13.	U		
91-20-3	Naphthalene	11.	U	11.	U	12.	U	13.	U		
98-95-3	Nitrobenzene	11.	U	11.	U	12.	U	13.	U		
87-86-5	Pentachlorophenol	27.	U	27.	U	29.	U	32.	U		
85-01-8	Phenanthrene	11.	U	11.	U	12.	U	13.	U		
108-95-2	Phenol	11.	U	11.	U	12.	U	13.	U		
129-00-0	Pyrene	11.	U	11.	U	12.	U	13.	U		
111-91-1	bis(2-Chloroethoxy)methane	11.	U	11.	U	12.	U	13.	U		
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	11.	U	11.	U	12.	U	13.	U		
111-44-4	bis(2-Chloroethyl)ether	11.	U	11.	U	12.	U	13.	U		
108-60-1	2,2'-oxybis(1-Chloropropane)	11.	U	11.	U	12.	U	13.	U		

*** Validation Complete ***

NAS PENSACOLA Site 10
QA/QC Samples
Phase I

VOA									
	SAMPLE ID ——>	010-E-0002-00		010-F-0005-00		010-€-CEO?-00		010-E-SE01-00	
	ORIGINAL ID ——>	10SE02		70FB05		10GE01		10SE01	
	LAB SAMPLE ID ——>	39224-34		39224-35		2649.2		39220-38	
	ID FROM REPORT ——>	10SE02		70FB05		10GE01		10SE01	
	SAMPLE DATE ——>	02/04/94		02/04/94		02/14/94		02/03/94	
	DATE EXTRACTED ——>	02/08/94		02/08/94				02/06/94	
	DATE ANALYZED ——>	02/11/94		02/11/94		02/17/94		02/09/94	
	MATRIX ——>	Water		Uatcr		Uater		Uater	
	UNITS ——>	UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	CT506	VAL	CT506	VAL	CT513	VAL	CT505	VAL
71-55-6	1,1,1-Trichloroethane	10.	u	10.	u	10.	u	10.	u
79-34-5	1, 1,2,2-Tetrachloroethane	10.	u	10.	u	10.	u	10.	u
79-00-5	1,1,2-Trichlorocthane	10.	u	10.	u	10.	u	10.	u
75-34-3	1,1-Dichloroethane	10.	u	10.	u	10.	u	10.	u
75-35-4	1,1-Dichloroethene	10.	u	10.	u	10.	u	10.	u
107-06-2	1,2-Dichloroethane	10.	u	10.	u	10.	u	10.	u
540-59-0	1,2-Dichloroethene (total)	10.	u	10.	u	10.	u	10.	u
78-87-5	1,2-Dichloropropane	10.	u	10.	u	10.	u	10.	u
78-93-3	2-Butanone (MEK)	10.	u	10.	u	10.	u	10.	u
591-78-6	2-Hexanone	10.	u	10.	u	10.	u	10.	u
108-10-1	4-Methyl-2-Pentanone (MIBK)	10.	u	10.	u	10.	u	10.	u
67-64-1	Acetone	10.	UJ	10.	J	5.	J	13.	J
71-43-2	Benzene	10.	u	10.	u	10.	u	10.	u
75-27-4	Bromodichloromethane	10.	u	10.	u	10.	u	10.	u
75-25-2	Bromoform	IO.	u	10.	u	10.	u	10.	u
74-83-9	Bromomethane	10.	u	10.	u	10.	u	10.	u
75-15-0	Carbon disulfide	10.	u	10.	u	10.	u	10.	u
56-23-5	Carbon tctrachloride	10.	u	10.	u	10.	u	10.	u
108-90-7	Chlorobenzene	10.	u	10.	u	10.	u	10.	u
75-00-3	Chloroethane	10.	u	10.	u	10.	u	10.	u
67-66-3	Chloroform	10.	u	IO.	u	IO.	u	10.	u
74-87-3	Chloromethane	10.	u	10.	u	10.	u	10.	u
124-48-1	Dibromochloromethane	10.	u	10.	u	10.	u	10.	u
100-41-4	Ethylbenzene	IO.	u	10.	u	10.	u	10.	u
75-09-2	Methylene chloride	3.	J	3.	J	10.	u	5.	J
100-42-5	Styrene	10.	u	10.	u	10.	u	10.	u
127-18-4	Tetrachloroethene	10.	u	10.	u	10.	u	10.	u
108-88-3	Toluene	10.	u	10.	u	10.	u	IO.	u
79-01-6	Trichloroethene	10.	u	10.	u	10.	u	10.	u
75-01-4	Vinyl chloride	10.	u	10.	u	10.	u	10.	u
1330-20-7	m+p-Xylenes	10.	u	10.	u	10.	u	10.	u
10061-01-5	cis-1,3-Dichloropropene	10.	u	10.	u	10.	u	10.	u
10061-02-6	trans-1,3-Dichloropropene	10.	u	10.	u	10.	u	IO.	u

*** Validation Complete ***

NAS PENSACOLA Site 10
QA/QC Samples
Phase I

VOA											
	SAMPLE ID →	010-T-0001-00		010-T-0001-02		010-T-0003-00		010-T-GT01-00			
	ORIGINAL ID →	10ST01		10ST02		10ST03		10GT01			
	LAB SAMPLE ID →	39220-39		39220-37		39224-36		2650.6			
	ID FROM REPORT →	10ST01		10ST02		10ST03		10GT01			
	SAMPLE DATE →	02/03/94				02/04/94		02/14/94			
	DATE EXTRACTED →	02/06/94		02/06/94		02/08/94					
	DATE ANALYZED →	02/09/94		02/09/94		02/11/94		02/18/94			
	MATRIX →	Water		Water		Uatcr		Water			
	UNITS →	UG/L		UG/L		UG/L		UG/L			
CAS #	Parameter	CT505	VAL	CT505	VAL	CT506	VAL	CT513	VAL		
71-55-6	1,1,1-Trichloroethane	10.	U	10.	U	10.	U	10.	U		
79-34-5	1,1,2,2-Tetrachloroethane	10.	U	10.	U	10.	U	10.	U		
79-00-5	1,1,2-Trichloroethane	10.	U	10.	U	10.	U	10.	U		
75-34-3	1,1-Dichloroethane	10.	U	10.	U	10.	U	10.	U		
75-35-4	1,1-Dichloroethene	10.	U	10.	U	10.	U	10.	U		
107-06-2	1,2-Dichloroethane	10.	U	10.	U	10.	U	10.	U		
540-59-0	1,2-Dichloroethene (total)	10.	U	10.	U	10.	U	10.	U		
78-87-5	1,2-Dichloropropane	10.	U	10.	U	10.	U	10.	U		
78-93-3	2-Butanone (MEK)	10.	U	10.	U	10.	U	10.	U		
591-78-6	2-Hexanone	10.	U	10.	U	10.	U	10.	U		
108-10-1	4-Ncthyl-2-Pentanone (MIBK)	10.	U	10.	U	10.	U	10.	U		
67-64-1	Acetone	10.	U	15.	J	10.	J	3.	J		
71-43-2	Benzene	10.	U	10.	U	10.	U	10.	U		
75-27-4	Bromodichloromethane	10.	U	10.	U	10.	U	10.	U		
75-25-2	Bromoform	10.	U	10.	U	10.	U	10.	U		
74-83-9	Bromomethane	10.	U	10.	U	10.	U	10.	U		
75-15-0	Carbon disulfide	10.	U	10.	U	10.	U	10.	U		
56-23-5	Carbon tetrachloride	10.	U	10.	U	10.	U	10.	U		
108-90-7	Chlorobenzene	10.	U	10.	U	10.	U	10.	U		
75-00-3	Chloroethane	10.	U	10.	U	10.	U	10.	U		
67-66-3	Chloroform	10.	U	10.	U	10.	U	10.	U		
74-87-3	Chloromethane	10.	U	10.	U	10.	U	10.	U		
124-48-1	Dibromochloromethane	10.	U	10.	U	10.	U	10.	U		
100-41-4	Ethylbenzene	10.	U	10.	U	10.	U	10.	U		
75-09-2	Methylene chloride	10.	U	6.	J	4.	J	10.	U		
100-42-5	Styrene	10.	U	10.	U	10.	U	10.	U		
127-18-4	Tetrachloroethene	10.	U	10.	U	10.	U	10.	U		
108-88-3	Toluene	10.	U	10.	U	10.	U	10.	U		
79-01-6	Trichloroethene	10.	U	10.	U	10.	U	10.	U		
75-01-4	Vinyl chloride	10.	U	10.	U	10.	U	10.	U		
1330-20-7	m+p-Xylenes	10.	U	10.	U	10.	U	10.	U		
10061-01-5	cis-1,3-Dichloropropene	10.	U	10.	U	10.	U	10.	U		
10061-02-6	trans-1,3-Dichloropropene	10.	U	10.	U	10.	U	10.	U		

*** Validation Complete ***

Site 10

Phase I Lab Blanks

NAS PENSACOLA Site 10
Lab Blanks
Phase I

PEST													
	SMPLE ID ——→	LCS-T-0000-01		LCS-T-0000-02		LCS-T-0000-03		LCS-T-0000-04		LCS-T-0000-05		LCS-T-000006	
	ORIGINAL ID ——→	LCSG72MS		LCSG72MSD		LCSG73MS		LCSG73MSD		LCSG75MS		LCSG75MSD	
	LAB SAMPLE ID —→	SP3252		SP3253		SP3254		SP3255		SP3256		SP3257	
	ID FROM REPORT —→	LCSG72MS		LCSG72MSD		LCSG73MS		LCSG73MSD		LCSG75MS		LCSG75MSD	
	SAMPLE DATE ——→												
	DATE EXTRACTED —→	02/05/94		02/05/94		02/07/94		02/07/94		02/08/94		02/08/94	
	DATE ANALYZED ——→	02/08/94		02/08/94		02/08/94		02/09/94		02/04/94		02/04/94	
	MATRIX ———	Soil		Soil		Water		Water		Soil		Soil	
	UNITS ———	UG/KG		UG/KG		UG/L				UG/KG		UG/KG	
CAS #	Parameter	CT505	VAL	CT505	VAL	CT505	VAL	CT505	VAL	CT506	VAL	CT506	VAL
319-84-6	alpha-BHC	1.7	U	1.7	U	0.05	U	0.05	U	1.7	U	1.7	U
319-85-7	beta-BHC	1.7	U	1.7	U	0.05	U	0.05	U	1.7	U	1.7	U
319-86-8	delta-BHC	1.7	U	1.7	U	0.05	U	0.05	U	1.7	U	1.7	U
58-89-9	gamma-BHC (Lindane)	9.7		9.3		0.36		0.37		14.		9.7	
76-44-8	Heptachlor	9.8		9.5		0.37		0.38		14.		10.	
309-00-2	Aldrin	9.8		9.5		0.33		0.33		14.		9.8	
1024-57-3	Heptachlor epoxide	1.7	U	1.7	U	0.05	U	0.05	U	1.7	U	1.7	U
959-98-8	Endosulfan I	1.7	U	1.7	U	0.05	U	0.05	U	1.7	U	1.7	U
60-57-1	Dieldrin	23.		23.		0.79		0.81		34.		25.	
72-55-9	4,4'-DDE	3.3	U	3.3	U	0.1	U	0.1	U	3.3	U	3.3	U
72-20-8	Endrin	26.		26.		0.85		0.88		38.		28.	
33213-65-9	Endosulfan II	3.3	U	3.3	U	0.1	U	0.1	U	3.3	U	3.3	U
72-54-8	4,4'-DDD	3.3	U	3.3	U	0.1	U	0.1	U	3.3	U	3.3	U
1031-07-8	Endosulfan sulfate	3.3	U	3.3	U	0.1	U	0.1	U	3.3	U	3.3	U
50-29-3	4,4'-DDT	22.		22.		0.65		0.64		34.		24.	
72-43-5	Methoxychlor	17.	U	17.	U	0.5	U	0.5	U	17.	U	17.	U
53494-70-5	Endrin ketone	3.3	U	3.3	U	0.1	U	0.1	U	3.3	U	3.3	U
7421-93-4	Endrin aldehyde	3.3	U	3.3	U	0.1	U	0.1	U	3.3	U	3.3	U
5103-71-9	alpha-Chlordane	1.7	U	1.7	U	0.05	U	0.05	U	1.7	U	1.7	U
5103-74-2	gamma-Chlordane	1.7	U	1.7	U	0.05	U	0.05	U	1.7	U	1.7	U
8001-35-2	Toxaphene	170.	U	170.	U	5.	U	5.	U	170.	U	170.	U
12674-11-2	Aroclor-1016	33.	U	33.	U	1.	U	1.	U	33.	U	33.	U
11104-28-2	Aroclor-1221	67.	U	67.	U	2.	U	2.	U	67.	U	67.	U
11141-16-5	Aroclor-1232	33.	U	33.	U	1.	U	1.	U	33.	U	33.	U
53469-21-9	Aroclor-1242	33.	U	33.	U	1.	U	1.	U	33.	U	33.	U
12672-29-6	Aroclor-1248	33.	U	33.	U	1.	U	1.	U	33.	U	33.	U
11097-69-1	Aroclor-1254	100.		100.		3.6		3.6		130.		100.	
11096-82-5	Aroclor-1260	33.	U	33.	U	1.	U	1.	U	33.	U	33.	U

*** Validation Complete ***

NAS PENSACOLA Site 10
Lab Blanks
Phase I

PEST													
	SAMPLE ID →	LCS-T-019L-01		LCS-T-019L-01 RE		PBL-T-019L-01		PBL-T-019L-02		PBL-T-019L-03		PBL-T-019L-04	
	ORIGINAL ID →	PLCS35		PLCS35RE		PBLK18		PBLK36		PBLK45		PBLK52	
	LAB SAMPLE ID →	669107		669107 R1		687187		671119		678963		671626	
	ID FROM REPORT →	PLCS35		PLCS35RE		PBLK18		PBLK36		PBLK45		PBLK52	
	SAMPLE DATE →												
	DATE EXTRACTED →					31/19/95							
	DATE ANALYZED →	01/24/95		01/24/95		01/24/95		12/27/94		01/27/95		12/30/94	
	MATRIX →	Uater		Uater		Uater		Uater		Uater		Uater	
	UNITS →	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	0019L	VAL	0019L	VAL	0019L	VAL	0019L	VAL	0019L	VAL	0019L	VAL
319-84-6	alpha-BHC	0.01	u	0.01	u	0.01	u	NR		0.01	u	0.01	u
319-85-7	beta-BHC	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u	0.002	J
319-86-8	delta-BHC	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u
58-89-9	gammaBHC (Lindane)	0.05	J	0.073		0.01	u	0.01	u	0.01	u	0.01	u
76-44-8	Heptachlor	0.0007	J	0.0009	J	0.01	u	0.0005	J	0.01	u	0.01	u
309-00-2	Aldrin	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u
1024-57-3	Heptachlor epoxide	0.058		0.076	J	0.0061	JP	0.01	u	0.01	u	0.0008	J
959-98-8	Endosulfan I	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u
60-57-1	Dieldrin	0.12		0.15		0.02	u	0.02	u	0.02	u	0.0013	J
72-55-9	4,4'-DDE	0.11		0.14		0.02	u	0.02	u	0.02	u	0.02	u
72-20-8	Endrin	0.13		0.15		0.02	u	0.02	u	0.0028	J	0.02	u
33213-65-9	Endosulfan II	0.0006	J	0.02	u	0.02	u	0.02	u	0.0013	J	0.0024	J
72-54-8	4,4'-DDD	0.02	u	0.02	u	0.02	u	0.02	u	0.02	u	0.02	u
1031-07-8	Endosulfan sulfate	0.12		0.14		0.02	u	0.02	u	0.02	u	0.02	u
50-29-3	4,4'-DDT	0.02	u	0.02	u	0.02	u	0.02	u	0.02	u	0.02	u
72-43-5	Methoxychlor	0.0023	J	0.1	u	0.1	u	0.1	u	0.1	u	0.1	u
53494-70-5	Endrin ketone	0.0032	J	0.0049	J	0.02	u	0.02	u	0.02	u	0.02	u
7421-93-4	Endrin aldehyde	0.0014	J	0.02	u	0.02	u	0.0014	J	0.02	u	0.0022	J
5103-71-9	alpha-Chlordane	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u
5103-74-2	gamma-Chlordane	0.056		0.073		0.01	u	0.01	u	0.01	u	0.001	J
8007-35-2	Toxaphene	1.	u	1.	u	1.	u	1.	u	1.	u	1.	u
12674-11-2	Aroclor-1016	0.2	u	0.2	u	0.2	u	0.2	u	0.2	u	0.2	u
11104-28-2	Aroclor-1221	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	u
11141-16-5	Aroclor-I232	0.2	u	0.2	u	0.2	u	0.2	u	0.2	u		
53469-21-9	Aroclor-1242	0.2	u	0.2	u	0.2	u	0.2	u	0.2	u	0.2	u
12672-29-6	Aroclor-1248	0.2	u	0.2	u	0.2	u	0.2	u	0.2	u	0.2	u
11097-69-1	Aroclor-1254	0.2	u	0.2	u	0.2	u	0.2	u	0.2	u	0.2	u
11096-82-5	Aroclor-1260	0.2	u	0.2	u	0.2	u	0.2	u	0.2	u	0.2	u

*** Validation Complete ***

NAS PENSACOLA Site 10
Lab Blinks
Phase I

PEST													
	SAMPLE ID →	PBL-T-T505-01		PBL-T-T505-02		PBL-T-T506-03		PBL-T-T506-04		PBL-T-T513-05		PBL-T-T513-06	
	ORIGINAL ID →	PBLK22		PBLK23		PBLK26		PBLK27		PBLK461		PBLK482	
	LAB SAMPLE ID →	BP2756		BP2758		BP2759		BP2758B		PBLK46-1		PBLK48-2	
	ID FROM REPORT →	PBLK22		PBLK23		PBLK26		PBLK27		PBLK461		PBLK482	
	SAMPLE DATE →												
	DATE EXTRACTED →	02/05/94		02/07/94		02/08/94		02/07/94		02/15/94		02/17/94	
	DATE ANALYZED →	02/08/94		02/08/94		02/04/94		02/04/94		02/27/94		02/28/94	
	MATRIX →	Sail		Water		Soi1		Water		Water		Water	
	UNITS →	UG/KG		UG/L		UG/KG		UG/L		UG/L		UG/L	
CAS #	Parameter	CT505	VAL	CT505	VAL	CT506	VAL	CT506	VAL	CT513	VAL	CT513	VAL
319-84-6	alpha-BHC	1.7	U	0.05	U	1.7	U	0.05	U	0.05	U	0.05	U
319-85-7	beta-BHC	1.7	U	0.05	U	1.7	U	0.05	U	0.05	U	0.05	U
319-86-8	delta-BHC	1.7	U	0.05	U	1.7	U	0.05	U	0.05	U	0.05	U
58-89-9	gamma-BHC (Lindane)	1.7	U	0.05	U	1.7	U	0.05	U	0.05	U	0.05	U
76-44-8	Heptachlor	1.7	U	0.05	U	1.7	U	0.05	U	0.05	U	0.05	U
309-00-2	Aldrin	1.7	U	0.05	U	1.7	U	0.05	U	0.05	U	0.05	U
1024-57-3	Heptachlor epoxide	17	U	0.05	U	1.7	U	0.05	U	0.05	U	0.05	U
959-98-8	Endosulfan I	1.7	U	0.05	U	1.7	U	0.05	U	0.05	U	0.05	U
60-57-1	Dieldrin	3.3	U	0.1	U	3.3	U	0.1	U	0.1	U	0.1	U
72-55-9	4,4'-DDE	3.3	U	0.1	U	3.3	U	0.1	U	0.1	U	0.1	U
72-20-8	Endrin	3.3	U	0.1	U	3.3	U	0.1	U	0.1	U	0.1	U
33213-65-9	Endosulfan If	3.3	U	0.1	U	3.3	U	0.1	U	0.1	U	0.1	U
72-54-8	4,4'-DDD	3.3	U	0.1	U	3.3	U	0.1	U	0.1	U	0.1	U
1031-07-8	Endosulfan sulfate	3.3	U	0.1	U	3.3	U	0.1	U	0.1	U	0.1	U
50-29-3	4,4'-DDT	3.3	U	0.1	U	3.3	U	0.1	U	0.1	U	0.1	U
72-43-5	Methoxychlor	17.	U	0.5	U	17.	U	0.5	U	0.5	U	0.5	U
53494-70-5	Endrin ketone	3.3	U	0.1	U	3.3	U	0.1	U	0.1	U	0.1	U
7421-93-4	Endrin aldehyde	3.3	U	0.1	U	3.3	U	0.1	U	0.1	U	0.1	U
5103-71-9	alpha-Chlordane	1.7	U	0.05	U	1.7	U	0.05	U	0.05	U	0.05	U
5103-74-2	gamma-Chlordane	1.7	U	0.05	U	1.7	U	0.05	U	0.05	U	0.05	U
8001-35-2	Toxaphene	170.	U	5.	U	170.	U	5.	U	5.	U	5.	U
12674-11-2	Aroclor-1016	33.	U	1.	U	33.	U	1.	U	1.	U	1.	U
11104-28-2	Aroclor-1221	67.	U	2.	U	67.	U	2.	U	2.	U	2.	U
11141-16-5	Aroclor-1232	33.	U	1.	U	33.	U	1.	U	1.	U	1.	U
53469-21-9	Aroclor-1242	33.	U	1.	U	33.	U	1.	U	1.	U	1.	U
12672-29-6	Aroclor-1248	33.	U	1.	U	33.	U	1.	U	1.	U	1.	U
11097-69-1	Aroclor-1254	33.	U	1.	U	33.	U	1.	U	1.	U	1.	U
11096-82-5	Aroclor-1260	33.	U	1.	U	33.	U	1.	U	1.	U	1.	U

*** Validation Complete ***

Phase I

PEST													
	SAMPLE ID →	PIB-T-019L-05		PIB-T-019L-06		PIB-T-O19L-07		PIB-T-019L-08		PIE-1-019L-09		PIB-T-019L-10	
	ORIGINAL ID →	PIBUQP		PIBLK2X		PIBLK7R		PIBLK8T		PIBLK8V		PIBLK9R	
	LAB SAMPLE ID →	PIBLK 2P		PIBLK 2X		PIBLK 7R		PIBLK 8T		PIBLK 8V		PIBLK 9R	
	ID FROM REPORT →	PIBUQP		PIBLK2X		PIBLK7R		PIBLK8T		PIBLK8V		PIBLK9R	
	SAMPLE DATE →												
	DATE ANALYZED →	12/29/94		12/30/94		01/20/95		01/24/95		01/24/95		01/27/95	
	MATRIX →	Uater		Uater		Uater		Water		Uater		Uater	
	UNITS →	UG/L		UG/L		UG/L		UG/L				UG/L	
CAS #	Parameter	0019L	VAL	0019L	VAL	0019L	VAL	0019L	VAL	0019L	VAL	0019L	VAL
319-84-6	alpha-BHC	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u
319-85-7	beta-BHC	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u
319-86-8	delta-BHC	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u
58-89-9	gamma-BHC (Lindane)	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u
76-44-8	Heptachlor	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u
309-00-2	Aldrin	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u
1024-57-3	Heptachlor epoxide	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u
959-98-8	Endosulfan I	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u
60-57-1	Dieldrin	0.02	u	0.02	u	0.02	u	0.02	u	0.02	u	0.02	u
72-55-9	4,4'-DDE	0.02	u	0.02	u	0.02	u	0.02	u	0.02	u	0.02	u
72-20-8	Endrin	0.02	u	0.02	u	0.02	u	0.02	u	0.02	u	0.02	u
33213-65-9	Endosulfan II	0.02	u	0.02	u	0.02	u	0.02	u	0.02	u	0.02	u
72-54-8	4,4'-DDD	0.02	u	0.02	u	0.02	u	0.02	u	0.02	u	0.02	u
1031-07-8	Endosulfan sulfate	0.02	u	0.02	u	0.02	u	0.02	u	0.02	u	0.02	u
50-29-3	4,4'-DDT	0.02	u	0.02	u	0.02	u	0.02	u	0.02	u	0.02	u
72-43-5	Methoxychlor	0.1	u	0.1	u	0.1	u	0.1	u	0.1	u	0.1	u
53494-70-5	Endrin ketone	0.02	u	0.02	u	0.02	u	0.02	u	0.02	u	0.02	u
7421-93-4	Endrin aldehyde	0.02	u	0.02	u	0.02	u	0.02	u	0.02	u	0.02	u
5103-71-9	alpha-Chlordane	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u
5103-74-2	gamma-Chlordane	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u
8001-35-2	Toxaphene	1.	u	1.	u	1.	u	1.	u	1.	u	[illegible]	u
12674-11-2	Aroclor-1M6	0.2	u	0.2	u	0.2	u	0.2	u	0.2	u	0.2	u
11104-28-2	Aroclor-1221	0.4	U	0.4	U	0.4	U	0.4	u	0.4	U	0.4	U
11141-16-5	Aroclor1232	0.2	u	0.2	u	0.2	u	0.2	u	0.2	u	0.2	u
53469-21-9	Aroclor-1242	0.2	u	0.2	u	0.2	u	0.2	u	0.2	u	0.2	u
12672-29-6	Aroclor-1248	0.2	u	0.2	u	0.2	u	0.2	u	0.2	u	0.2	u
11097-69-1	Aroclor-1254	0.2	u	0.2	u	0.2	u	0.2	u	0.2	u	0.2	u
11096-82-5	Aroclor-1260	0.2	u	0.2	u	0.2	u	0.2	u	0.2	u	0.2	u

*** Validation Complete ***

NAS PENSACOLA Site 10
Lab Blanks
Phase I

PEST															
	SAMPLE ID →	PIB-T-019L-11		PIB-T-019L-12		PIB-T-019L-13		PIB-T-019L-14		PIB-T-019L-15		PIB-T-T505-13	
	ORIGINAL ID →	PIBLK9V		PIBLKSL		PIBLKTU		PIBLKYM		PIBLKZL		PIBLKG1	
	LAB SAMPLE ID →	PIBLK 9V		PIBLK SL		PIBLK TU		PIBLK YW		PIBLK ZL		PIBLKG1	
	ID FROM REPORT →	PIBLK9V		PIBLKSL		PIBLKTU		PIBLKYM		PIBLKZL		PIBLKG1	
	SAMPLE DATE →												
	DATE ANALYZED →	01/27/95		12/15/94		12/19/94		12/27/94		12/27/94		02/07/94	
	MATRIX →	Uater		Water		Water		Water		Water		Uater	
	UNITS →	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	0019L	VAL	0019L	VAL	0019L	VAL	0019L	VAL	0019L	VAL	CT505	VAL
319-84-6	alpha-BHC	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u	0.05	u
319-85-7	beta-WC	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u	0.05	u
319-86-8	delta-BHC	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u	0.05	u
58-89-9	gamma-BHC (Lindane)	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u	0.05	u
76-44-8	Heptachlor	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u	0.05	u
309-00-2	Aldrin	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u	0.05	u
1024-57-3	Heptachlor epoxide	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u	0.05	u
959-98-8	Endosulfan I	0.01	u	0.01	u	0.01	u	0.01	u	0.01	u	0.05	u
60-57-1	Dieldrin	0.02	u	0.02	u	0.02	u	0.02	u	0.02	u	0.1	u
72-55-9	4,4'-DDE	0.02	u	0.02	u	0.02	u	0.02	u	0.02	u	0.1	u
72-20-8	Endrin	0.02	u	0.02	u	0.02	u	0.02	u	0.02	u	0.1	u
33213-65-9	Endosulfan II	0.02	u	0.02	u	0.02	u	0.02	u	0.02	u	0.1	u
72-54-8	4,4'-DDD	0.02	u	0.02	u	0.02	u	0.02	u	0.02	u	0.1	u
1031-07-8	Endosulfan sulfate	0.02	u	0.02	u	0.02	u	0.02	u	0.02	u	0.1	u
50-29-3	4,4'-DDT	0.02	u	0.02	u	0.02	u	0.02	u	0.02	u	0.1	u
72-43-5	Methoxychlor	0.1	u	0.1	u	0.1	u	0.1	u	0.1	u	0.5	u
53494-70-5	Endrin ketone	0.02	u	0.02	u	0.02	u	0.02	u	0.02	u	0.1	u
7421-93-4	Endrin aldehyde	0.02	u	0.02	u	0.02	u	0.02	u	0.02	u	0.1	u
5103-71-9	alpha-Chlordane	0.01	u	0.01	u	0.01	u	0.01	u	0.01	U	0.05	u
5103-74-2	gamma-Chlordane	0.01	u	0.01	u	0.01	u	0.01	u	0.01	U	0.05	u
8001-35-2	Toxaphene	1.	u	1.	u	1.	u	1.	u	1.	u	5.	u
12674-11-2	Aroclor-1016	0.2	u	0.2	u	0.2	u	0.2	u	0.2	u	1.	u
11104-28-2	Aroclor-1221	0.4	U	0.4	u	0.4	U	0.4	U	0.4	U	2.	u
11141-16-5	Aroclor-1232	0.2	u	0.2	u	0.2	u	0.2	u	0.2	u	1.	u
53469-21-9	Aroclor-1242	0.2	u	0.2	u	0.2	u	0.2	u	0.2	u	1.	u
12672-29-6	Aroclor-1248	0.2	u	0.2	u	0.2	u	0.2	u	0.2	u	[illegible]	u
11097-69-1	Aroclor-1254	0.2	u	0.2	u	0.2	u	0.2	u	0.2	u	1.	u
11096-82-5	Aroclor-1260	0.2	u	0.2	u	0.2	u	0.2	u	0.2	u	1.	u

*** Validation Complete ***

NAS PENSACOLA Site 10
Lab Blanks
Phase I

PEST																	
	SAMPLE ID →			PIB-T-T505-15		PIB-T-T505-16		PIB-T-T505-17		PIB-T-T505-21		PIB-T-T505-22	
	ORIGINAL ID →			PIBLKG3		PIBLKG4		PIBLKG5		PIBLKGF		PIBLKGG	
	LAB SAMPLE ID →			PIBLKG3		PIBLKG4		PIBLKGS		PIBLKGF		PIBLKGG	
	ID FROM REPORT →			PIBLKG3		PIBLKG4		PIBLKGS		PIBLKGF		PIBLKGG	
	SAMPLE DATE →			02/09/94		02/09/94		02/10/94		02/16/94		02/16/94	
	DATE ANALYZED →												
	MATRIX →	Water		Water		Water		Water		Water		Water	
	UNITS →	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	CT505	VAL	CT505	VAL	CT505	VAL	CT505	VAL	CT505	VAL	CT505	VAL
319-84-6	alpha-BHC	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
319-85-7	beta-BHC	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
319-86-8	delta-BHC	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
58-89-9	gamma-BHC (Lindane)	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
76-44-8	Heptachlor	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
309-00-2	Aldrin	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
1024-57-3	Heptachlor epoxide	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
959-98-8	Endosulfan I	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
60-57-1	Dieldrin	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
72-55-9	4,4'-DDE	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
72-20-8	Endrin	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
33213-65-9	Endosulfan II	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
72-54-8	4,4'-DDD	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
1031-07-8	Endosulfan sulfate	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
50-29-3	4,4'-DDT	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
72-43-5	Methoxychlor	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
53494-70-5	Endrin ketone	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
7421-93-4	Endrin aldehyde	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
5103-71-9	alpha-Chlordane	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
5103-74-2	gama-Chlordane	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
8001-35-2	Toxaphene	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
12674-11-2	Aroclor-1016	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
11104-28-2	Aroclor-1221	2.	U	2.	U	2.	U	2.	U	2.	U	2.	U
11141-16-5	Amelor-I232	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
53469-21-9	Amelor-1242	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
12672-29-6	Aroclor-1248	1.	U	1.	U	1.	U	1.	U	[illegible]	U	1.	U
11097-69-1	Aroclor-1254	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
11096-82-5	Amlor-1260	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U

** Validation Complete ***

NAS PENSACOLA Site 10
Lab Blanks
Phase I

PEST													
	SAMPLE ID →	PIB-T-T505-23		PIB-T-T506-18		PIB-T-T506-19		PIB-T-T506-20		PIB-T-T513-08		PIB-T-T513-09	
	ORIGINAL ID →	PIBLKGH		PIBLKGC		PIBLKGD		PIBLKGE		PIBLK01		PIBLK02	
	LAB SAMPLE ID →	PIBLKGH		PIBLKGC		PIBLKGD		PIBLKGE		PIBLK01		PIBLK02	
	ID FROM REPORT →	PIBLKGH		PIBLKGC		PIBLKGD		PIBLKGE		PIBLK01		PIBLK02	
	SAMPLE DATE →												
	DATE ANALYZED →	02/17/94		02/04/94		02/04/94		02/15/94		02/27/94		02/27/94	
	MATRIX →	Uater		Water		Water		Water		Uatcr		Water	
	UNITS →	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	CT505	VAL	CT506	VAL	CT506	VAL	CT506	VAL	CT513	VAL	CT513	VAL
319-84-6	alpha-BHC	0.05	U	0.05	U	0.05	U	0.05	U	0.025	U	0.025	U
319-85-7	beta-BHC	0.05	U	0.05	U	0.05	U	0.05	U	0.025	U	0.025	U
319-86-8	delta-BHC	0.05	U	0.05	U	0.05	U	0.05	U	0.025	U	0.025	U
58-89-9	gamma-BHC (Lindane)	0.05	U	0.05	U	0.05	U	0.05	U	0.025	U	0.025	U
76-44-8	Heptachlor	0.05	U	0.05	U	0.05	U	0.05	U	0.025	U	0.025	U
309-00-2	Aldrin	0.05	U	0.05	U	0.05	U	0.05	U	0.025	U	0.025	U
1024-57-3	Heptachlor epoxide	0.05	U	0.05	U	0.05	U	0.05	U	0.025	U	0.025	U
959-98-8	Endosulfan I	0.05	U	0.05	U	0.05	U	0.05	U	0.025	U	0.025	U
60-57-1	Dieldrin	0.1	U	0.1	U	0.1	U	0.1	U	0.05	U	0.05	U
72-55-9	4,4'-DDE	0.1	U	0.1	U	0.1	U	0.1	U	0.05	U	0.05	U
72-20-8	Endrin	0.1	U	0.1	U	0.1	U	0.1	U	0.05	U	0.05	U
33213-65-9	Endosulfan II	0.1	U	0.1	U	0.1	U	0.1	U	0.05	U	0.05	U
72-54-8	4,4'-DDD	0.1	U	0.1	U	0.1	U	0.1	U	0.05	U	0.05	U
1031-07-8	Endosulfan sulfate	0.1	U	0.1	U	0.1	U	0.1	U	0.05	U	0.05	U
50-29-3	4,4'-DDT	0.1	U	0.1	U	0.1	U	0.1	U	0.05	U	0.05	U
72-43-5	Methoxychlor	0.5	U	0.5	U	0.5	U	0.5	U	0.25	U	0.25	U
53494-70-5	Endrin ketone	0.1	U	0.1	U	0.1	U	0.1	U	0.05	U	0.05	U
7421-93-4	Endrin aldehyde	0.1	U	0.1	U	0.1	U	0.1	U	0.05	U	0.05	U
5103-71-9	alpha-Chlordane	0.05	U	0.05	U	0.05	U	0.05	U	0.025	U	0.025	U
5103-74-2	gam-Chlordane	0.05	U	0.05	U	0.05	U	0.05	U	0.025	U	0.025	U
8001-35-2	Toxaphene	5.	U	5.	U	5.	U	5.	U	2.5	U	2.5	U
12674-11-2	Aroclor-1016	1.	U	1.	U	1.	U	1.	U	0.5	U	0.5	U
11104-28-2	Aroclor-1221	2.	U	2.	U	2.	U	2.	U	1.	U	1.	U
11141-16-5	Aroclor-1232	1.	U	1.	U	1.	U	1.	U	0.5	U	0.5	U
53469-21-9	Aroclor-1242	1.	U	1.	U	1.	U	[illegible]	U	0.5	U	0.5	U
12672-29-6	Aroclor-1248	1.	U	1.	U	1.	U	1.	U	0.5	U	0.5	U
11097-69-1	Aroclor-1254	1.	U	1.	U	1.	U	1.	U	0.5	U	0.5	U
11096-82-5	Aroclor-1260	1.	U	1.	U	1.	U	1.	U	0.5	U	0.5	U

** Validation Complete ***

NAS PENSACOLA Site 10
Lab Blanks
Phase I

PEST												
	SAMPLE ID →	PIB-T-T513-10		PIB-T-T513-11		PIB-T-T513-12						
	ORIGINAL ID →	PIBLK03		PIBLK04		PIBLK05						
	LAB SAMPLE ID →	PIBLK03		PIBLK04		PIBLK05						
	ID FROM REPORT →	PIBLK03		PIBLK04		PIBLK05						
	SAMPLE DATE →											
	DATE ANALYZED →	02/27/94		02/28/94		02/28/94						
	MATRIX →	Water		Water		Water						
	UNITS →	UG/L		UG/L		UG/L						
CAS #	Parameter	CT513	VAL	CT513	VAL	CT513	VAL					
319-84-6	alpha-BHC	0.025	U	0.025	U	0.025	U					
319-85-7	beta-BHC	0.025	U	0.025	U	0.025	U					
319-86-8	delta-BHC	0.025	U	0.025	U	0.025	U					
58-89-9	gamma-BHC (Lindane)	0.025	U	0.025	U	0.025	U					
76-44-8	Heptachlor	0.025	U	0.025	U	0.025	U					
309-00-2	Aldrin	0.025	U	0.025	U	0.025	U					
1024-57-3	Heptachlor epoxide	0.025	U	0.025	U	0.025	U					
959-98-8	Endosulfan I	0.025	U	0.025	U	0.025	U					
60-57-1	Dieldrin	0.05	U	0.05	U	0.05	U					
72-55-9	4,4'-DDE	0.05	U	0.05	U	0.05	U					
72-20-8	Endrin	0.05	U	0.05	U	0.05	U					
33213-65-9	Endosulfan II	0.05	U	0.05	U	0.05	U					
72-54-8	4,4'-DDD	0.05	U	0.05	U	0.05	U					
1031-07-8	Endosulfan sulfate	0.05	U	0.05	U	0.05	U					
50-29-3	4,4'-DDT	0.05	U	0.05	U	0.05	U					
72-43-5	Methoxychlor	0.25	U	0.25	U	0.25	U					
53494-70-5	Endrin ketone	0.05	U	0.05	U	0.05	U					
7421-93-4	Endrin aldehyde	0.05	U	0.05	U	0.05	U					
5103-71-9	alpha-Chlordane	0.025	U	0.025	U	0.025	U					
5103-74-2	gamma-Chlordane	0.025	U	0.025	U	0.025	U					
8001-35-2	Toxaphene	2.5	U	2.5	U	2.5	U					
12674-11-2	Aroclor-1016	0.5	U	0.5	U	0.5	U					
11104-28-2	Aroclor-1221	1.	U	1.	U	1.	U					
11141-16-5	Aroclor-1232	0.5	U	0.5	U	0.5	U					
53469-21-9	Aroclor-1242	0.5	U	0.5	U	0.5	U					
12672-29-6	Aroclor-1248	0.5	U	0.5	U	0.5	U					
11097-69-1	Aroclor-1254	0.5	U	0.5	U	0.5	U					
11096-82-5	Aroclor-1260	0.5	U	0.5	U	0.5	U					

*** Validation Complete ***

NAS PENSACOLA Site 10
Lab Blanks
Phase I

SVOA											
	SAMPLE ID →	SBL-T-T505-26		SBL-T-T505-27		SBL-T-T506-28		SBL-T-T513-24		SBL-T-T513-25	
	ORIGINAL ID →	SBLKFR		SBLKFS		SBLKFU		SBLK461		SBLK481	
	LAB SAMPLE ID →	B-A1331		B-A1332		B-A1333		SBLK46-1		SBLK48-1	
	ID FROM REPORT →	SBLKFR		SBLKFS		SBLKFU		SBLK461		SBLK481	
	SAMPLE DATE →										
	DATE EXTRACTED →	02/06/94		02/07/94		02/08/94		02/15/94		02/17/94	
	DATE ANALYZED →	02/07/94		02/08/94		02/12/94		02/26/94		02/28/94	
	MATRIX →	Soil		Water		Soil		Water		Water	
	UNITS →	UG/KG		UG/L		UG/KG		UG/L		UG/L	
CAS #	Parameter	CT505	VAL	CT505	VAL	CT506	VAL	CT513	VAL	CT513	VAL
120-82-1	1,2,4-Trichlorobenzene	330.	U	10.	U	330.	U	10.	U	10.	U
95-50-1	1,2-Dichlorobenzene	330.	U	10.	U	330.	U	10.	U	10.	U
541-73-1	1,3-Dichlorobenzene	330.	U	10.	U	330.	U	10.	U	10.	U
106-46-7	1,4-Dichlorobenzene	330.	U	10.	U	330.	U	10.	U	10.	U
95-95-4	2,4,5-Trichlorophenol	800.	U	25.	U	800.	U	25.	U	25.	U
88-06-2	2,4,6-Trichlorophenol	330.	U	10.	U	330.	U	10.	U	10.	U
120-83-2	2,4-Dichlorophenol	330.	U	10.	U	330.	U	10.	U	10.	U
105-67-9	2,4-Dimethylphenol	330.	U	10.	U	330.	U	10.	U	10.	U
51-28-5	2,4-Dinitrophenol	800.	U	25.	U	800.	U	25.	U	25.	U
121-14-2	2,4-Dinitrotoluene	330.	U	10.	U	330.	U	10.	U	10.	U
606-20-2	2,6-Dinitrotoluene	330.	U	10.	U	330.	U	10.	U	10.	U
91-58-7	2-Chloronaphthalene	330.	U	10.	U	330.	U	10.	U	10.	U
95-57-8	2-Chlorophenol	330.	U	10.	U	330.	U	10.	U	10.	U
91-57-6	2-Methylnaphthalene	330.	U	10.	U	330.	U	10.	U	10.	U
95-48-7	2-Methylphenol (o-Cresol)	330.	U	10.	U	330.	U	10.	U	10.	U
88-74-4	2-Nitroaniline	800.	U	25.	U	800.	U	25.	U	25.	U
88-75-5	2-Nitrophenol	330.	U	10.	U	330.	U	10.	U	10.	U
91-94-1	3,3'-Dichlorobenzidine	330.	U	10.	U	330.	U	10.	U	10.	U
99-09-2	3-Nitroaniline	800.	U	25.	U	800.	U	25.	U	25.	U
534-52-1	4,6-Dinitro-2-methylphenol	800.	U	25.	U	800.	U	25.	U	25.	U
101-55-3	4-Bromophenyl-phenylether	330.	U	10.	U	330.	U	10.	U	10.	U
59-50-7	4-Chloro-3-methylphenol	330.	U	10.	U	330.	U	10.	U	10.	U
106-47-8	4-Chloroaniline	330.	U	10.	U	330.	U	10.	U	10.	U
7005-72-3	4-Chlorophenyl-phenylether	330.	U	10.	U	330.	U	10.	U	10.	U
106-44-5	4-Methylphenol (p-Cresol)	330.	U	10.	U	330.	U	10.	U	10.	U
100-01-6	4-Nitroaniline	800.	U	25.	U	800.	U	25.	U	25.	U
100-02-7	4-Nitrophenol	800.	U	25.	U	800.	U	25.	U	25.	U
83-32-9	Acenaphthene	330.	U	10.	U	330.	U	10.	U	10.	U
208-96-8	Acenaphthylene	330.	U	10.	U	330.	U	10.	U	10.	U
120-12-7	Anthracene	330.	U	10.	U	330.	U	10.	U	10.	U
56-55-3	Benzo(a)anthracene	330.	U	10.	U	330.	U	10.	U	10.	U
50-32-8	Benzo(a)pyrene	330.	U	10.	U	330.	U	10.	U	10.	U
205-99-2	Benzo(b)fluoranthene	330.	U	10.	U	330.	U	10.	U	10.	U
191-24-2	Benzo(g,h,i)perylene	330.	U	10.	U	330.	U	10.	U	10.	U
207-08-9	Benzo(k)fluoranthene	330.	U	10.	U	330.	U	10.	U	10.	U
85-68-7	Butylbenzylphthalate	330.	U	10.	U	330.	U	10.	U	10.	U

** Validation Complete ***

NAS PENSACOLA Site 10
Lab Blanks
Phase I

SVOA											
	SAMPLE ID →	SBL-T-T505-26		SBL-T-T505-27		SBL-T-T506-28		SBL-T-T513-24		SBL-T-T513-25	
	ORIGINAL ID →	SBLKFR		SBLKFS		SBLKFU		SBLK461		SBLK481	
	LAB SAMPLE ID →	B-A1331		B-A1332		B-A1333		SBLK46-1		SBLK48-1	
	ID FROM REPORT →	SBLKFR		SBLKFS		SBLKFU		SBLK461		SBLK481	
	SAMPLE DATE →										
	DATE EXTRACTED →	02/06/94		02/07/94		02/08/94		02/15/94		02/17/94	
	DATE ANALYZED →	02/07/94		02/08/94		02/12/94		02/26/94		02/28/94	
	MATRIX →	Soil		Water		Soil		Uater		Uater	
	WITS →	UG/KG		UG/L		UG/KG		UG/L		UG/L	
CAS #	Parameter	CT505	VAL	CT505	VAL	CT506	VAL	CT513	VAL	CT513	VAL
86-74-8	Carbazole	330.	U	10.	U	330.	U	10.	U	10.	U
218-01-9	Chrysene	330.	U	10.	U	330.	U	10.	U	10.	U
84-74-2	Di-n-butylphthalate	330.	U	10.	U	330.	U	10.	U	10.	U
117-84-0	Di-n-octylphthalatc	330.	U	10.	U	330.	U	10.	U	10.	U
53-70-3	Dibenzo(a,h)anthracene	330.	U	10.	U	330.	U	10.	U	10.	U
132-64-9	Dibenzofuran	330.	U	10.	U	330.	U	10.	U	10.	U
84-66-2	Dicthylphthalate	330.	U	10.	U	330.	U	10.	U	10.	U
131-11-3	Dimethylphthalate	330.	U	10.	U	330.	U	10.	U	10.	U
206-44-0	Fluoranthcnc	330.	U	10.	U	330.	U	10.	U	10.	U
86-73-7	Fluorene	330.	U	10.	U	330.	U	10.	U	10.	U
118-74-1	Hexachlorobcnzenc	330.	U	10.	U	330.	U	10.	U	10.	U
87-68-3	Hexachlorobutadiene	330.	U	10.	U	330.	U	10.	U	10.	U
77-47-4	Hexachlorocyclopentadiene	330.	U	10.	U	330.	U	10.	U	10.	U
67-72-1	Hcxachloroethane	330.	U	10.	U	330.	U	10.	U	10.	U
193-39-5	Indeno(1,2,3-cd)pyrene	330.	U	10.	U	330.	U	10.	U	10.	U
78-59-1	Isophorone	330.	U	10.	U	330.	U	10.	U	10.	U
621-64-7	N-Nitroso-di-n-propylamine	330.	U	10.	U	330.	U	10.	U	10.	U
86-30-6	N-Nitrosodiphenylamine	330.	U	10.	U	330.	U	10.	U	10.	U
91-20-3	Naphthalene	330.	U	10.	U	330.	U	10.	U	10.	U
98-95-3	Nitrobenzene	330.	U	10.	U	330.	U	10.	U	10.	U
87-86-5	Pentachlorophenol	800.	U	25.	U	800.	U	2s.	U	2s.	U
85-01-8	Phenanthrene	330.	U	10.	U	330.	U	10.	U	10.	U
108-95-2	Phenol	330.	U	18.	U	330.	U	10.	U	10.	U
129-00-0	Pyrenc	330.	U	10.	U	330.	U	10.	U	10.	U
111-91-1	bis(2-Chloroethoxy)methane	330.	U	10.	U	330.	U	10.	U	10.	U
117-81-7	bis(2-Ethylhexyl)phthalate (BEHP)	330.	U	10.	U	330.	U	10.	U	10.	U
111-44-4	bis(2-Chloroethyl)ether	330.	U	10.	U	330.	U	10.	U	10.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	330.	U	10.	U	330.	U	10.	U	10.	U

*** Validation Complete ***

NAS PENSACOLA Site 10
Lab Blanks
Phase I

VOA													
	SAMPLE ID →	VBL-T-T505-31		VBL-T-T505-32		VBL-T-T505-33		VBL-T-T505-34		VBL-T-T506-35		VBL-T-T513-01	
	ORIGINAL ID →	VBLKCU		VBLKCV		VBLKCU		VBLKCY		VBLKCZ		VBLK048	
	LAB SAMPLE ID →	BC020794A		BC020894A		BC020994A		MB021094A		BC021194A		A04803	
	ID FROM REPORT →	VBLKCU		VBLKCV		VBLKCW		VBLKCY		VBLKCZ		VBLK048	
	SAMPLE DATE →												
	DATE EXTRACTED →	02/06/94		02/06/94		02/06/94		02/06/94		02/08/94			
	DATE ANALYZED →	02/07/94		02/08/94		02/09/94		02/10/94		02/11/94		02/17/94	
	MATRIX →	Soil		Soil		Soil		Soil		Soil		Water	
	UNITS →	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/L	
CAS #	Parameter	CT505	VAL	CT505	VAL	CT505	VAL	CT505	VAL	CT506	VAL	CT513	VAL
71-55-6	1,1,1-Trichloroethane	10.	U	10.	U	10.	U	1200.	U	10.	U	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U	10.	U	10.	U	1200.	U	10.	U	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U	10.	U	10.	U	1200.	U	10.	U	10.	U
75-34-3	1,1-Dichloroethane	10.	U	10.	U	10.	U	1200.	U	10.	U	10.	U
75-35-4	1,1-Dichloroethene	10.	U	10.	U	10.	U	1200.	U	10.	U	10.	U
107-06-2	1,2-Dichloroethane	10.	U	10.	U	10.	U	1200.	U	10.	U	10.	U
540-59-0	1,2-Dichloroethene (total)	10.	U	10.	U	10.	U	1200.	U	10.	U	10.	U
78-87-5	1,2-Dichloropropane	10.	U	10.	U	10.	U	1200.	U	10.	U	10.	U
78-93-3	2-Butanone (MEK)	10.	U	10.	U	10.	U	1200.	U	10.	U	10.	U
591-78-6	2-Hexanone	10.	U	10.	U	10.	U	1200.	U	10.	U	10.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	10.	U	10.	U	10.	U	1200.	U	10.	U	10.	U
67-64-1	Acetone	7.	J	12.	J	17.	J	1200.	U	10.	U	10.	U
71-43-2	Benzene	10.	U	10.	U	10.	U	1200.	U	10.	U	10.	U
75-27-4	Bromodichloromethane	10.	U	10.	U	10.	U	1200.	U	10.	U	10.	U
75-25-2	Bromoform	10.	U	10.	U	10.	U	1200.	U	10.	U	10.	U
74-83-9	Bromomethane	10.	U	10.	U	10.	U	1200.	U	10.	U	10.	U
75-15-0	Carbon disulfide	10.	U	10.	U	10.	U	1200.	U	10.	U	10.	U
56-23-5	Carbon tetrachloride	10.	U	10.	U	10.	U	1200.	U	10.	U	10.	U
108-90-7	Chlorobenzene	10.	U	10.	U	10.	U	1200.	U	10.	U	10.	U
75-00-3	Chloroethane	10.	U	10.	U	10.	U	1200.	U	10.	U	10.	U
67-66-3	Chloroform	10.	U	10.	U	10.	U	1200.	U	10.	U	10.	U
74-87-3	Chloromethane	10.	U	10.	U	10.	U	1200.	U	10.	U	10.	U
124-48-1	Dibromochloromethane	10.	U	10.	U	10.	U	1200.	U	10.	U	10.	U
100-41-4	Ethylbenzene	10.	U	10.	U	10.	U	1200.	U	10.	U	10.	U
75-09-2	Methylene chloride	4.	J	3.	J	4.	J	630.	J	4.	J	10.	U
100-42-5	Styrene	10.	U	10.	U	10.	U	1200.	U	10.	U	10.	U
127-18-4	Tetrachloroethene	10.	U	10.	U	10.	U	1200.	U	10.	U	10.	U
108-88-3	Toluene	10.	U	10.	U	10.	U	1200.	U	10.	U	10.	U
79-01-6	Trichloroethene	10.	U	10.	U	10.	U	1200.	U	10.	U	10.	U
75-01-4	vinyl chloride	10.	U	10.	U	10.	U	1200.	U	10.	U	10.	U
1330-20-7	m+p-Xylenes	10.	U	10.	U	10.	U	1200.	U	10.	U	10.	U
10061-01-5	cis-1,3-Dichloropropene	10.	U	10.	U	10.	U	1200.	U	10.	U	10.	U
10061-02-6	trans-1,3-Dichloropropene	10.	U	10.	U	10.	U	1200.	U	10.	U	10.	U

** Validation Complete ***

NAS PENSACOLA Site 10
Lab Blanks
Phase I

VOA

SAMPLE ID →	VBL-T-T513-02
ORIGINAL ID →	VBLK049
LAB SAMPLE ID →	A04903
ID FROM REPORT →	VBLK049
SAMPLE DATE →	
DATE ANALYZED →	02/18/94
MATRIX →	Water
UNITS →	UG/L

CAS #	Parameter	CT513	VAL
71-55-6	1,1,1-Trichloroethane	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
75-34-3	1,1-Dichloroethane	10.	U
75-35-4	1,1-Dichloroethene	10.	U
107-06-2	1,2-Dichloroethane	10.	U
540-59-0	1,2-Dichloroethene (total)	10.	U
78-87-5	1,2-Dichloropropane	10.	U
78-93-3	2-Butanone (MEK)	10.	U
591-78-6	2-Hexanone	10.	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	10.	U
67-64-1	Acetone	3.	J
71-43-2	Benzene	10.	U
75-27-4	Bromodichloromethane	10.	U
75-25-2	Bromoform	10.	U
74-83-9	Bromomethane	10.	U
75-15-0	Carbon disulfide	10.	U
56-23-5	Carbon tetrachloride	10.	U
108-90-7	Chlorobenzene	10.	U
75-00-3	Chlorocthanc	10.	U
67-66-3	Chloroform	10.	U
74-87-3	Chloromethane	10.	U
124-48-1	Dibromochloromethane	10.	U
100-41-4	Ethylbenzene	10.	U
75-09-2	Methylene chloride	10.	U
100-42-5	Styrene	10.	U
127-18-4	Tctrachloroethene	10.	U
108-88-3	Toluene	10.	U
79-01-6	Trichloroethene	10.	U
75-01-4	Vinyl chloride	10.	U
1330-20-7	m+p-Xylenes	10.	U
10061-01-5	cis-1,3-Dichloropropene	10.	U
10061-02-6	trans-1,3-Dichloropropene	10.	U

*** Validation Complete ***

Site 10

Phase **II Groundwater Samples**

NAS PENSACOLA Site 10
Groundwater Samples
Phase II

PEST									
	SAMPLE ID ——>	010-G-GS01-02		010-G-GS02-02					
	ORIGINAL ID ——>	10GGS0102		10GGS0202					
	LAB SAMPLE ID ——>	669360		669359					
	ID FROM REPORT ——>	10GGS0102		10GGS0202					
	SAMPLE DATE ——>	12/14/94		12/14/94					
	MATRIX ——>	Water		Water					
	UNITS ——>	UG/L		UG/L					
CAS #	Parameter	0019L	VAL	0019L	VAL				
319-84-6	alpha-BHC	0.01	U	0.01	U				
319-85-7	beta-BHC	0.01	U	0.01	U				
319-86-8	delta-BHC	0.01	U	0.01	U				
58-89-9	gamma-BHC (Lindane)	0.01	U	0.01	U				
76-44-8	Heptachlor	0.01	U	0.01	U				
309-00-2	Aldrin	0.01	U	0.01	U				
1024-57-3	Heptachlor epoxide	0.01	U	0.01	U				
959-98-8	Endosulfan I	0.01	U	0.01	U				
60-57-1	Dieldrin	0.02	U	0.02	U				
72-55-9	4,4'-DDE	0.02	U	0.02	U				
72-20-8	Endrin	0.02	U	0.02	U				
33213-65-9	Endosulfan II	0.02	U	0.02	U				
72-54-8	4,4'-DDD	0.02	U	0.02	U				
1031-07-8	Endosulfan sulfate	0.02	U	0.02	U				
50-29-3	4,4'-DDT	0.02	U	0.02	U				
72-43-5	Methoxychlor	0.1	U	0.1	U				
53494-70-5	Endrin ketone	0.02	U	0.02	U				
7421-93-4	Endrin aldehyde	0.02	U	0.02	U				
5103-71-9	alpha-Chlordane	0.01	U	0.01	U				
5103-74-2	gamma-Chlordane	0.01	U	0.01	U				
8001-35-2	Toxaphene	1.	U		U				
12674-11-2	Aroclor-1016	0.2	U	0.2	U				
11104-28-2	Aroclor-1221	0.4	U	0.4	U				
11141-16-5	Aroclor-1232	0.2	U	0.2	U				
53469-21-9	Aroclor-1242	0.2	U	0.2	U				
12672-29-6	Aroclor-1248	0.2	U	0.2	U				
11097-69-1	Aroclor-1254	0.2	U	0.2	U				
11096-82-5	Aroclor-1260	0.2	U	0.2	U				

*** Validation Complete ***

Appendix D

Preliminary Remediation Goals

Preliminary Remediation Goals - PRGs For Soil Contaminants			
Parameter	USEPA - RBCs	FDEP - CGs	Reference Concentration
Inorganics (mg/kg)			
Aluminum	23,000	75,000	3833.6
Antimony	3.1	26	9.49
Arsenic	.37	0.7	1.56
Barium	550	5000	4.63
Beryllium	0.15	0.1	0.41
Cadmium	3.9	37	1.00
Calcium	NA	NA	912.37
Chromium	7800	66,000	6.13
Cobalt	4700	4700	1.87
Copper	290	2900	5.74
Cyanide	160	1600	0.52
Iron	NA	NA	2745
Lead	NA	500	7.32
Magnesium	NA	NA	133.33
Manganese	39	10,000	21.36
Mercury	2.3	23	0.10
Nickel	160	1500	6.38
Potassium	NA	NA	460.67
Selenium	39	390	0.62
Silver	39	380	2.07
Sodium	NA	NA	107.85
Thallium	NA	NA	0.82
Vanadium	55	480	5.83
Zinc	23,000	23,000	16.87

Preliminary Remedial Goals - PRGs for Soil Contaminants		
Parameters	**USEPA - RBCs**	**FDEP - CGs**
Pesticides/PCBs (μg/kg)		
4,4-DDD	2,700	4,400
4,4'-DDE	1,900	2,900
4,4'-DDT	1,900	3,100
Aldrin	38	60
Aroclor 1016	550	NA
Aroclor 1221	NA	NA
Aroclor 1232	NA	NA
Aroclor 1242	NA	NA
Aroclor 1248	NA	NA
Aroclor 1254	NA	NA
Aroclor 1260	NA	NA
Dieldrin	40	70
Endosulfan I	NA	340,000'
Endosulfan II	NA	NA
Endosulfan sulfate	NA	NA
Endrin	2300	23,000
Endrin aldehyde	NA	23,000
Endrin ketone	NA	NA
Heptachlor	140	200
Heptachlor epoxide	70	100
Methoxychlor	3900	380,000
Toxaphene	580	800
alpha-BHC	100	200
alpha-Chlordane	NA	800[2]
beta-BHC	350	NA
delta-BHC	NA	NA
gamma-BHC (Lindane)	490	NA
gamma-Chlordane	NA	800[2]

Preliminary Remedial Goals - PRGs for Soil Contaminants		
Parameters	**USEPA - RBCs**	**FDEP - CGs**
Semivolatiles (µg/kg)		
1,2,4-Trichlorobenzene	78,000	480,000
1,2-Dichlorobenzene	700,000	420,000
1,3-Dichlorobenzene	700,000	960,000
1,4-Dichlorobenzene	27,000	4,200
2,4,5-Trichlorophenol	780,000	6,700,000
2,4,6-Trichlorophenol	58,000	77,000
2,4-Dichlorophenol	23,000	210,000
2,4-Dimethylphenol	160,000	960,000
2,4-Dinitrophenol	16,000	NA
2,4-Dinitrotoluene	16,000	1,200
2.6-Dinitrotoluene	7800	1,400
2-Chloronaphthalene	630,000	1,700,000
2-Chlorophenol	39,000	220,000
2-Methylnaphthalene	NA	700,000
2-methyl phenol	390,000	1,900,000
2-Nitroaniline	470	3,700
2-Nitrophenol	NA	NA
3,3'-Dichlorobenzidine	1,400	NA
3-Nitroaniline	23,000	NA
4,6-Dinitro-2-methylphenol	NA	NA
4-Bromophenyl-phenylether	450,000	NA
4-Chloro-3-methyl phenol	NA	1,200,000
4-Chloroaniline	31,000	190,000
4-Chlorophen yl-phen ylether	NA	NA
4-methyl phenol	39,000	300,000
4-Nitroaniline	23,000	230,000
4-Nitrophenol	480,000	NA
Acenaphthene	NA	2,000,000

for [illegible] Contaminants		
Parameters	USEPA - RBCs	FDEP -
Acenaphthylene	NA	320,000
Anthracene	NA	16,000,000
Benzo(a)anthracene	880	1,400
Benzo(a)pyrene	88	140
Benzo(b)fluoranthene	880	1,400
Benzo(g,h,i)perylene	NA	14,000
Benzo(k)fluoranthene	8,800	14,000
Butylbenzylphthalate	1,600,000	15,000,000
Carbazole	32,000	35,000
Chrysene	88,000	140,000
Di-n-butylphthalate	NA	7,500,000
Di-n-octylphthalate	160,000	1,500,000
Dibenz(a,h)anthracene	88	140
Dibenzofuran	NA	200,000
Diethylphthalate	6,300,000	51,000,000
Dimethylphthalate	78,000,000	540,000,000
Fluoranthene	310,000	2,800,000
Fluorene	310,000	1,900,000
Hexachlorobenzene	400	500
Hexachlorobutadiene	1,600	1,700
Hexachlorocyclopentadiene	550,000	300
Hexachloroethane	7,800	17,000
Indeno(1,2,3-cd)pyrene	880	1,400
Isophorone	670,000	NA
N-Nitroso-di-n-propylamine	91	10
N-Nitrosodiphenylamine	130,000	44,000
Naphthalene	310,000	840,000
Nitrobenzene	3900	33,000
Pentachlorophenol	5,300	5,500

Preliminary Remedial Goals - PRGs for Soil Contaminants		
	USEPA - RBCs	FDEP - CGs
Phenanthrene	NA	1,200,000
Phenol	4,700,000	27,000,000
Pyrene	230,000	2,200,000
bis(2-Chloroethoxy)methane	NA	150,000
bis(2-EthlyhexyL)phthalate	46,000	45,000
bis(2-chloroethyl)ether	580	300
bis(2-chloroisopropyl)ether	9.100	NA
1,1,1-Trichloroethane	700,000	320,000
1,1,2,2-Tetrachloroethane	3,200	500
1,1,2-Trichloroethane	11,000	1,100
1,1-Dichloroethane	780,000	160,000
1,1-Dichloroethene	1,100	NA
1,2-Dichloroethane	7,000	400
1,2-Dichloroethene (total)	70,000	NA
1,2-Dichloropropane	9,400	400
2-Butanone	NA	2,500,000
2-Hexanone	NA	NA
4-Methyl-2-Pentanone	NA	310,000
Acetone	780,000	130,000
Benzene	22,000	800
Bromodichloromethane	10,000	400
Bromoform	81,000	43,000
Bromomethane	11,000'	NA
Carbon Disulfide	780,000	2,600
Carbon Tetrachloride	4,900	300
Chlorobenzene	160,000	19,000
Chloroethane	160,000	NA
Chloroform	78,000	300

Preliminary Remedial Goals - PRGs for Soil Contaminants		
Parameters	**USEPA - RBCs**	**FDEP - CGs**
Chloromethane	49,000	100
Dibromochloromethane	7,600	600
Ethylbenzene	780,000	770,000
Methylene Chloride	85,000	9,300
Styrene	1,600,000	1,700,000
Tetrachloroethene	12,000	9,200
Toluene	1,600,000	270,000
Trichloroethene	47,000	3,400
Vinyl Chloride	340	3
Xylene (total)	16,000,000	6,400,000
cis-1,3-Dichloropropene	NA	NA
trans-1,3-Dichloropropene	NA	NA

Notes:

USEPA-RBCs = Risk-based concentrations (RBCs). USEPA Region III COC Screening table (18 Mar 1994) for residential soil.

FDEP-CGs – FDEP Clean-up Goal for Department of Defense sites (April 5, 1995), aggregate resident or child resident scenario (lowest value).

NASP-Reference Concentration – NAS Pensacola, specific reference concentrations, two times the mean concentration and one-half the detection level for non-detections.

NA – Data not available, listed, or applicable under the particular guidance reference.

Preliminary Remediation Goals (PRGs) for Groundwater Contaminants						
Inorganics	EPA MCLs[1]	FPDWS[2]	EPA SMCLs[3]	FSDWS[4]	FGGC[5]	NASP Reference Concentration[6]
Aluminum	NA	NA	50-200	200	NA	3882.8
Antimony	6	6	NA	NA	NA	30.2
Arsenic	50'	50	NA	NA	NA	2.8
Barium	2000	2000	NA	NA	NA	13.2
Beryllium	4	4	NA	NA	NA	1.1
Cadmium	5	5	NA	NA	NA	3.4
Calcium	NA	NA	NA	NA	NA	17560.0
Chromium	100	100	NA	NA	NA	35
Cobalt	NA	NA	NA	NA	NA	4.1
Copper	1300	NA	1000	1000	NA	16.2
Cyanide	200[b]	200	NA	NA	NA	NA
Iron	NA	NA	300	300	NA	1707.8
Lead	15'	15	NA	NA	NA	1.6
Magnesium	NA	NA	NA	NA	NA	2872.6
Manganese	NA	NA	50	50	NA	22.0
Mercury	2	2	NA	NA	NA	0.2
Nickel	100	100	NA	NA	NA	39.9
Potassium	NA	NA	NA	NA	NA	12167.6
Selenium	50	50	NA	NA	NA	3.9
Silver	NA	NA	100	100	NA	4.0

Preliminary Remediation Goals (PRGs) for Groundwater Contaminants						
Inorganics	EPA MCLs[1]	FPDWS[2]	EPA SMCLs[3]	FSDWS[4]	FGGC[5]	NASP Reference Concentration[6]
Sodium	NA	160,000	NA	NA	NA	18345.0
Thallium	2	2	NA	NA	NA	3.6
Vanadium	NA	NA	NA	NA	49	9.6
Zinc	NA	NA	5000	5000	NA	153.20

Notes:

[1] = USEPA-MCLs - U.S. Environmental Protection Agency - Maximum Contaminant Levels
[2] = FPDWS - Florida Primary Drinking Water Standards
[3] = EPA-SMCLs - U.S. Environmental Protection Agency - Secondary Maximum Contaminant Levels
[4] = FSDWS - Florida Secondary Drinking Water Standards
[5] = FGGC - Florida Groundwater Guidance Concentrations
[6] = NAS Pensacola - specific reference concentrations, two times the mean concentration (using one-half the detection level for non-detections).
[a] = Under EPA Review
[b] = EPA proposed MCL
[c] = Action Level
NA = Data not available, listed, or determined under the particular guidance reference.

Preliminary Remediation Goals (PRGs) for Groundwater Contaminants					
Parameter	USEPA MCLs[1]	FPDWS[2]	USEPA SMCLs[3]	FSDWs[4]	FGCG[5]
Pesticides					
4,4-DDD	NA	NA	NA	NA	0.1
4,4'-DDE	NA	NA	NA	NA	0.1
4,4'-DDT	NA	NA	NA	NA	0.1
Aldrin	NA	NA	NA	NA	0.5
Aroclor 1016	NA	NA	NA	NA	NA
Aroclor 1221	NA	NA	NA	NA	NA
Aroclor 1232	NA	NA	NA	NA	NA
Aroclor 1242	NA	NA	NA	NA	NA
Aroclor 1248	NA	NA	NA	NA	NA
Aroclor 1254	NA	NA	NA	NA	NA
Aroclor 1260	NA	NA	NA	NA	NA
Dieldrin	NA	NA	NA	NA	0.1
Endosulfan I	NA	NA	NA	NA	0.35
Endosulfan II	NA	NA	NA	NA	0.35
Endosulfan sulfate	NA	NA	NA	NA	**0.3**
Endrin	2.0	2.0	NA	NA	NA
Endrin aldehyde	NA	NA	NA	NA	**0.1**
Endrin ketone	NA	NA	NA	NA	NA
Heptachlor	0.4	0.4	NA	NA	NA
Heptachlor epoxide	0.2	0.2	NA	NA	NA
Methoxychlor	40	40	NA	NA	NA
Toxaphene	3.0	3.0	NA	NA	NA
alpha-BHC	NA	NA	NA	NA	0.5
alpha-Chlordane	NA	NA	NA	NA	NA
beta-BHC	NA	NA	NA	NA	0.1
delta-BHC	NA	NA	NA	NA	***0.5***
gamma-BHC (Lindane)	0.2	NA	NA	NA	NA

Preliminary Remediation Goals (PRGs) for Groundwater Contaminants					
Parameter	USEPA MCLs[1]	FPDWS[2]	USEPA SMCLs[3]	FSDWs[4]	FGCG[5]
gamma-Chlordane	NA	NA	NA	NA	NA
Semivolatiles					
1,2,4-Trichlorobenzene	70	70	NA	NA	NA
1,2-Dichlorobenzene	600	600	NA	NA	NA
1,3-Dichlorobenzene	600*	NA	NA	NA	10
1,4-Dichlorobenzene	75	75	NA	NA	NA
2,4,5-Trichlorophenol	NA	NA	NA	NA	4
2,4,6-Trichlorophenol	NA	NA	NA	NA	10
2,4-Dichlorophenol	NA	NA	NA	NA	4
2,4-Dimethylphenol	NA	NA	NA	NA	400
2,4-Dinitrophenol	NA	NA	NA	NA	30
2,4-Dinitrotoluene	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	NA	NA	NA	NA	NA
2-Chloronaphthalene	NA	NA	NA	NA	560
2-Chlorophenol	NA	NA	NA	NA	35
2-Methylnaphthalene	NA	NA	NA	NA	NA
2-Methylphenol	NA	NA	NA	NA	350
2-Nitroaniline	NA	NA	NA	NA	7.5
2-Nitrophenol	NA	NA	NA	NA	20
3,3'-Dichlorobenzidine	NA	NA	NA	NA	7.5
3-Nitroaniline	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA
4-Bromophenyl-phenylether	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	NA	NA	NA	NA	3000
4-Chloroaniline	NA	NA	NA	NA	28
4-Chlorophenyl-phenylether	NA	NA	NA	NA	10
4-Methylphenol	NA	NA	NA	NA	35
4-Nitroaniline	NA	NA	NA	NA	NA

Preliminary Remediation Goals (PRGs) for Groundwater Contaminants					
Parameter	USEPA MCLs[1]	FPDWS[2]	USEPA SMCLs[3]	FSDWs[4]	FGCG[5]
4-Nitrophenol	NA	NA	NA	NA	15
Acenaphthene	NA	NA	NA	NA	20
Acenaphthylene	NA	NA	NA	NA	10
Anthracene	NA	NA	NA	NA	2100
Benzo(a)anthracene	0.1	NA	NA	NA	4
Benzo(a)pyrene	0.2	0.2	NA	NA	NA
Benzo(b)fluoranthene	0.2	NA	NA	NA	4
Benzo(g,h,i)perylene	NA	NA	NA	NA	10
Benzo(k)fluoranthene	0.2	NA	NA	NA	4
Butylbenzylphthalate	0.1	NA	NA	NA	1400
Carbazole	NA	NA	NA	NA	7.5
Chrysene	0.2	NA	NA	NA	5
Di-n-butylphthalate	NA	NA	NA	NA	700
Di-n-octylphthalate	NA	NA	NA	NA	140
Dibenzo(a,h)anthracene	0.3	NA	NA	NA	7.5
Dibenzofuran	NA	NA	NA	NA	NA
Diethylphthalate	NA	NA	NA	NA	5600
Dimethylphthalate	NA	NA	NA	NA	70,000
Fluoranthene	NA	NA	NA	NA	280
Fluorene	NA	NA	NA	NA	280
Hexachlorobenzene HCB	1.0	1.0	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA	NA	15
Hexachlorocyclopentadiene	50	50	NA	NA	NA
Hexachloroethane	NA	NA	NA	NA	10
Indeno(1,2,3-cd)pyrene	0.4	NA	NA	NA	7.5
Isophorone	NA	NA	NA	NA	40
N-Nitroso-di-n-propylamine	NA	NA	NA	NA	4.0
N-Nitrosodiphenylamine	NA	NA	NA	NA	7

Preliminary Remediation Goals (PRGs) for Groundwater Contaminants					
Parameter	USEPA MCLs[1]	FPDWS[2]	USEPA SMCLs[3]	FSDWs[4]	FGCG[5]
Naphthalene	NA	NA	NA	NA	6.8
Nitrobenzene	NA	NA	NA	NA	9.5
Pentachlorophenol	1.0	1.0	NA	NA	NA
Phenanthrene	NA	NA	NA	NA	10
Phenol	NA	NA	NA	NA	10
Pyrene	NA	NA	NA	NA	210
bis(2-Chloroethoxy)methane	NA	NA	NA	NA	10
bis(2-Ethlyhexy)phthalate	NA	NA	NA	NA	NA
bis(2-chloroethyl)ether	NA	NA	NA	NA	1.5
bis(2-chloroisopropyl)ether	NA	NA	NA	NA	7.5
Volatiles					
1,1,1-Trichloroethane	200	200	NA	NA	NA
1,1,2,2-Tetrachloroethane	NA	NA	NA	NA	0.2
1,1,2-Trichloroethane	5	5	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA	NA	700
1,1-Dichloroethene	7	7	NA	NA	NA
1,2-Dichloroethane	5	3	NA	NA	NA
1,2-Dichloroethene (total)	NA	NA	NA	NA	NA
1,2-Dichloropropane	5	5	NA	NA	NA
2-Butanone	NA	NA	NA	NA	4,200
2-Hexanone	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	NA	NA	NA	NA	*350*
Acetone	NA	NA	NA	NA	*700*
Benzene	5.0	1.0	NA	NA	NA
Bromodichloromethane	NA	NA	NA	NA	0.6
Bromoform	NA	NA	NA	NA	4
Bromomethane	NA	NA	NA	NA	10
Carbon Disulfide	NA	NA	NA	NA	700

Preliminary Remediation Goals (PRGs) for Groundwater Contaminants					
Parameter	**USEPA MCLs[1]**	**FPDWS[2]**	**USEPA SMCLs[3]**	**FSDWs[4]**	**FGCG[5]**
Carbon Tetrachloride	5.0	3	NA	NA	NA
Chlorobenzene	100	100	NA	NA	NA
Chloroethane	NA	NA	NA	NA	140
Chloroform	NA	NA	NA	NA	6
Chloromethane	NA	NA	NA	NA	2.7'
Dibromochloromethane	NA	NA	NA	NA	1.0
Ethylbenzene	700	700	NA	30	NA
Methylene Chloride	5	5	NA	NA	NA
Styrene	100	100	NA	NA	NA
Tetrachloroethene	5	3	NA	NA	NA
Toluene	1000	1000	NA	40	NA
Trichloroethene	5	3	NA	NA	NA
Vinyl Chloride	2.0	1	NA	NA	NA
Xylene (total)	10,000	10,000	NA	20	NA
cis-1.3-Dichloropropene	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA

Notes:

[1] = USEPA-MCLs - U.S. Environmental Protection Agency - Maximum Contaminant Levels
[2] = FPDWS - Florida Primary Drinking Water Standards
[3] = EPA-SMCLs - U.S. Environmental Protection Agency - Secondary Maximum Contaminant Levels
[4] = FSDWS - Florida Secondary Drinking Water Standards
[5] = FGGC - Florida Groundwater Guidance Concentrations
[a] = Under EPA Review
[b] = EPA proposed MCL
[c] = Action Level
[d] = Based on data for o-dichlorobenzene
NA = Data not available, listed, or determined under the particular guidance reference.

Draft Region IV Waste Management Division Sediment Screening Values for Hazardous Waste Sites (2/16/94 Version)			
Chemical Analyte	Effects Value	CLP POL [1]	Screening Value
Trace Elements (ppm)			
Antimony	2[2]	12	12
Arsenic	8[3]	2	8
Cadmium	1[3]	1	1
Chromium	33[3]	2	33
Copper	28[3]	5	28
Lead	21[3]	0.6	21
Mercury	0.13	0.02	0.1
Nickel	20.9'	8	20.9
Silver	0.5[3]	2	2
Zinc	68[3]	4	68
Organics (ppb)			
Total PCBs	22.7[4]	33 (67 for Aroclor 1221)	33 (67 for Aroclor 1221)
DDT	1[2]	3.3	3.3
Total DDT	1.58[4]	3.3	3.3
Chlordane	0.5[2]	1.7	1.7
Dieldrin	0.02[2]	3.3	3.3
Endrin	0.02[2]	3.3	3.3
Acenaphthene	16[4]	330	330
Acenaphthylene	44[4]	330	330
Anthracene	85[3]	330	330
Fluorene	18[3]	330	330
2-Methyl Naphthalene	70[4]	330	330
Naphthalene	130[3]	330	330
Phenanthrene	140[3]	330	330
Low Molecular Weight PAHs	250[3]		330

Draft Region IV Waste Management Division Sediment Screening Values for Hazardous Waste Sites (2/16/94 Version)			
Chemical Analyte	**Effects Value**	**CLP POL [1]**	**Screening Value**
Benzo(a)anthracene	160[3]	330	330
Benzo(a)pyrene	230[3]	330	330
Chrysene	220[3]	330	330
Dibenz(a,h)anthracene	31[3]	330	330
Fluoranthene	380[3]	330	330
Pyrene	290[3]	330	330
High Molecular Weight PAHs	870[3]	330	330
Total PAHs	2900[3]		2900

Note:

1 – Contract Laboratory Program Practical Quantification Limit.

2 = Long, Edward R., and Lee G. Morgan. 1991. The Potential for Biological Effects of Sediment-Sorbed Contaminants Tested in the National Status and Trends Program. NOAA Technical Memorandum NOS OMA 52.

3 = MacDonald, D.D. 1993. Development of an Approach to the Assessment of Sediment Quality in Florida Coastal Waters. Florida Department of Environmental Regulation.

4 – Long, Edward R., Donald D. MacDonald, and Sherri L. Smith. In press. Incidence of Adverse Biological Effects Within Ranges of Chemical Concentrations in Marine and Estuarine Sediments. Environmental Management.

Appendix E

Reference Concentrations and Background Samples Analytical Report

Summary Analytical Results for Background Soil Samples Site 1				
Parameter	Minimum Detected Concentration	Maximum Detected Concentration	Mean Concentration (MC)	Reference Concentration (2 X MC)
Metals (mg/kg)				
Aluminum	95.20	12400.00	1916.68	3833.36
Arsenic	1.70	2.40	0.78	1.56
Barium	1.20	10.10	2.32	4.63
Beryllium	0.20U	0.21U	0.21	0.41
Cadmium	0.50U	0.50U	0.50	1.00
Calcium	35.70	6740.00	456.18	912.37
Chromium (total)	2.40	11.80	3.07	6.13
Cobalt	0.90U	0.95U	0.93	1.87
Copper	5.10	5.10	2.87	5.74
Cyanide	0.25U	0.26U	0.26	0.52
Iron	205.00	9180.00	1372.5	2745.00
Lead	0.44	28.00	3.66	7.32
Magnesium	365.00	365.00	66.67	133.33
Manganese	1.70	63.70	10.68	21.36
Mercury	0.05U	0.05U	0.05	0.10
Nickel	3.10U	3.25U	3.19	6.38
Potassium	225	233	230.34	460.67
Selenium	0.30	0.31	0.31	0.62
Silver	1.00	1.05	1.04	2.07
Sodium	97.20	108.00	53.93	107.85
Vanadium	1.60	20.60	2.91	5.83
Zinc	3.30	29.00	8.43	16.87

Notes:

mg/kg = Milligrams par kilogram

U = Parameter not detected, value reported equals one-half the detection limit.

RC = Reference concentration, calculated as two times the mean concentration (MC).

Summary Analytical Results for Shallow and Intermediate Background Groundwater Samples
June 1994
(All results in µg/l)

Parameter	FPDWS	Sample Number				Mean Concentration	RC (2xMC)
		01GS67	01GI68	01GS69	01GI70		
Aluminum	200*	*4240.0*	146.5 U	*3270.0*	109.0 U	*1941.4*	*3882.8*
Antimony	6	15.1 U	15.1 U	15.1 U	15.1U	*15.1*	*30.2*
Arsenic	50	1.4 U	1.4 U	1.4 U	1.4 U	1.4	2.8
Barium	2000	5.5 U	6.75 U	9.45 U	4.75 U	6.6	13.2
Berylium	4	.55 U	.55 U	.55 U	.55 U	.55	1.1
Cadmium	5	1.7 U	1.7 U	1.7 U	1.7 U	1.7	3.4
Calcium	—	17800.0	5670.0	6300.0	5350.0	8780.0	17560.0
Chromium	100	4.85 U	2.6 U	59.9	2.6 U	17.5	35.0
Cobalt	—	2.05 U	2.05 U	2.05 U	2.05 U	2.05	4.1
Copper	1000*	5.4 U	5.4 U	16.2	5.4 U	8.1	16.2
Iron	300*	*677.0*	*942.0*	*1770.0*	26.65	***853.9***	*1707.8*
Lead	15	.8 U	.8 U	.8 U	.8 U	.8	1.6
Magnesium	—	795.0 U	665.0 U	1255.0 U	3030.0	1436.3	2872.6
Manganese	50*	6.7	8.9	26.7	1.55 U	11.0	22.0
Mercury	2	.1 U	.1 U	.1 U	.1 U	.1	.2
Nickel	100	19.95 U	19.95 U	19.95 U	19.95 U	19.95	39.9
Potassium	—	13300.0	1275.0 U	6560.0	3200.0	6083.8	12167.6
Selenium	50	1.95 U	1.95 U	1.95 U	1.95 U	1.95	3.9
Silver	100	2.0 U	2.0 U	2.0 U	2.0 U	2.0	4.0
Sodium	160,000	10700.0	8350.0	7830.0	9810.0	9172.5	18345.0

Summary Analytical Results for Shallow and Intermediate Background Groundwater Samples June 1994 (All results in µg/l)							
		Sample Number					
Parameter	FPDWS	01GS67	01GI68	01GS69	01GI70	Mean Concentration	RC (2xMC)
Thallium	2	1.8 U	1.8 U	1.8 U	1.8	1.8	***3.6***
Vanadium	49**	7.9	3.75 U	3.75 U	3.75 U	4.8	9.6
Zinc	5000*	8.75 U	3.9 U	290	3.75 U	76.60	153.20

Notes:

µg/l	=	Micrograms per liter.
U	=	Parameter not detected, value reported equals one-half detection limit.
RC	=	Reference concentration, calculated as two times the mean concentrations (MC).
FPDWS	=	florida and/or USEPA Primary Drinking Water Standard (lower of the two) MCL.
*	=	florida Secondary Drinking Water Standard (FSDWS).
**	=	Florida Groundwater Guidance Concentration.
Bold italics	=	The reported value exceeds the FPDWS/USEPA or FSDWS MCL.

NAS PENSACOLA, BACKGROUND GROUNDWATER SAMPLES
1994 DATA

	SAMPLE ID ------->	001-G-GI68-00		001-G-GI70-00		001-G-GS67-00		001-G-GS69-00			
	ORIGINAL ID ----->	01GI68		01GI70		01GS67		01GS69			
	LAB SAMPLE ID --->	622850		622852		622849		622851			
	SAMPLE DATE ----->	07/01/94		07/01/94		07/01/94		07/01/94			
	MATRIX ---------->	Water		Water		Water		Water			
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L			
Method	Parameter	93820	VAL	93820	VAL	93820	VAL	93820	VAL		
METAL	Cyanide	NR		NR		NR		NR			
METAL	Aluminum	293.	U	218.	U	4240.		3270.			
METAL	Antimony	30.2	U	30.2	U	30.2	U	30.2	U		
METAL	Arsenic	2.8	U	2.8	U	2.8	U	2.8	U		
METAL	Barium	13.5	U	9.5	U	11.	U	18.9	U		
METAL	Beryllium	1.1	U	1.1	U	1.1	U	1.1	U		
METAL	Cadmium	3.4	U	3.4	U	3.4	U	3.4	U		
METAL	Calcium	5670.		5350.		17800.		6300.			
METAL	Chromium	5.2	U	5.2	U	9.7	U	59.9			
METAL	Cobalt	4.1	U	4.1	U	4.1	U	4.1	U		
METAL	Copper	10.8	U	10.8	U	10.8	U	16.2			
METAL	Iron	942.		53.3	U	677.		1770.			
METAL	Lead	1.6	UJ	1.6	UJ	1.6	UJ	1.6	UJ		
METAL	Magnesium	1330.	U	3030.		1590.	U	2510.	U		
METAL	Manganese	8.9		3.1	U	6.7		26.7			
METAL	Mercury	0.2	U	0.2	U	0.2	U	0.2	U		
METAL	Nickel	39.9	U	39.9	U	39.9	U	39.9	U		
METAL	Potassium	2550.	U	3200.		13300.		6560.			
METAL	Selenium	3.9	U	3.9	U	3.9	U	3.9	UJ		
METAL	Silver	4.	U	4.	U	4.	U	4.	U		
METAL	Sodium	8350.		9810.		10700.		7830.			
METAL	Thallium	3.6	UJ	3.6	UJ	3.6	UJ	3.6	UJ		
METAL	Vanadium	7.5	U	7.5	U	7.9		7.5	U		
METAL	Zinc	7.8	U	7.5	U	17.5	U	290.			

*** Validation Complete ***

NAS PENSACOLA, BACKGROUND SOIL SAMPLES 1993 DATA

SAMPLE ID ------->	001-S-0067-17					
ORIGINAL ID ----->	01S6717					
LAB SAMPLE ID --->	01S6717					
SAMPLE DATE ----->						
DATE ANALYZED --->	06/17/93					
MATRIX ---------->	Soil					
UNITS ---------->	mg/L					
Method Parameter	NOSDG VAL					
HEXACHROME 10-32-0	0.026					

*** Validation Complete ***

NAS PENSACOLA, BACKGROUND
SOIL SAMPLES
1993 DATA

	SAMPLE ID ------->	001-S-0067-01		001-S-0067-03		001-S-0067-05		001-S-0067-07		001-S-0067-09		001-S-0067-11	
	ORIGINAL ID ----->	01S6701		01S6703		01S6705		01S6707		01S6709		01S6711	
	LAB SAMPLE ID --->	553146		553153		553155		553156		553157		553158	
	SAMPLE DATE ----->												
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
Method	Parameter	731446	VAL	731446	VAL	731446	VAL	731446	VAL	731446	VAL	731446	VAL
METAL	Silver	2.	U	2.	U	2.	U	2.1	U	2.1	U	2.1	U
METAL	Aluminum	12400.		1800.		9050.		1320.		932.		574.	
METAL	Arsenic	2.4	J	0.61	UJ	1.7	J	0.62	UJ	0.62	UJ	0.62	UJ
METAL	Barium	5.8		1.6		10.1		1.8		1.8		1.2	
METAL	Beryllium	0.4	U	0.41	U	0.4	U	0.42	U	0.42	U	0.41	U
METAL	Calcium	421.		227.		6740.		113.		78.7		67.	
METAL	Cadmium	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
METAL	Cyanide	0.51	U	0.51	U	0.5	U	0.52	U	0.52	U	0.52	U
METAL	Cobalt	1.8	U	1.8	U	1.8	U	1.9	U	1.9	U	1.9	U
METAL	Chromium	11.8		2.	U	8.		2.1	U	2.1	U	2.1	U
METAL	Copper	5.1		5.1	U	5.1		5.2	U	5.2	U	5.2	U
METAL	Iron	9180.		1450.		4790.		1140.		866.		525.	
METAL	Mercury	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
METAL	Potassium	452.	U	458.	U	450.	U	466.	U	466.	U	464.	U
METAL	Magnesium	96.3	U	97.4	U	365.		99.2	U	99.2	U	98.8	U
METAL	Manganese	63.7		3.7		63.6		3.8		4.4		5.7	
METAL	Sodium	116.	U	87.5	U	112.	U	111.	U	135.	U	98.	U
METAL	Nickel	6.3	U	6.3	U	6.2	U	6.5	U	6.5	U	6.4	U
METAL	Lead	20.1		1.3		28.		1.2		0.53		0.41	U
METAL	Antimony	9.3	U	9.4	U	9.3	U	9.6	U	9.6	U	9.5	U
METAL	Selenium	0.61	U	0.61	U	0.6	U	0.62	U	0.62	U	0.62	U
METAL	Thallium	0.81	U	0.82	U	0.81	U	0.83	U	0.83	U	0.83	U
METAL	Vanadium	20.6		2.6		12.5		2.		1.6		1.5	U
METAL	Zinc	10.9		3.	U	29.		2.8	U	3.3		7.2	

*** Validation Complete ***

NAS PENSACOLA, BACKGROUND
SOIL SAMPLES
1993 DATA

	SAMPLE ID ------->	001-S-0067-13		001-S-0067-17		001-S-0067-19		001-S-0067-21		001-S-0067-23		001-S-0069-01	
	ORIGINAL ID ----->	01S6713		01S6717		01S6719		01S6721		01S6723		01S6901	
	LAB SAMPLE ID --->	553160		553720		553194		553169		553173		552866	
	SAMPLE DATE ----->												
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
Method	Parameter	731446	VAL	314135	VAL	314135	VAL	731446	VAL	731446	VAL	731446	VAL
METAL	Silver	2.1	U	2.1	U	2.1	U	2.1	U	2.1	U	2.	U
METAL	Aluminum	502.		473.		179.		156.		95.2		1240.	
METAL	Arsenic	0.62	UJ	0.7	UJ	0.62	UJ	0.62	UJ	0.62	UJ	0.61	UJ
METAL	Barium	1.	U	1.	U	1.	U	1.	U	1.	U	5.9	
METAL	Beryllium	0.42	U	0.41	U	0.42	U	0.41	U	0.41	U	0.41	U
METAL	Calcium	50.6		47.7		32.5	U	35.7		36.5		162.	
METAL	Cadmium	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
METAL	Cyanide	0.52	U	0.51	U	0.52	U	0.51	U	0.52	U	0.51	U
METAL	Cobalt	1.9	U	1.9	U	1.9	U	1.9	U	1.9	U	1.8	U
METAL	Chromium	2.1	U	2.1	U	3.7		2.1	U	2.1	U	2.	U
METAL	Copper	5.2	U	5.1	U	5.2	U	5.1	U	5.2	U	5.1	U
METAL	Iron	482.		483.		449.		237.		225.		911.	
METAL	Mercury	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
METAL	Potassium	464.	U	460.	U	466.	U	460.	U	463.	U	453.	U
METAL	Magnesium	98.9	U	97.9	U	99.2	U	97.9	U	98.7	U	96.6	U
METAL	Manganese	5.7		5.6		4.1		1.7		1.7		3.7	
METAL	Sodium	93.9	U	88.8	U	73.8	U	108.	U	101.	U	101.	U
METAL	Nickel	6.4	U	6.4	U	6.5	U	6.4	U	6.4	U	6.3	U
METAL	Lead	0.44		1.1		0.6		0.41	U	0.41	U	6.7	
METAL	Antimony	9.6	U	9.5	R	9.6	R	9.5	U	9.5	U	9.3	U
METAL	Selenium	0.62	U	0.62	U	0.62	U	0.62	U	0.62	U	0.61	U
METAL	Thallium	0.83	U	0.82	U	0.83	U	0.82	U	0.83	U	0.81	U
METAL	Vanadium	1.5	U	1.4	U	1.5	U	1.4	U	1.5	U	2.5	
METAL	Zinc	7.3		6.		29.		19.9		17.2		8.2	

*** Validation Complete ***

NAS PENSACOLA, BACKGROUND
SOIL SAMPLES
1993 DATA

	SAMPLE ID ------->	001-S-0069-03		001-S-0069-05		001-S-0069-07		001-S-0069-09		001-S-0069-11		001-S-0069-13	
	ORIGINAL ID ----->	01S6903		01S6905		01S6907		01S6909		01S6911		01S6913	
	LAB SAMPLE ID --->	552867		552868		552869		552870		552871		552872	
	SAMPLE DATE ----->												
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
Method	Parameter	731446	VAL	731446	VAL	731446	VAL	731446	VAL	731446	VAL	731446	VAL
METAL	Silver	2.	U	2.1	U	2.1	U	2.	U	2.1	U	2.1	U
METAL	Aluminum	1430.		1550.		991.		820.		293.		695.	
METAL	Arsenic	0.61	UJ	0.62	UJ	0.62	UJ	0.61	UJ	0.62	UJ	0.62	UJ
METAL	Barium	3.		2.4		1.7		1.6		1.	U	1.8	
METAL	Beryllium	0.41	U	0.42	U	0.41	U	0.41	U	0.41	U	0.42	U
METAL	Calcium	71.4		50.8		32.3	U	31.9	U	32.3	U	45.4	
METAL	Cadmium	1.	U	1.	U	1.	U	1.	U	1.	U	1.	U
METAL	Cyanide	0.51	U	0.52	U	0.52	U	0.51	U	0.52	U	0.52	U
METAL	Cobalt	1.8	U	1.9	U	1.9	U	1.8	U	1.9	U	1.9	U
METAL	Chromium	3.5		2.4		3.3		3.5		5.4		4.6	
METAL	Copper	5.1	U	5.2	U	5.2	U	5.1	U	5.2	U	5.2	U
METAL	Iron	1010.		963.		697.		595.		205.		497.	
METAL	Mercury	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
METAL	Potassium	456.	U	465.	U	463.	U	457.	U	463.	U	466.	U
METAL	Magnesium	97.1	U	99.	U	98.7	U	97.2	U	98.7	U	99.2	U
METAL	Manganese	3.7		3.7		4.6		3.7		3.4		5.7	
METAL	Sodium	99.6	U	109.	U	103.	U	118.	U	97.2		91.3	U
METAL	Nickel	6.3	U	6.4	U	6.4	U	6.3	U	6.4	U	6.5	U
METAL	Lead	2.9		0.79		0.56		0.49		0.41	U	0.59	
METAL	Antimony	9.4	U	9.6	U	9.5	U	9.4	U	9.5	U	9.6	U
METAL	Selenium	0.61	U	0.62	U	0.62	U	0.61	U	0.62	U	0.62	U
METAL	Thallium	0.82	U	0.83	U	0.83	U	0.82	U	0.83	U	0.83	U
METAL	Vanadium	1.7		1.6		1.5	U	1.4	U	1.5	U	1.5	U
METAL	Zinc	4.6		3.6	U	2.	U	2.4	U	1.6	U	3.	U

*** Validation Complete ***

NAS PENSACOLA, BACKGROUND
SOIL SAMPLES
1993 DATA

	SAMPLE ID ------->	001-S-0067-01		001-S-0067-03		001-S-0067-05		001-S-0067-07		001-S-0067-09		001-S-0067-11	
	ORIGINAL ID ----->	01S6701		01S6703		01S6705		01S6707		01S6709		01S6711	
	LAB SAMPLE ID --->	553077		553078		553079		553080		553081		553106	
	SAMPLE DATE ----->												
	DATE EXTRACTED -->	06/11/93		06/11/93		06/11/93		06/11/93		06/11/93		06/11/93	
	DATE ANALYZED --->	06/16/93		06/16/93		06/16/93		06/16/93		06/16/93		06/16/93	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
Method	Parameter	32	VAL	32	VAL	32	VAL	32	VAL	32	VAL	32	VAL
PEST	Heptachlor epoxide	1.7	U	1.7	U	1.7	U	1.8	U	1.7	U	1.8	U
PEST	Endosulfan sulfate	3.3	U	3.4	U	3.3	U	3.4	U	3.4	U	3.4	U
PEST	Aroclor-1260	33.	U	34.	U	33.	U	34.	U	34.	U	34.	U
PEST	Aroclor-1254	33.	U	34.	U	33.	U	34.	U	34.	U	34.	U
PEST	Aroclor-1221	67.	U	68.	U	68.	U	69.	U	68.	U	70.	U
PEST	Aroclor-1232	33.	U	34.	U	33.	U	34.	U	34.	U	34.	U
PEST	Aroclor-1248	33.	U	34.	U	33.	U	34.	U	34.	U	34.	U
PEST	Aroclor-1016	33.	U	34.	U	33.	U	34.	U	34.	U	34.	U
PEST	Aldrin	1.7	U	1.7	U	1.7	U	1.8	U	1.7	U	1.8	U
PEST	alpha-BHC	1.7	U	1.7	U	1.7	U	1.8	U	1.7	U	1.8	U
PEST	beta-BHC	1.7	U	1.7	U	1.7	U	1.8	U	1.7	U	1.8	U
PEST	delta-BHC	1.7	U	1.7	U	1.7	U	1.8	U	1.7	U	1.8	U
PEST	Endosulfan II	3.3	U	3.4	U	3.3	U	3.4	U	3.4	U	3.4	U
PEST	4,4'-DDT	0.55	J	3.4	U	3.3	U	3.4	U	3.4	U	3.4	U
PEST	alpha-Chlordane	1.7	U	1.7	U	1.7	U	1.8	U	1.7	U	1.8	U
PEST	gamma-Chlordane	1.7	U	1.7	U	1.7	U	1.8	U	1.7	U	1.8	U
PEST	Aroclor-1242	33.	U	34.	U	33.	U	34.	U	34.	U	34.	U
PEST	Endrin ketone	3.3	U	3.4	U	3.3	U	3.4	U	3.4	U	3.4	U
PEST	gamma-BHC (Lindane)	1.7	U	1.7	U	1.7	U	1.8	U	1.7	U	1.8	U
PEST	Dieldrin	0.45	J	3.4	U	3.3	U	3.4	U	3.4	U	3.4	U
PEST	Endrin	3.3	U	3.4	U	3.3	U	3.4	U	3.4	U	3.4	U
PEST	Methoxychlor	17.	U	17.	U	17.	U	18.	U	17.	U	18.	U
PEST	4,4'-DDD	3.3	U	3.4	U	3.3	U	3.4	U	3.4	U	3.4	U
PEST	4,4'-DDE	0.14	J	3.4	U	3.3	U	3.4	U	3.4	U	3.4	U
PEST	Endrin aldehyde	1.4	J	3.4	U	0.62	J	3.4	U	3.4	U	3.4	U
PEST	Heptachlor	1.7	U	1.7	U	1.7	U	1.8	U	1.7	U	1.8	U
PEST	Toxaphene	170.	U	170.	U	170.	U	180.	U	170.	U	180.	U
PEST	Endosulfan I	1.7	U	1.7	U	1.7	U	1.8	U	1.7	U	1.8	U

*** Validation Complete ***

NAS PENSACOLA, BACKGROUND
SOIL SAMPLES
1993 DATA

	SAMPLE ID ------->	001-S-0067-13		001-S-0067-17		001-S-0067-19		001-S-0067-21		001-S-0067-23		001-S-0069-01	
	ORIGINAL ID ----->	01S6713		01S6717		01S6719		01S6721		01S6723		01S6901	
	LAB SAMPLE ID --->	553120		553121		553193		553124		553130		552859	
	SAMPLE DATE ----->												
	DATE EXTRACTED -->	06/11/93		06/11/93		06/11/93		06/11/93		06/11/93		06/04/93	
	DATE ANALYZED --->	06/16/93		06/16/93		06/18/93		06/16/93		06/18/93		06/19/93	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
Method	Parameter	32	VAL	32	VAL	120	VAL	32	VAL	120	VAL	32	VAL
PEST	Heptachlor epoxide	1.8	U	1.8	U	1.8	U	1.8	U	0.029	J	0.13	J
PEST	Endosulfan sulfate	3.4	U	3.4	U	3.4	U	3.4	U	3.4	U	3.3	U
PEST	Aroclor-1260	34.	U	34.	U	34.	U	34.	U	34.	U	33.	U
PEST	Aroclor-1254	34.	U	34.	U	34.	U	34.	U	34.	U	33.	U
PEST	Aroclor-1221	69.	U	69.	U	69.	U	69.	U	69.	U	67.	U
PEST	Aroclor-1232	34.	U	34.	U	34.	U	34.	U	34.	U	33.	U
PEST	Aroclor-1248	34.	U	34.	U	34.	U	34.	U	34.	U	33.	U
PEST	Aroclor-1016	34.	U	34.	U	34.	U	34.	U	34.	U	33.	U
PEST	Aldrin	1.8	U	1.8	U	1.8	U	1.8	U	0.38	J	1.7	U
PEST	alpha-BHC	1.8	U	1.8	U	1.8	U	1.8	U	1.8	U	1.7	U
PEST	beta-BHC	1.8	U	1.8	U	1.8	U	1.8	U	1.8	U	1.7	U
PEST	delta-BHC	1.8	U	1.8	U	1.8	U	1.8	U	1.8	U	1.7	U
PEST	Endosulfan II	3.4	U	3.4	U	3.4	U	3.4	U	3.4	U	3.3	U
PEST	4,4'-DDT	3.4	U	3.4	U	3.4	U	3.4	U	3.4	U	2.2	J
PEST	alpha-Chlordane	1.8	U	1.8	U	1.8	U	1.8	U	1.8	U	1.7	U
PEST	gamma-Chlordane	1.8	U	1.8	U	1.8	U	1.8	U	0.059	J	0.14	J
PEST	Aroclor-1242	34.	U	34.	U	34.	U	34.	U	34.	U	33.	U
PEST	Endrin ketone	3.4	U	3.4	U	3.4	U	3.4	U	3.4	U	3.3	U
PEST	gamma-BHC (Lindane)	1.8	U	1.8	U	1.8	U	1.8	U	0.43	J	1.7	U
PEST	Dieldrin	3.4	U	3.4	U	3.4	U	3.4	U	1.	J	0.53	J
PEST	Endrin	3.4	U	3.4	U	3.4	U	3.4	U	1.1	J	3.3	U
PEST	Methoxychlor	18.	U	18.	U	18.	U	18.	U	18.	U	17.	U
PEST	4,4'-DDD	3.4	U	3.4	U	3.4	U	3.4	U	3.4	U	3.3	U
PEST	4,4'-DDE	3.4	U	3.4	U	3.4	U	3.4	U	3.4	U	2.6	J
PEST	Endrin aldehyde	3.4	U	3.4	U	3.4	U	3.4	U	3.4	U	3.3	U
PEST	Heptachlor	1.8	U	1.8	U	1.8	U	1.8	U	0.55	J	1.7	U
PEST	Toxaphene	180.	U	180.	U	180.	U	180.	U	180.	U	170.	U
PEST	Endosulfan I	1.8	U	1.8	U	1.8	U	1.8	U	1.8	U	1.7	U

*** Validation Complete ***

NAS PENSACOLA, BACKGROUND
SOIL SAMPLES
1993 DATA

	SAMPLE ID ------->	001-S-0069-03		001-S-0069-05		001-S-0069-07		001-S-0069-09		001-S-0069-11		001-S-0069-13	
	ORIGINAL ID ----->	01S6903		01S6905		01S6907		01S6909		01S6911		01S6913	
	LAB SAMPLE ID --->	552860		552861		552862		552863		552864		552865	
	SAMPLE DATE ----->												
	DATE EXTRACTED -->	06/04/93		06/04/93		06/04/93		06/04/93		06/04/93		06/04/93	
	DATE ANALYZED --->	06/11/93		06/19/93		06/19/93		06/19/93		06/19/93		06/19/93	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
Method	Parameter	32	VAL	32	VAL	32	VAL	32	VAL	32	VAL	32	VAL
PEST	Heptachlor epoxide	1.7	U	1.7	U	1.7	U	1.7	U	1.8	U	1.7	U
PEST	Endosulfan sulfate	3.3	U	3.4	U	3.4	U	3.3	U	3.4	U	3.4	U
PEST	Aroclor-1260	33.	U	34.	U	34.	U	33.	U	34.	U	34.	U
PEST	Aroclor-1254	33.	U	34.	U	34.	U	33.	U	34.	U	34.	U
PEST	Aroclor-1221	68.	U	68.	U	69.	U	67.	U	70.	U	68.	U
PEST	Aroclor-1232	33.	U	34.	U	34.	U	33.	U	34.	U	34.	U
PEST	Aroclor-1248	33.	U	34.	U	34.	U	33.	U	34.	U	34.	U
PEST	Aroclor-1016	33.	U	34.	U	34.	U	33.	U	34.	U	34.	U
PEST	Aldrin	1.7	U	1.7	U	1.7	U	1.7	U	1.8	U	1.7	U
PEST	alpha-BHC	1.7	U	1.7	U	1.7	U	1.7	U	1.8	U	1.7	U
PEST	beta-BHC	1.7	U	1.7	U	1.7	U	1.7	U	1.8	U	1.7	U
PEST	delta-BHC	1.7	U	1.7	U	1.7	U	1.7	U	1.8	U	1.7	U
PEST	Endosulfan II	3.3	U	0.23	J	3.4	U	3.3	U	3.4	U	3.4	U
PEST	4,4'-DDT	0.61	J	3.4	U	3.4	U	3.3	U	3.4	U	3.4	U
PEST	alpha-Chlordane	1.7	U	1.7	U	1.7	U	0.3	J	1.8	U	1.7	U
PEST	gamma-Chlordane	1.7	U	1.7	U	1.7	U	1.7	U	1.8	U	1.7	U
PEST	Aroclor-1242	33.	U	34.	U	34.	U	33.	U	34.	U	34.	U
PEST	Endrin ketone	3.3	U	3.4	U	3.4	U	3.3	U	3.4	U	3.4	U
PEST	gamma-BHC (Lindane)	1.7	U	1.7	U	1.7	U	1.7	U	1.8	U	1.7	U
PEST	Dieldrin	3.3	U	0.39	J	3.4	U	3.3	U	3.4	U	3.4	U
PEST	Endrin	3.3	U	0.28	J	3.4	U	3.3	U	3.4	U	3.4	U
PEST	Methoxychlor	17.	U	17.	U	17.	U	17.	U	18.	U	17.	U
PEST	4,4'-DDD	3.3	U	0.28	U	3.4	U	3.3	U	0.26	J	0.2	U
PEST	4,4'-DDE	0.7	J	3.4	U	3.4	U	3.3	U	3.4	U	3.4	U
PEST	Endrin aldehyde	3.3	U	3.4	U	3.4	U	3.3	U	3.4	U	3.4	U
PEST	Heptachlor	1.7	U	1.7	U	1.7	U	1.7	U	1.8	U	1.7	U
PEST	Toxaphene	170.	U	170.	U	170.	U	170.	U	180.	U	170.	U
PEST	Endosulfan I	1.7	U	1.7	U	1.7	U	1.7	U	1.8	U	1.7	U

*** Validation Complete ***

NAS PENSACOLA, BACKGROUND SOIL SAMPLES 1993 DATA

	ID ------->	001-S-0067-01		001-S-0067-		001-S-0067-05		001-S-0067-07		001-S-0067-09		001-S-0067-11	
	ORIGINAL ID ----->	01S6701		01S6703		01S6705		01S6707		01S6709		01S6711	
	LAB SAMPLE ID --->	553077		553078		553079		553080		553081		553106	
	SAMPLE DATE ----->												
	DATE EXTRACTED -->	06/14/93		06/14/93		06/14/93		06/14/93		06/14/93		06/14/93	
	DATE ANALYZED --->	06/17/93		06/17/93		06/17/93		06/17/93		06/18/93		06/18/93	
	MATRIX ---------->	soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
Method	Parameter	32	VAL	32	VAL	32	VAL	32	VAL	32	VAL	32	VAL
SVOA	4-Nitroaniline	810.	U	820.	U	810.	U	830.	U	830.	U	830.	U
SVOA	4-Nitrophenol	810.	U	820.	U	810.	U	830.	U	830.	U	830.	U
SVOA	4-Bromophenyl-phenylether	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	2,4-Dimethylphenol	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	4-Methylphenol	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	1,4-Dichlorobenzene	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	4-Chloroaniline	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	Phenol	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	bis(2-Chloroethyl)ether	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	bis(2-Chloroethoxy)methane	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	bis(2-Ethylhexyl)phthalate (BEHP)	330.	U	340.	U	87.	U	340.	U	340.	U	340.	U
SVOA	Di-n-octylphthalate	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	Hexachlorobenzene	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	Anthracene	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	1,2,4-Trichlorobenzene	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	2,4-Dichlorophenol	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	2,4-Dinitrotoluene	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	Pyrene	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	Dimethylphthalate	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	Dibenzofuran	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	Benzo(g,h,i)perylene	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	Indeno(1,2,3-cd)pyrene	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	Benzo(b)fluoranthene	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	Fluoranthene	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	Benzo(k)fluoranthene	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	Acenaphthylene	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	Chrysene	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	Bis(2-chloroisopropyl)ether	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	Benzo(a)pyrene	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	2,4-Dinitrophenol	810.	U	820.	U	810.	U	830.	U	830.	U	830.	U
SVOA	4,6-Dinitro-2-methylphenol	810.	U	820.	U	810.	U	830.	U	830.	U	830.	U
SVOA	Dibenzo(a,h)anthracene	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	1,3-Dichlorobenzene	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	Benzo(a)anthracene	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	4-Chloro-3-methylphenol	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	2,6-Dinitrotoluene	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	N-Nitroso-di-n-propylamine	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U

++* Validation Complete +++

NAS PENSACOLA, BACKGROUND
SOIL SAMPLES
1993 DATA

	SAMPLE ID ------->	001-S-0067-01		001-S-0067-03		001-S-0067-05		001-S-0067-07		001-S-0067-09		001-S-0067-11	
	ORIGINAL ID ----->	01S6701		01S6703		01S6705		0186707		01S6709		01S6711	
	LAB SAMPLE ID --->	553077		553078		553079		553080		553081		553106	
	SAMPLE DATE ----->												
	DATE EXTRACTED -->	06/14/93		06/14/93		06/14/93		06/14/93		06/14/93		06/14/93	
	DATE ANALYZED --->	06/17/93		06/17/93		06/17/93		06/17/93		06/18/93		06/18/93	
	MATRIX ---------->	Soil		Soil		Soil		Soi		Soi1		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
Method	Parameter	32	VAL	32	VAL	32	VAL	32	VAL	32	VAL	32	VAL
SVOA	HexachLoroethane	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	4-Chlorophenyl-phenylether	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	Hexachlorocyclopentadiene	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	Isophorone	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	Acenaphthene	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	Diethylphthalate	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	Di-n-butylphthalate	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	Phenanthrene	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	Butylbenzylphthalate	330.	U	340.	U	51.	U	340.	U	340.	U	340.	U
SVOA	N-Nitrosodiphenylamine	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	Fluorene	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	Carbazole	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	Hexachlorobutadiene	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	Pentachlorophenol	810.	U	820.	U	810.	U	830.	U	830.	U	830.	U
SVOA	2,4,6-Trichlorophenol	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	2-Nitroaniline	810.	U	820.	U	810.	U	830.	U	830.	U	830.	U
SVOA	2-Nitrophenol	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	Naphthalene	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	2-Methylnaphthalene	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	2-Chloronaphthalene	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	3,3'-Dichlorobenzidine	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	2-Methylphenol	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	1,2-Dichlorobenzene	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	2-Chlorophenol	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	2,4,5-Trichlorophenol	810.	U	820.	U	810.	U	830.	U	830.	U	830.	U
SVOA	Nitrobenzene	330.	U	340.	U	330.	U	340.	U	340.	U	340.	U
SVOA	3-Nitroaniline	810.	U	820.	U	810.	U	830.	U	830.	U	830.	U
SVOA	1,1-Dichloroethane												

NAS PENSACOLA, BACKGROUND
SOIL SAMPLES
1993 DATA

	SAMPLE ID ------->	001-S-0067-13		001-S-0067-17		001-S-0067-19		001-S-0067-21		001-S-0067-23		001-S-0069-01	
	ORIGINAL ID ----->	01S6713		01S6717		01S6719		01S6721		01S6723		01S6901	
	LAB SAMPLE ID --->	553120		553121		553193		553124		553130		552859	
	SAMPLE DATE ----->												
	DATE EXTRACTED -->	06/14/93		06/14/93		06/11/93		06/14/93		06/11/93		06/04/93	
	DATE ANALYZED --->	06/18/93		06/18/93		06/16/93		06/18/93		06/16/93		06/09/93	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
Method	Parameter	32	VAL	32	VAL	120	VAL	32	VAL	120	VAL	32	VAL
SVOA	4-Nitroaniline	830.	U	820.	U	830.	U	820.	U	820.	U	800.	U
SVOA	4-Nitrophenol	830.	U	820.	U	830.	U	820.	U	820.	U	800.	U
SVOA	4-Bromophenyl-phenylether	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	2,4-Dimethylphenol	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	4-Methylphenol	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	1,4-Dichlorobenzene	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	4-Chloroaniline	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	Phenol	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	bis(2-Chloroethyl)ether	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	bis(2-Chloroethoxy)methane	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	bis(2-Ethylhexyl)phthalate (BEHP)	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	Di-n-octylphthalate	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	Hexachlorobenzene	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	Anthracene	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	1,2,4-Trichlorobenzene	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	2,4-Dichlorophenol	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	2,4-Dinitrotoluene	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	Pyrene	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	Dimethylphthalate	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	Dibenzofuran	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	Benzo(g,h,i)perylene	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	Indeno(1,2,3-cd)pyrene	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	Benzo(b)fluoranthene	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	Fluoranthene	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	Benzo(k)fluoranthene	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	Acenaphthylene	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	Chrysene	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	Bis(2-chloroisopropyl)ether	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	Benzo(a)pyrene	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	2,4-Dinitrophenol	830.	U	820.	U	830.	U	820.	U	820.	U	800.	U
SVOA	4,6-Dinitro-2-methylphenol	830.	U	820.	U	830.	U	820.	U	820.	U	800.	U
SVOA	Dibenzo(a,h)anthracene	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	1,3-Dichlorobenzene	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	Benzo(a)anthracene	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	4-Chloro-3-methylphenol	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	2,6-Dinitrotoluene	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	N-Nitroso-di-n-propylamine	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U

*** Validation Complete ***

NAS PENSACOLA, BACKGROUND
SOIL SAMPLES
1993 DATA

	SAMPLE ID ------->	001-S-0067-13		001-S-0067-17		001-S-0067-19		001-S-0067-21		001-S-0067-23		001-S-0069-01	
	ORIGINAL ID ----->	01S6713		01S6717		01S6719		01S6721		01S6723		01S6901	
	LAB SAMPLE ID --->	553120		553121		553193		553124		553130		552859	
	SAMPLE DATE ----->												
	DATE EXTRACTED -->	06/14/93		06/14/93		06/11/93		06/14/93		06/11/93		06/04/93	
	DATE ANALYZED --->	06/18/93		06/18/93		06/16/93		06/18/93		06/16/93		06/09/93	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
Method	Parameter	32	VAL	32	VAL	120	VAL	32	VAL	120	VAL	32	VAL
SVOA	Hexachloroethane	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	4-Chlorophenyl-phenylether	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	Hexachlorocyclopentadiene	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	Isophorone	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	Acenaphthene	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	Diethylphthalate	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	Di-n-butylphthalate	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	Phenanthrene	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	Butylbenzylphthalate	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	N-Nitrosodiphenylamine	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	Fluorene	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	Carbazole	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	Hexachlorobutadiene	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	Pentachlorophenol	830.	U	820.	U	830.	U	820.	U	820.	U	800.	U
SVOA	2,4,6-Trichlorophenol	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	2-Nitroaniline	830.	U	820.	U	830.	U	820.	U	820.	U	860.	U
SVOA	2-Nitrophenol	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	Naphthalene	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	2-Methylnaphthalene	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	2-Chloronaphthalene	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	3,3'-Dichlorobenzidine	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	2-Methylphenol	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	1,2-Dichlorobenzene	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	2-Chlorophenol	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
	T	830.	U	820.	U	830.	U	820.	U	820.	U	800.	U
SVOA	Nitrobenzene	340.	U	340.	U	340.	U	340.	U	340.	U	330.	U
SVOA	3-Nitroaniline	830.	U	820.	U	830.	U	820.	U	820.	U	800.	U
SVOA	1,1-Dichloroethane												

NAS PENSACOLA, BACKGROUND
SOIL SAMPLES
1993 DATA

	SAMPLE ID	0069-03		001-S-006 03		001-S-0069-07		001-S-0069-09		001-S-0069-11		001-S-0069-13	
	ORIGINAL ID ----->	01S6903		5905		01S6907		01S6909		01S6911		01S6913	
	LAB SAMPLE ID --->	552860		552861		552862		552863		552864		552865	
	SAMPLE DATE ----->												
	DATE EXTRACTED -->	06/04/93		06/04/93		06/04/93		06/04/93		06/04/93		06/04/93	
	DATE ANALYZED --->	06/09/93		06/09/93		06/09/93		06/09/93		06/09/93		06/09/93	
	MATRIX ---------->	Soil		soil		Soil		Soil		soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
Method	Parameter	32	VAL	32	VAL	32	VAL	32	VAL	32	VAL	32	VAL
SVOA	4-Nitroaniline	810.	U	820.	U	820.	U	810.	U	820.	U	820.	U
SVOA	4-Nitrophenol	810.	U	820.	U	820.	U	810.	U	820.	U	820.	U
SVOA	4-Bromophenyl-phenylether	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	2,4-Dimethylphenol	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	4-Methylphenol	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	1,4-Dichlorobenzene	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	4-Chloroaniline	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	Phenol	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	bis(2-Chloroethyl)ether	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	bis(2-Chloroethoxy)methane	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	bis(2-Ethylhexyl)phthalate (BEHP)	46.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	Di-n-octylphthalate	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	Hexachlorobenzene	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	Anthracene	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	1,2,4-Trichlorobenzene	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	2,4-Dichlorophenol	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	2,4-Dinitrotoluene	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	Pyrene	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	Dimethylphthalate	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	Dibenzofuran	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	Benzo(g,h,i)perylene	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	Indeno(1,2,3-cd)pyrene	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	Benzo(b)fluoranthene	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	Fluoranthene	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	Benzo(k)fluoranthene	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	Acenaphthylene	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	Chrysene	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	Bis(2-chloroisopropyl)ether	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	Benzo(a)pyrene	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	2,4-Dinitrophenol	810.	U	820.	U	820.	U	810.	U	820.	U	820.	U
SVOA	4,6-Dinitro-2-methylphenol	810.	U	820.	U	820.	U	810.	U	820.	U	820.	U
SVOA	Dibenzo(a,h)anthracene	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	1,3-Dichlorobenzene	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	Benzo(a)anthracene	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	4-Chloro-3-methylphenol	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	2,6-Dinitrotoluene	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	N-Nitroso-di-n-propylamine	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U

+++ Validation Complete +++

NAS PENSACOLA, BACKGROUND
SOIL SAMPLES
1993 DATA

	SAMPLE ID ------->	001-S-0069-03		001-S-0069-05		001-S-0069-07		001-S-0069-09		001-S-0069-11		001-S-0069-13	
	ORIGINAL ID ----->	01S6903		01S6905		01S6907		01S6909		01S6911		01S6913	
	LAB SAMPLE ID --->	552860		552861		552862		552863		552864		552865	
	SAMPLE DATE ----->												
	DATE EXTRACTED -->	06/04/93		06/04/93		06/04/93		06/04/93		06/04/93		06/04/93	
	DATE ANALYZED --->	06/09/93		06/09/93		06/09/93		06/09/93		06/09/93		06/09/93	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
Method	Parameter	32	VAL	32	VAL	32	VAL	32	VAL	32	VAL	32	VAL
SVOA	Hexachloroethane	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	4-Chlorophenyl-phenylether	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	Hexachlorocyclopentadiene	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	Isophorone	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	Acenaphthene	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	Diethylphthalate	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	Di-n-butylphthalate	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	Phenanthrene	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	Butylbenzylphthalate	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	N-Nitrosodiphenylamine	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	Fluorene	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	Carbazole	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	Hexachlorobutadiene	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	Pentachlorophenol	810.	U	820.	U	820.	U	810.	U	820.	U	820.	U
SVOA	2,4,6-Trichlorophenol	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	2-Nitroaniline	810.	U	820.	U	820.	U	810.	U	820.	U	820.	U
SVOA	2-Nitrophenol	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	Naphthalene	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	2-Methylnaphthalene	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	2-Chloronaphthalene	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	3,3'-Dichlorobenzidine	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	2-Methylphenol	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	1,2-Dichlorobenzene	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	2-Chlorophenol	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	2,4,5-Trichlorophenol	810.	U	820.	U	820.	U	810.	U	820.	U	820.	U
SVOA	Nitrobenzene	330.	U	340.	U	340.	U	330.	U	340.	U	340.	U
SVOA	3-Nitroaniline	810.	U	820.	U	820.	U	810.	U	820.	U	820.	U
SVOA	1,1-Dichloroethane												

NAS PENSACOLA, BACKGROUND
SOIL SAMPLES
1993 DATA

	SAMPLE ID ------->	001-S-0067-01		001-S-0067-03		001-S-0067-05		001-S-0067-07		001-S-0067-09		001-S-0067-11	
	ORIGINAL ID ----->	01S6701		01S6703		01S6705		01S6707		01S6709		01S6711	
	LAB SAMPLE ID --->	553077		553078		553079		553080		553081		553106	
	SAMPLE DATE ----->												
	DATE EXTRACTED -->	06/03/93		06/03/93		06/03/93		06/03/93		06/03/93		06/03/93	
	DATE ANALYZED --->	06/07/93		06/07/93		06/07/93		06/07/93		06/07/93		06/07/93	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
Method	Parameter	32	VAL	32	VAL	32	VAL	32	VAL	32	VAL	32	VAL
VOA	Ethylbenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Styrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	cis-1,3-Dichloropropene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	trans-1,3-Dichloropropene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	1,2-Dichloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	4-Methyl-2-Pentanone (MIBK)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Toluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Chlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Dibromochloromethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Tetrachloroethylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Xylene (total)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	1,2-Dichloroethene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Carbon tetrachloride	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	2-Hexanone	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Acetone	10.	U	7.	U	11.	U	17.	U	15.	U	13.	U
VOA	Chloroform	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Benzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	1,1,1-Trichloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Bromomethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Chloromethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Chloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Vinyl chloride	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Methylene chloride	8.	U	8.	U	6.	U	6.	U	10.	U	9.	U
VOA	Carbon disulfide	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Bromoform	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Bromodichloromethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	1,1-Dichloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	1,1-Dichloroethylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	1,2-Dichloropropane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	2-Butanone (MEK)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	1,1,2-Trichloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Trichloroethylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	1,1,2,2-Tetrachloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

NAS PENSACOLA, BACKGROUND
SOIL SAMPLES
1993 DATA

	SAMPLE ID ------->	001-S-0067-13		001-S-0067-17		001-S-0067-19		001-S-0067-21		001-S-0067-23		001-S-0069-01	
	ORIGINAL ID ----->	01S6713		01S6717		01S6719		01S6721		01S6723		01S6901	
	LAB SAMPLE ID --->	553120		553121		553193		553124		553130		552859	
	SAMPLE DATE ----->												
	DATE EXTRACTED -->	06/03/93		06/03/93				06/03/93				06/03/93	
	DATE ANALYZED --->	06/07/93		06/09/93		06/04/93		06/07/93		06/04/93		06/03/93	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
Method	Parameter	32	VAL	32	VAL	120	VAL	32	VAL	120	VAL	32	VAL
VOA	Ethylbenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Styrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	cis-1,3-Dichloropropene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	trans-1,3-Dichloropropene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	1,2-Dichloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	4-Methyl-2-Pentanone (MIBK)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Toluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Chlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Dibromochloromethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Tetrachloroethylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Xylene (total)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	1,2-Dichloroethene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Carbon tetrachloride	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	2-Hexanone	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Acetone	21.	U	27.	U	45.	U	22.	U	25.	U	10.	U
VOA	Chloroform	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Benzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	1,1,1-Trichloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Bromomethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Chloromethane	10.	U	10.	U	10.	U	10.	U	10.	U		
VOA	Chloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Vinyl chloride	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Methylene chloride	10.	U	26.	U	16.	U	16.	U	22.	U	11.	U
VOA	Carbon disulfide	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Bromoform	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Bromodichloromethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	1,1-Dichloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	1,1-Dichloroethylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	1,2-Dichloropropane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	2-Butanone (MEK)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	1,1,2-Trichloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Trichloroethylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	1,1,2,2-Tetrachloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***

NAS PENSACOLA, BACKGROUND
SOIL SAMPLES
1993 DATA

	SAMPLE ID ------->	001-S-0069-03		001-S-0069-05		001-S-0069-07		001-S-0069-09		001-S-0069-11		001-S-0069-13	
	ORIGINAL ID ----->	01S6903		01S6905		01S6907		01S6909		01S6911		01S6913	
	LAB SAMPLE ID --->	552860		552861		552862		552863		552864		552865	
	SAMPLE DATE ----->												
	DATE EXTRACTED -->	06/03/93		06/03/93		06/03/93		06/03/93		06/03/93		06/03/93	
	DATE ANALYZED --->	06/03/93		06/03/93		06/03/93		06/03/93		06/03/93		06/03/93	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
Method	Parameter	32	VAL	32	VAL	32	VAL	32	VAL	32	VAL	32	VAL
VOA	Ethylbenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Styrene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	cis-1,3-Dichloropropene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	trans-1,3-Dichloropropene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	1,2-Dichloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	4-Methyl-2-Pentanone (MIBK)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Toluene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Chlorobenzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Dibromochloromethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Tetrachloroethylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Xylene (total)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	1,2-Dichloroethene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Carbon tetrachloride	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	2-Hexanone	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Acetone	86.	U	38.	U	28.	U	24.	U	42.	U	35.	U
VOA	Chloroform	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Benzene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	1,1,1-Trichloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Bromomethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Chloromethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Chloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Vinyl chloride	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Methylene chloride	12.	U	29.	U	20.	U	16.	U	17.	U	28.	U
VOA	Carbon disulfide	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Bromoform	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Bromodichloromethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	1,1-Dichloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	1,1-Dichloroethylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	1,2-Dichloropropane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	2-Butanone (MEK)	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	1,1,2-Trichloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	Trichloroethylene	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U
VOA	1,1,2,2-Tetrachloroethane	10.	U	10.	U	10.	U	10.	U	10.	U	10.	U

*** Validation Complete ***