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FINAL

CONTAMINATION ASSESSMENT/ REMEDIAL ACTIVITIES INVESTIGATION SUPPLY DEPARTMENT OUTSIDE STORAGE (SITE 26) NAVAL AIR STATION PENSACOLA PENSACOLA, FLORIDA

INTERIM DATA REPORT

October 1991

Contract N62467-88-C-0200

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possibly, groundwater contamination of limited extent and magnitude are present on and in the vicinity of the site. Metals (arsenic, cadmium, and chromium), total recoverable petroleum hydrocarbons, volatile organic compounds, and polynuclear aromatic hydrocarbons are the primary contaminants. Additional assessment activities are required on and in the vicinity of Site 26.

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RECORD OF DOCUMENT CHANGES

Revisions to this document were made based on comments received from the U.S. Environmental Protection Agency, Florida Department of Environmental Regulation, Florida Department of Natural Resources, and National Oceanic and Atmospheric Administration. All revisions are in bold and enclosed in brackets to denote changes to the last version of this document.

EXECUTIVE SUMMARY

As part of the U.S. Navy's Installation Restoration Program, Phase I of the Contamination Assessment/Remedial Activities Investigation was conducted for the Supply Department Outside Storage (Site 26), located on the Naval Air Station (NAS) in Pensacola, Florida. This work was performed by Ecology and Environment, Inc., (E & E) under contract to the U.S. Navy, Southern Division, Naval Facilities Engineering Command.

Site 26 is located northwest of Chevalier Field and immediately south of Building *684.* The site area is approximately 150 by 500 feet. On the site is a small, prefabricated, open-sided metal shed (located in the area of the former chemical storage building), which is currently used by NAS Pensacola to store chemicals. The types of chemicals stored in these structures are unknown. The west side of the site is bounded by a paved road and the east side is bounded by a wooded area and an unpaved road.

The purpose of the Phase I investigation was to identify principal areas and primary contaminants of concern at the site and to provide recommendations for subsequent phases of investigation. The Phase I tasks included an aerial photograph and existing data analysis, site reconnaissance, habitat/biota survey, surface emissions survey and particulate air sampling, radiation survey, geophysical survey, utilities survey, collection and analysis of soil and groundwater samples, and a hydrologic assessment.

Soil and groundwater contamination are present on Site 26. Metals, total recoverable petroleum hydrocarbons (TRPHs), polynuclear aromatic hydrocarbons (PAHs), and volatile organic compounds (VOCs) are the primary contaminants. Some of the detected contamination is probably

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associated vith the historical source area, the former chemical storage building. However, additional sources of Contamination may be impacting Site 26.

Although Site 26 soils show only traces of total metals, it is apparent that isolated areas of soil contamination exist. These areas are limited in lateral and vertical extent. Soil metals contamination in the north portion of the site may be associated with the area of the former chemical storage building. Soil metals contamination in the south portion of the site may be associated with other enderic or ambient sources in this area.

PAH contamination is present in the A and B intervals in the north portion of the site. TRPE contamination is found only in the A interval in the south portion of the site; however, TRPE contamination appears to be distributed uniformly across the site area at deeper intervals and may be attributable to an off-site ambient source.

Groundwater contamination also is present at Site 26. Metals concentrations exceeding Florida standards were detected for arsenic, chromium, and cadmium and could reflect that turbid groundvater samples were not filtered prior to acid preservation. However, the arsenic concentration, occurring only in well TW002 in the north portion of the site, may be attributable to an off-site source adjacent to Site 26, possibly Site 12, the Scrap Bin Area. Arsenic was detected in three Site 12 soil samples (from boring P12B008). In addition, chromium, which was elevated vith respect to the Florida Primary Drinking Water Standard (FPDWS) in all three temporary wells, also was detected in nearly all Site 26 soil samples, vhich suggests the presence of an endemic source on Site 26. At present, 1,1,1-trichloroethane contamination is limited to the central site area, and the concurtration detected was far below the FPDWS. The source and extent of this contaminant plume are unknown; however, the plume may have resulted from site activities at the location of the potential, historical, on-site source area, the former chemical storage area. It is possible that this contaminant may also be associated with an off-site source, possibly Site 12.

Further assessment activities are required at and in the vicinity of Site 26.

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1. INTRODUCTION

This Interim Data Report presents the findings of the Phase I investigation activities performed for the Supply Department Outside Storage (Site 26), located at the Naval Air Station (NAS) in Pensacola, Escambia County, Florida. This report has been prepared by Ecology and Environment, Inc., (E & E) for the Southern Division, U.S. Navy, Naval Facilities Engineering Command, under Contract No. N62467-88-C-0200. The information presented in this report is based on information and file documents provided by the Navy and on information gathered during the Phase I fieldwork conducted on the site from October 1990 to February 1991. The investigation was conducted in accordance with the administrative documents prepared by E & E for this project, which include the [June 1990] Project Management Plan, [June 1990] Site Management Plan, [July 1990] Generic Quality Assurance Project Plan (GQAPP), [July 1990] General Health and Safety Plan, and [June 1990] Contamination Assessment/Remedial Activities Investigation Work Plan--Group B with appended Site-Specific Health and Safety Plan and Site-Specific Quality Assurance Plan. [All references to these documents in this report apply only to the 1990 versions.]

Site 26 is located northwest of Chevalier Field and immediately south of Building 684 (see figures 1-1 and 1-2). The site area is approximately 150 by 500 feet. On the site is a small, prefabricated, open-sided metal shed (located in the area of the former chemical storage building) which is currently used by NAS Pensacola to store chemicals. The types of chemicals stored in these structures are unknown. The west side of the site is bounded by a paved road and the east side is bounded by a wooded area and an unpaved road.

The purpose of the Phase I investigation was to identify principal areas and primary contaminants of concern at the site and to provide

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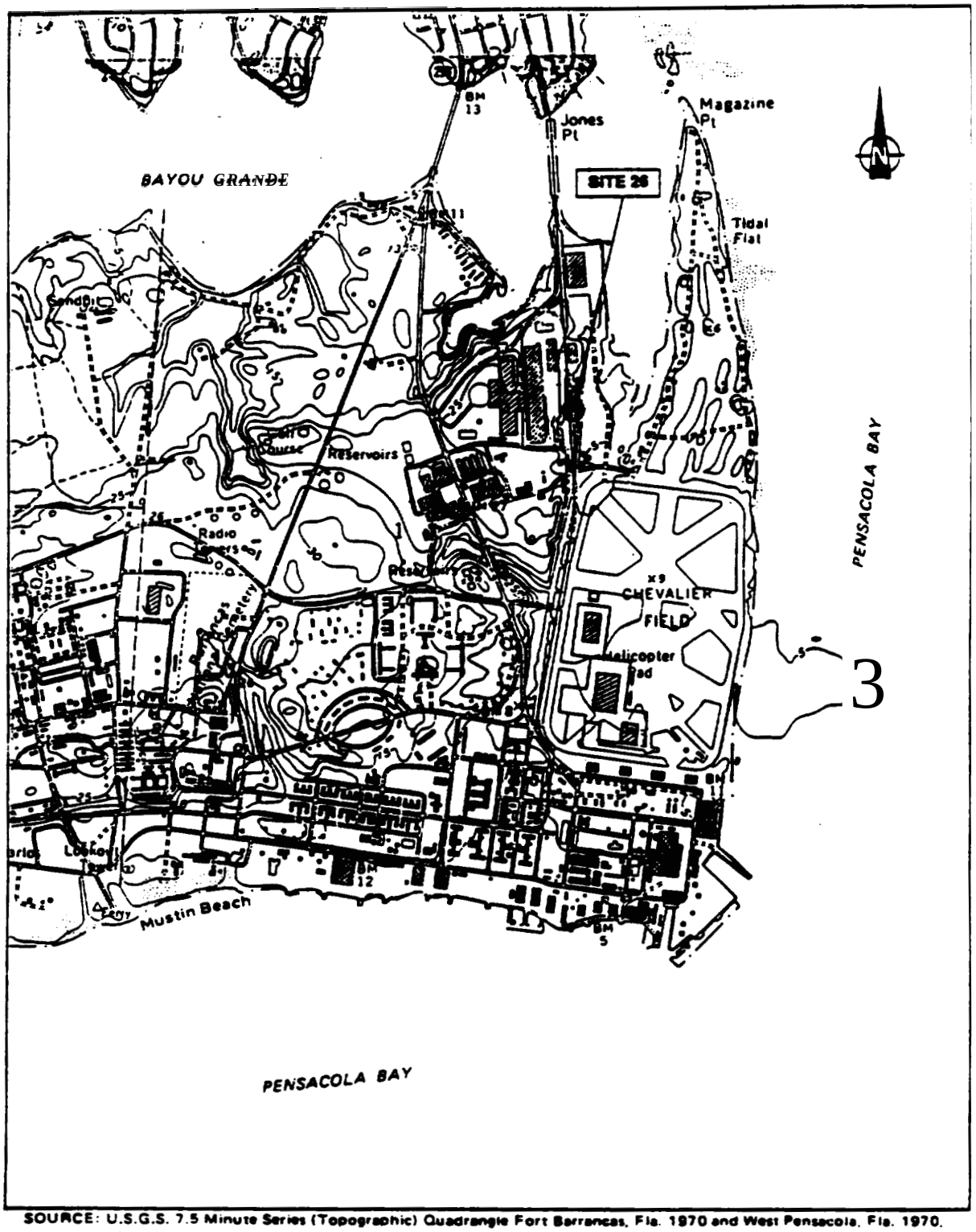

SOURCE: U.S.G.S. 7.5 Minute Series (Topographic) Quadrangle Fort Barrancas, Fla. 1970 and West Pensacola, Fla. 1970.

SCALE

0 — ½ — 1 MILE

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Figure 1-1 LOCATION MAP — NAS PENSACOLA SITE 26

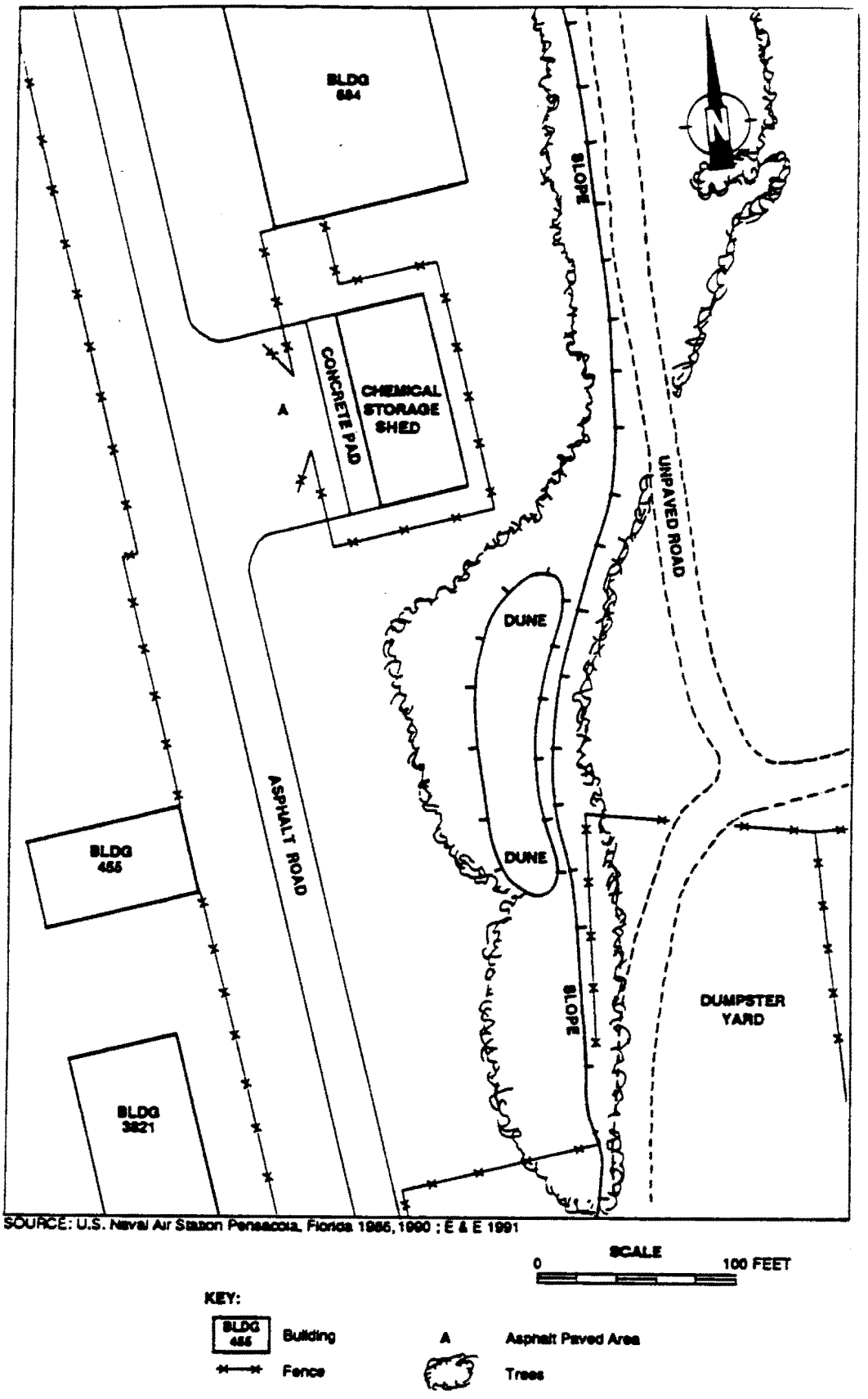

Figure 1-2 SITE VICINITY MAP — NAS PENSACOLA SITE 26

recommendations for subsequent phases of investigation. The Phase I fieldvork included an aerial photograph and existing data analysis, site reconnaissance, habitat/biota survey, surface emissions survey and particulate air sampling, radiation survey, geophysical survey, utilities survey, and the collection and analysis of soil and groundvater samples. In addition, a hydrologic assessment, vhich included the determination of groundvater and surface vater elevations, groundvater flow direction and hydraulic gradient, and surface vater flov rates, vas performed at the site. The recommendations for additional work at this site are presented with this submittal under separate cover.

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2. INVESTIGATION METHODOLOGY

2.1 AERIAL PHOTOGRAPH AND EXISTING DATA ANALYSIS

Prior to the initiation of fieldwork, E & E personnel examined all available aerial photographs of NAS Pensacola for past and present conditions, features, and developments that might have had direct relevance to the fieldwork methodology. The aerial photograph analysis task involved assembling and stereoscopically analyzing historical photographic imagery and topographic maps available for the site area. Photographs were scaled to allow analysis of past and present surface conditions, drainage, and land use. The aerial photographs used in the analysis are listed in Table 2-1. The photographs were analyzed to obtain information regarding the evolution of site features that might have affected hydrologic conditions and to aid in the performance of such tasks as field reconnaissance and monitoring well placement.

2.2 SITE RECONNAISSANCE

A field reconnaissance survey was conducted on and around the site. Available aerial photographs and maps were used as guides in locating surface features. Visual inspections were made of surface conditions, vegetation, surface drainage patterns, and areas of exposed site debris. These observations of surface conditions on the site were used to update the site map. During the reconnaissance survey, the field team identified areas which presented the most suitable conditions for the establishment of survey grid baselines. The use of a grid system as part of the Phase I field investigation is discussed in the following sections.

The reconnaissance survey team utilized radiation and air monitoring equipment during walkovers of site areas, in accordance with Section 6.1.1 of the GQAPP. Area "hot spots" were located, flagged,

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Table 2-1

PHOTOGRAPHS AND MAPS USED IN THE AERIAL PHOTOGRAPH ANALYSIS
NAS PENSACOLA SITE 26

Source	Photograph/Map Number	Date	Scale
NAS Pensacola Public Works Department	1276833*	2/5/90	1:2,400
	1276835*	2/5/90	1:2,400
	1276836*	5/22/06	1:2,400
	1276912.	9/29/06	1:2,400
Florida Department of Transportation	PD-3886-12-03	10/26/89	1:24,000
	PD-3886-12-04	10/26/89	1:24,000
	PO-3610-12-03	11/21/06	1:24,000
	PD-3618-12-04	11/21/06	1:24,000
	PD-3109-12-03	9/2 2/83	1:24,000
	PD-3109-12-04	9/22/83	1:24,000
	PO-26.4-128-04	3/9/01	1:24,000
	PD-2684-128-05	3/9/01	1:24,000
	OD-1000-11-03	4/28/76	1:24,000
	PO-1000-11-04	4/28/76	1:24,000
	PD-1331-11-03	5/4/73	1:24,000
	PD-1331-11-04	5/4/73	1:24,000
	PD-868-5-08	4/6/70	1:24,000
	PD-868-4-09	4/6/70	1:24,000
	PD-616-8-04	3/25/60	1:24,000
	PD-616-8-05	3/25/60	1:24,000
	PD-205-8-01	10/8/64	1:12,000
	PD-285-8-03	10/8/64	1:12,000
	PUS-7054-3-1	10/12/61	1:24,000
	PUS-7054-3-2	10/12/61	1:24,000
U.S. Department of Agriculture	CPF-1V-78	1/3/58	1:24,000
	CPF-4N-17	1/22/51	1:24,000
West Florida Regional Planning council	PD-3618-12-05	11/21/06	1:4 ,000

14[NASP]UN6027:T0229/435/23

Key:

*Map.

Source: Ecology mad Environment, Inc., 1991.

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and identified on a site map for future reference. All findings of the physical reconnaissance were mapped in detail and recorded in the field logbook.

2.3 HABITAT/BIOTA SURVEY

A habitat/biota survey was conducted for the site, as well as an evaluation of applicable literature pertaining to NAS Pensacola. During the physical reconnaissance, an E & E biologist/ecologist determined the on-site terrestrial habitats and the surrounding habitats that could be affected by off-site contaminant migration. During the walkover survey, rare, threatened, and endangered species and their potential habitats were identified, and general site conditions were evaluated regarding the site's ability to support viable populations of plants and animals.

2.4 HNu/OVA SURFACE EMISSIONS SURVEY AND PARTICULATE AIR SAMPLING

Following the establishment of the survey grid network (discussed in Section 2.6), a surface emissions survey was conducted using HNu and/or organic vapor analyzer (OVA) air monitoring equipment. The survey was conducted in accordance with Section 6.1.1 of the GQAPP. Measurements were made at each established grid point, and readings were recorded in the field logbook. In addition, preliminary air screening was conducted with a particulate monitor to determine if the site represents a source of particulates in the air. The air sampling was conducted in accordance with Section 6.1.[1] of the GQAPP.

2.5 RADIATION SURVEY

Following the establishment of the survey grid network (discussed in Section 2.6), a radiation survey was conducted using a Bicron micro-R-meter. The survey was conducted in accordance with Section 6.3.[6] of the GQAPP. Measurements were made at each established grid point, and readings were recorded in the field logbook.

2.6 GEOPHYSICAL SURVEY

An electromagnetic metal detector survey, magnetometer survey, and electromagnetic terrain conductivity survey were conducted at the site and surrounding local areas. The metal detector survey was conducted

wing a standard, portable metal detector/pipe locator; the magnetometer survey was conducted using a Geometrics G-856AX proton precession magnetometer, which measures the earth's total magnetic field near the surface in units of gammas; and the electromagnetic terrain conductivity surveys were conducted using Geonics, Ltd., EM-31 and EM-34XL instruments. (The electromagnetic surveys will be discussed in this report as the En-31 and EM-34XL surveys.) The EM-31 conductivity instrument measures the apparent terrain conductivity allowing quick screening for changes in conductivity potentially associated with buried utilities or changes in soil condftions due to lithology, vater content, or leachate plumes, if present.

The effective exploration depth of the En-31 is approximately 3 meters (9.8 feet) in the horizontal dipole mode and approximately 6 meters (19.7 feet) in the vertical dipole mode. The effective exploration depth of the EM-34XL is approximately 7.5 meters (24.6 feet) in the horizontal dipole rode at 10-meter intercoil spacings and approximately 15 meters (49.2 feet) in the horizontal dipole mode at 20-meter intercoil spacings.

The survey effort required the initial establishment of a grid system over the study area. To construct the grid, a baseline vas established along the asphalt-paved road (see Figure 2-1). The site vas then gridded vfth spacings based on 100-foot centers. Baseline transects vere established using a transit survey instrument and flagged at 25-foot intervals. The grid system vas completed relative to an arbitrarily established origin point using a Brunton compass and tape measure. Grid points vere flagged and numbered as follovs:

2000483 **Grid X, N (or S) n_1 + yy, E (or W) n_2 + zz,**

where:

X = Grid letter;

n_1 = Distance in 100-foot increments north (N) or south (S) from the origin point;

n_2 = Distance in 100-foot increments east (E) or vest (W) from the origin point;

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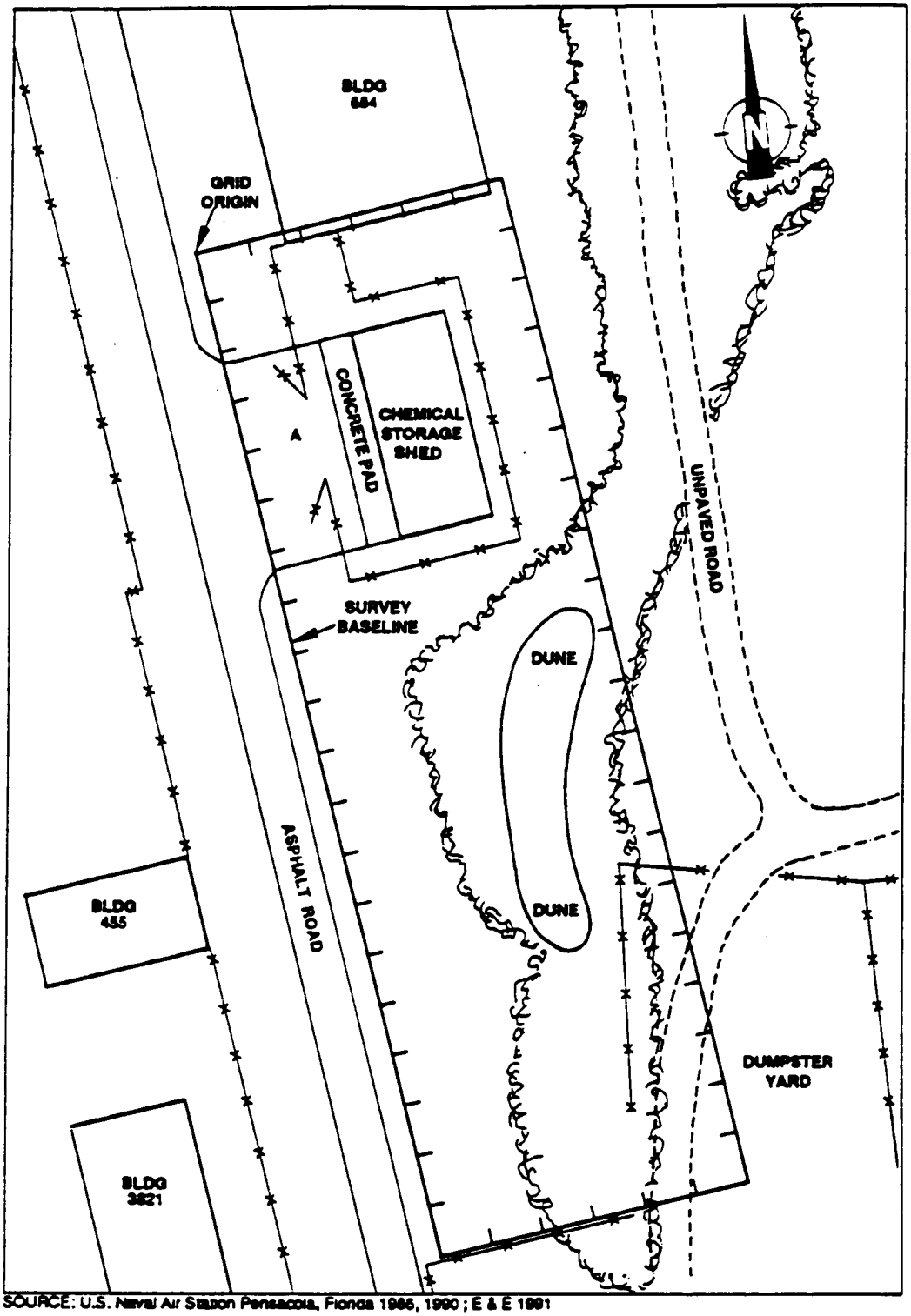


SOURCE: U.S. Naval Air Station Pensacola, Florida 1986, 1990 ; E & E 1991

SCALE 0 100 FEET

KEY:

Fence

Survey Grid Boundary

A Asphalt Paved Area

Figure 2-1 SURVEY GRID MAP — NAS PENSACOLA SITE 26

yy = Additional distance in feet north or south from the nearest previously located 100-foot increment from the grid origin; and

zz = Additional distance in feet east or west from the nearest previously located 100-foot increment from the grid origin.

In the case of grid points located at even 100-foot increments from the origin, yy and zz = 00. Figure 2-1 shows the location of the survey grid and origin point established on Site 26 and the surrounding area.

The geophysical survey was performed in accordance vith field methodologies and data interpretation techniques discussed in Section 6.2.1 of the GQAPP, except that during performance of the EM-34XL surveys readings were recorded at intercoil spacings of 10 and 20 meters due to the small size of the site area, rather than the 10- , 20- , and 40-meter spacings specified in the GQAPP.

The EM-31 and magnetometer surveys were conducted by obtaining measurements at each 25-foot interval grid point. EM-34XL readings were obtained at alternating grid point locations at a spacing of 50 feet. The geophysical data were used in conjunction with other background data to identify: the location and lateral extent of buried debris and potential landfilling activities on site; and the location of potential subsurface contaminant plumes.

2.7 UTILITIES SURVEY

2000484 Prior to conducting any augering, boring, or drilling, E & E located all underground cables, pipes, utilities, and other subsurface features that could potentially be damaged, create a safety hazard, or otherwise hinder fieldvork. The appropriate authorities (e.g., NAS Pensacola Public Works and Southern Bell) were contacted to identify the location of all underground utilities in the site area. In addition, E & E examined available maps and documents and conducted a metal detector survey to determine the presence of any other potentially hazardous subsurface features on site. The locations of all underground utilities and other obstructing features were marked with surveyor flags, fluorescent paint, or by other methods, as appropriate.

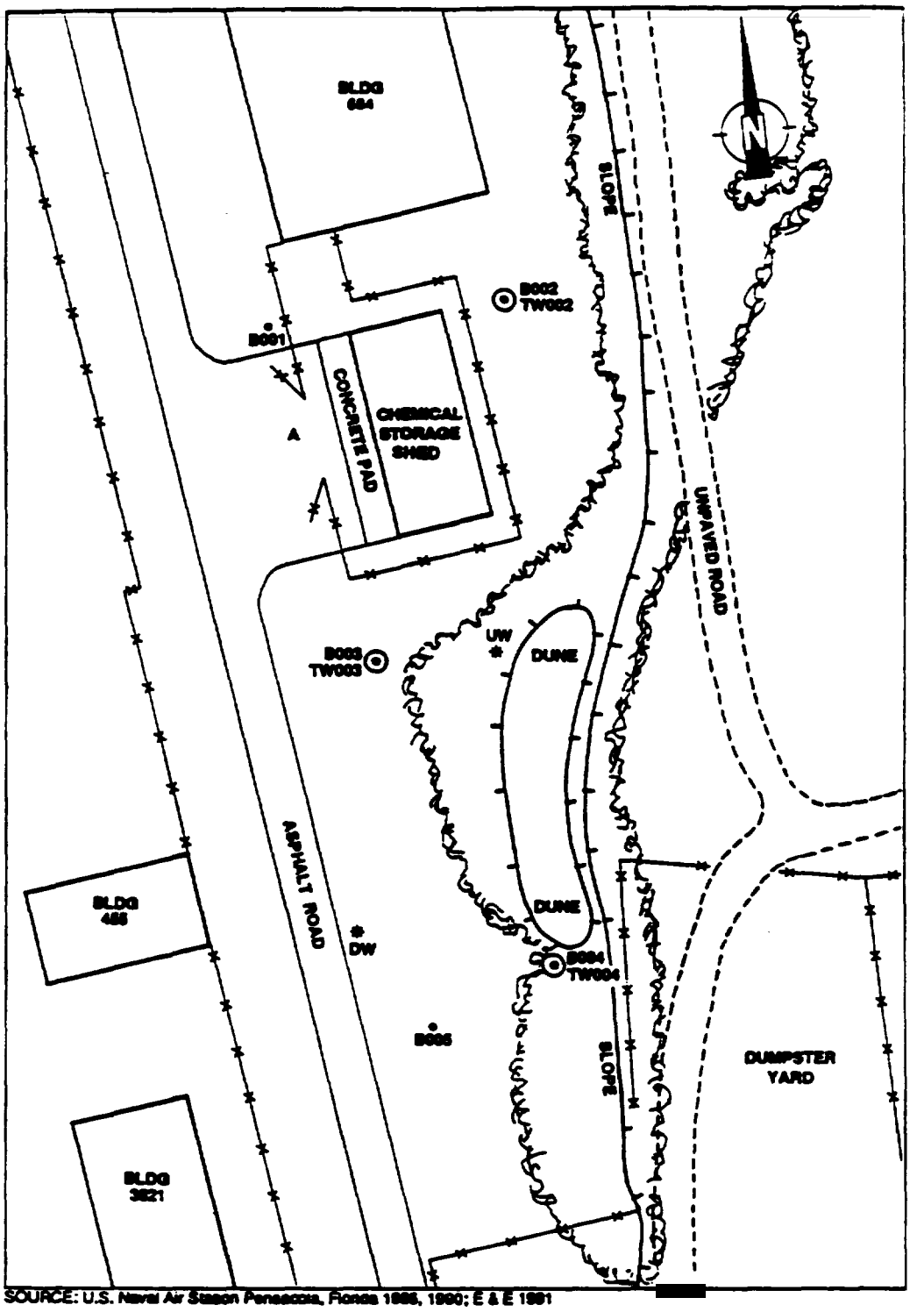
2.8 DATA ANALYSIS

Information obtained from the results of the above-described surface emissions, radiation, and geophysical surveys was given primary consideration in the development of placement strategies for the Phase I soil borings and temporary monitoring wells. Prior to establishing the Phase I temporary monitoring well locations or other sampling points, the results of the aerial photograph analysis, site reconnaissance, surface emissions survey and air particulate sampling, geophysical survey, and utilities survey were evaluated to identify potential areas of surface or subsurface contamination, leachate seeps, areas of stressed vegetation, and boundaries of landfilled areas. Based on the results of the above-mentioned surveys, the proposed Phase I temporary monitoring well locations and other sampling points, shown on Figure 14-2 of the work plan, were revised as appropriate upon approval by Southern Division.

2.9 SOIL BORINGS AND TEMPORARY MONITORING WELL INSTALLATION

Five soil borings were completed at Site 26 (see Figure 2-2). At each boring location, samples were collected by compositing soils over 5-foot depth intervals from land surface to the water table. Each 5-foot depth interval was assigned a letter designation as follows: A interval = surface to 5 feet below land surface (BLS); B interval = 5 to 10 feet BLS; C interval = 10 to 15 feet BLS; and so on to the water table. Samples were collected using either hand-operated bucket augers or a solid-stem auger powered by a drill rig. Lithologic characteristics of the materials encountered in each borehole were recorded in the field logbook. All sampling, compositing, and lithologic logging activities were performed in accordance with Section 6.6 of the GQAPP. Equipment decontamination was performed in accordance with Section 6.10 of the GQAPP.

Temporary, stainless steel monitoring wells were installed in three of the five borings (see Figure 2-2). Each well was constructed with 5 feet of 0.01-inch slotted screen, and installed to a depth that allowed the well screen to bracket the water table. The wells were installed using either hand-operated bucket augers or solid-stem augers powered by a drill rig. Lithologic characteristics of materials encountered during



SOURCE: U.S. Naval Air Station Pensacola, Florida 1988, 1990; E & E 1991

0 100 FEET

KEY:

BLDG 465	Building	DW/UW	Downwind/Upwind
	Fence	•	Soil Boring
A	Asphalt Paved Area	○	Temporary Monitoring Well
	Trees	B003	Soil Boring Number
✱	Particulate Air Sampling Location	TW003	Temporary Monitoring Well Number

Figure 2-2 PARTICULATE AIR SAMPLING, SOIL BORING, AND TEMPORARY MONITORING WELL LOCATIONS — NAS PENSACOLA SITE 26

2000455

installation of the wells were recorded in the field logbook. All equipment decontamination activities were performed in accordance with Section 6.10 of the GQAPP.

2.10 SOIL SAMPLING

Twenty soil samples, plus one duplicate sample, were collected as described in Section 2.9 (see Figure 2-2). All soil samples were shipped to E & E's Analytical Services Center (ASC) in Buffalo, New York, and analyzed for the screening parameters listed in Table 2-2.

2.11 GROUNDWATER SAMPLING--TEMPORARY MONITORING WELLS

Three groundwater samples, plus one duplicate sample, were collected from the three temporary monitoring wells shown in Figure 2-2. Weather conditions; water levels; purge volumes; and groundwater pH, specific conductance, and temperature measurements were recorded in the field logbook prior to sampling. In addition, prior to purging, each well was checked for the presence of floating and/or sinking immiscible hydrocarbons using an MMC International oil-water interface probe. Each groundwater sample was collected immediately following well purging. All well purging and sampling activities were performed in accordance with sections 6.8 and 6.11 of the GQAPP. Equipment decontamination was performed in accordance with Section 6.10 of the GQAPP. All groundwater samples collected from the temporary monitoring wells were shipped to E & E's ASC and analyzed for the screening parameters listed in Table 2-2.

2.12 HYDROLOGIC ASSESSMENT

The hydrologic assessment of the site and surrounding areas included a wellhead elevation survey and groundwater and surface water level measurements to determine groundwater and surface water elevations, groundwater flow direction and hydraulic gradient, and surface water flow rates.

Wellhead top-of-casing (TOC) elevations for the temporary monitoring wells were measured relative to the top of a driven reference stake located adjacent to each well using a spirit level and tape

Table 2-2

SAMPLING AND ANALYTICAL SUMMARY
NAS PENSACOLA SITE 26

Medium	No. of Samples	Duplicates	Total	Analytical Suite[a,b]
Soil	20	1	21	A
Groundwater[c]	3	1	4	A

[NASP]UN6027:T0229/315/25

Key :

[a]Analytical suite designation:

A = Volatile organic compounds (VOCS) including chlorobenzene, polynuclear aromatic hydrocarbons (PAHs), phenols, pesticides and total polychlorinated biphenyls (PCBs), total recoverable petroleum hydrocarbon. (TRPHs), and metals (total, unfiltered).

[b]Specific constituents encompassed by the various chemical groups included within analytical suite A are identified in tables 9-1 through 9-4 of the GQAPP.

[c]Groundwater samples and analyses shown are for temporary wells only.

Source: Ecology and Environment, Inc., 1991.

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[Bold items enclosed in brackets denote changes to the last version of document]

measure. Following groundwater sampling and removal of the temporary monitoring wells, the elevations of the driven reference stakes were surveyed using a transit with reference to a previously established elevation at permanent monitoring well GM15 located on Site 11 (North Chevalier Disposal Area).

In conjunction with the wellhead survey, the elevations of other nearby features (e.g., ponds and streams) were established. A staff gauge was placed in the creek (south of Bayou Grande near the northwest corner of Chevalier Field), located south of Site 26, and monitored over the course of the field investigation activities. In addition, a rain gauge station was established at the same location to monitor precipitation during fieldwork activities.

2.13 FIELD QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

All field tasks performed during the investigation were documented in the field logbooks according to the procedures specified in Section 7.2 of the GQAPP.

2.13.1 Field QA/QC Samples

Field QA/QC samples were prepared for all samples collected at the site during the Phase I investigation according to the procedures described in Section 6.12 of the GQAPP. Chain-of-custody was maintained for all samples collected, packaged, and shipped to E & E's ASC for analysis. Sample management was performed as specified in Section 7 of the GQAPP. The field QA/QC samples collected and corresponding analytical parameters are listed in Table 2-2.

2.13.2 Decontamination Procedures

All soil boring, well installation, and sampling equipment used during field activities were decontaminated in accordance with Section 6.10 of the GQAPP.

2.14 INVESTIGATION-DERIVED WASTE MANAGEMENT

Excess soil generated during soil boring and temporary monitoring well installation activities was temporarily contained in plastic, wrapped, and taped adjacent to the well or boring and then backfilled

into the borehole after the auger flights or temporary well casings had been removed following sample collection. Any soil material remaining after completion of borehole backfilling was placed in 55-gallon drums, sealed, labeled, and moved to a central area on the site. Each drum has a painted-on label listing the site number and the type of material contained in the drum.

All water generated during development and purging of the temporary monitoring wells vas temporarily contained in buckets adjacent to the well and then poured back into the well folloving collection of samples.

Potentially contaminated clothing and disposable materials, wastes generated during decontamination activities, and other potentially contaminated, investigation-derived materials were placed in 55-gallon drums, sealed, labeled "trash", and moved to a central area on the site. All drummed investigation-derived materials were subsequently picked up and disposed of by NAS Pensacola.

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3. RESULTS

3.1 AERIAL PHOTOGRAPH AND EXISTING DATA ANALYSIS

The review of aerial photographs dating from 1951 to 1989 indicated that activities and surface features on and in the vicinity of Site 26 have changed during this period. Some of these changes include the removal of temporary storage trailers, changes in vegetation, and removal of the north section of the former chemical storage building.

Review of the January 22, 1951, and January 3, 1958, aerial photographs indicated that a large building (the former chemical storage building) existed in the north portion of the site where Building 684 and the open chemical storage shed are now located. Approximately 12 to 13 storage trailers were located along the west edge of the site, along the asphalt-paved road. It is apparent that the surface of the west portion of the site sloped gently eastward, and consisted of bare sandy soil with some sparse vegetation. The east portion of the site consisted of a steep mound or dune that appeared to have been undercut on the west side--the west side was vertical--and the east, north, and south sides sloped steeply. The dune appeared to be covered with low-lying vegetation and trees.

Review of aerial photographs dating from October 12, 1961, to April 6, 1970, indicated that the storage trailers had been removed from the site by 1961 and vegetation density had increased on the east portion of the site; however, no changes in slope were observed.

Review of the May 4, 1973, aerial photograph indicated that an area of vegetation had been cleared immediately south of the aforementioned dune. The resultant clearing extended eastward, possibly serving as an unpaved access road connecting with an unpaved road on Site 11 (North Chevalier Disposal Area) or as an easement for a utility line.

[Bold items enclosed in brackets denote changes to the last version of document]

Reviev of the April 18, 1976, aerial photograph indicated a similar, cleared area; however, it appeared covered with low vegetation.

Reviev of the March 9, 1981, aerial photograph indicated that the west portion of the site had been cleared of low-lying vegetation and the surface vas bare sandy soil. Review of the November 21, 1986, aerial photograph indicated that vegetation, including small shrubs or trees, had regrown on this portion of the site.

Review of the October 26, 1989, aerial photograph indicated that the north two-thirds of the former chemical storage building located on the north edge of the site (first noted in the January 22, 1951, aerial photograph) had been removed. A new building (Building 684) was partially constructed (the foundation was in place) off site and adjacent to the north side of Site 26 (see Figure 1-2).

No evidence of contamination is apparent from the review of the aerial photographs; however, given that chemicals were stored in the former chemical storage building, the former location of this building may represent a potential location of contamination at Site 26.

32 SITE RECONNAISSANCE

During the site reconnaissance, visual inspections were performed around the perimeter of Site 26 and within the site area. As previously mentioned, an open chaical storage shed had been constructed south of Building 684, on the former location of the chemical storage building, during the previous year. The shed is located on a concrete pad, approximately 60 by 100 feet, that extends vest beyond the shed. The shed and concrete pad extension are completely surrounded by a chain link fence. This storage area is accessed by a ramp from Building 684 and by a large gate on the vest side of the storage area. The area between the asphalt-paved road and the west gate is covered with asphalt (see Figure 1-2).

2000438 The west portion of the site, south of the chemical storage shed area, is covered with low-lying vegetation. Several rectangular, concrete-lined excavations, that may have been associated with former on-site utilities, were observed. In addition, several long, reinforced-concrete structures (possibly foundations), oriented north-south, are located in the west-central area of the site. The origin and

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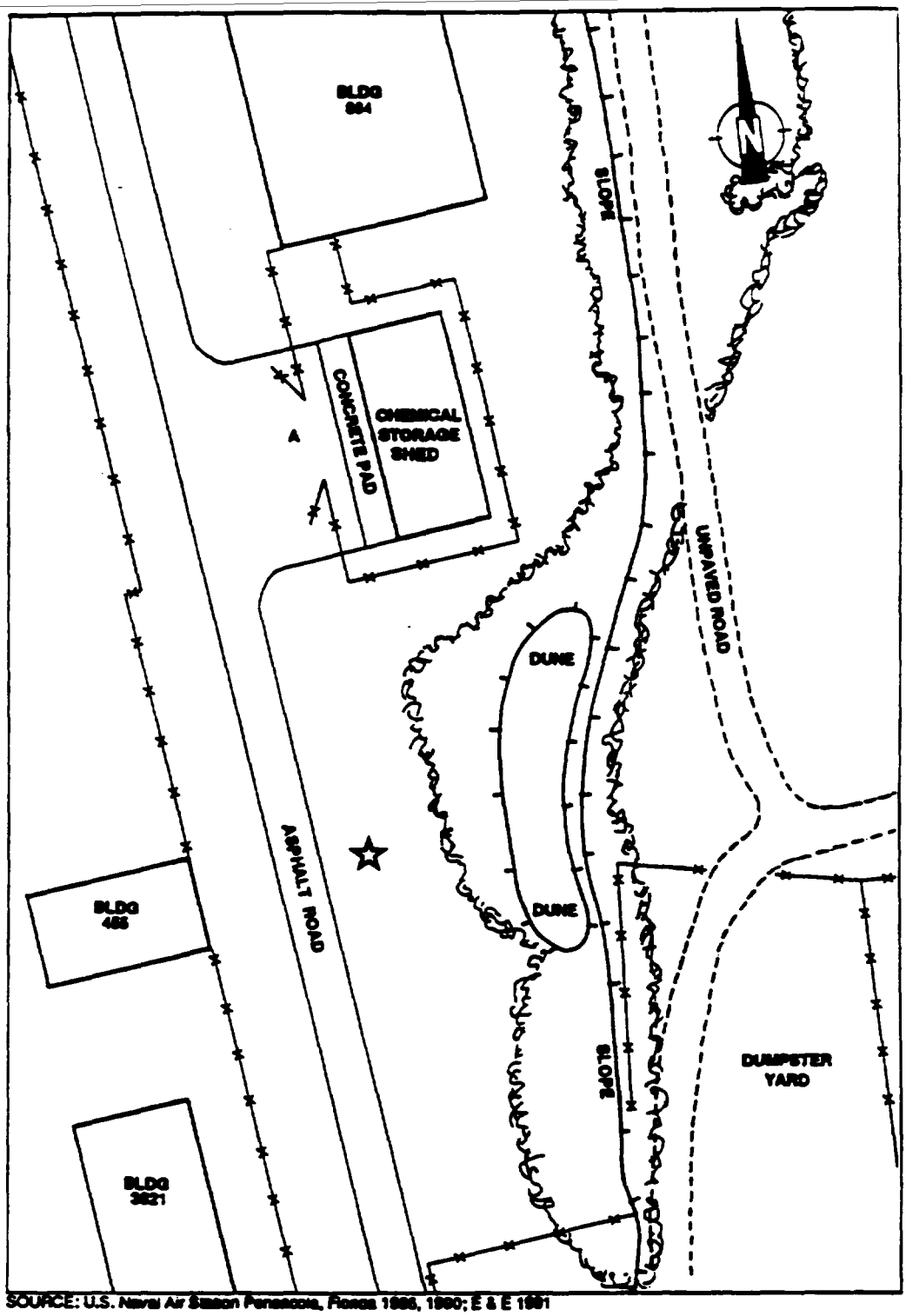
former or present function of these structures is unknown; they may have been associated with the storage trailers [identified in the 1951 and 1958 aerial photographs) in this area of the site. [Review of subsequent aerial photographs (1961 and later) revealed the trailers had been removed. It is not known what was stored in these trailers.]

The east-central portion of the site is a dune covered with trees and low-lying vegetation. Construction and metallic debris were observed on the surface of the dune. In addition, during the site reconnaissance, one 5-gallon, olive-green container labeled "DDT" was found on the dune surface. [The drum appeared to be in good condition and vas not observed to be leaking. The actual contents of the drum, if any, were not determined.] Approximately 10 to 15 [abandoned and empty] refuse bins exist adjacent to the site, east and southeast of the dune. [No physical evidence of contamination associated with these bins was observed.]

A hole, approximately 3 feet in diameter and 3 feet deep and of unknown origin or function, vas observed in the south-central area of the site. The soil on Site 26 appears to be mostly light-colored sand; however, the area around the chemical storage shed is covered with an orange sandy clay, apparently brought in as fill material and recently grass seeded. It is apparent that this fill material has been loosely dumped (i.e., not compacted) east of the chemical storage shed area because the slope is steep and unstable.

3.3 HABITAT/BIOTA SURVEY

Site 26 appears to be a natural former dune that has been undercut on the west side. No aquatic habitats are associated with this site. A state-listed threatened plant species, the large-leaved jointweed (Polygonella macrophylla), also a federal candidate plant species, has been found on the site (see Figure 3-1). The west portion of the site is dominated primarily by groundcover species with a sparse canopy of laurel oak (Quercus hemisphaerica). Groundcover species include catbrier (Smilax sp.), horseweed (Conyza canadensis), ragweed (Ambrosia trifida), and goldenrod (Solidago odora). The more wooded parts of Site 26 support a thicker canopy, mostly live oak (Q. virginiana) along with laurel oak, bumelia (Bumelia sp.), pignut hickory (Carya glabra), and



SOURCE: U.S. Naval Air Station Pensacola, Fence 1986, 1990; E & E 1991

SCALE 0 100 FEET

KEY:

BLDG 485 Building

Fence

A Asphalt Paved Area

Trees

Approximate Location of Large-Leaved Jointweed (Polygonella Macrophylla)

2000439

Figure 3-1 HABITAT/BIOTA MAP — NAS PENSACOLA SITE 26

hawthorn (Crataegus flava). The sparser groundcover consists of wild cherry (Prunus serotina), saw palmetto (Serenoa repens), sparkleberry (Vaccinium arboreum), and winged sumac (Rhus copallina). While the site is small, the overgrowth serves as a habitat for a variety of common birds (see Appendix A), small mammals, and lizards. Vegetation does not appear to be stressed on Site 26.

3.4 SURFACE EMISSIONS SURVEY AND PARTICULATE AIR SAMPLING

An OVA and an HNu were used to monitor surface emissions across Site 26. No OVA readings above background (1 ppm) were recorded; background readings were recorded in the field logbooks (see Appendix B).

On November 13, 1990, a Mini-Ram particulate air monitoring device was used to determine if Site 26 could represent a source of particulates in the air. During the test, the wind was blowing from the northeast at approximately 3 to 5 miles per hour (mph). The Mini-Ram was placed downwind at the southwest corner of Site 26, across the road from Building 3821 [(see Figure 2-2)]. After 15 minutes, the time weighted average (TUA) of particulates was 0.08 milligrams per cubic meter (mg/m^3). The Mini-Ram was then placed directly upwind and approximately 200 feet northeast of the downwind station [(see Figure 2-2)]. After 15 minutes, the TUA was recorded as 0.06 mg/m^3. Based on these results, the south-central area of the site appears to be a potential source of low levels of particulates.

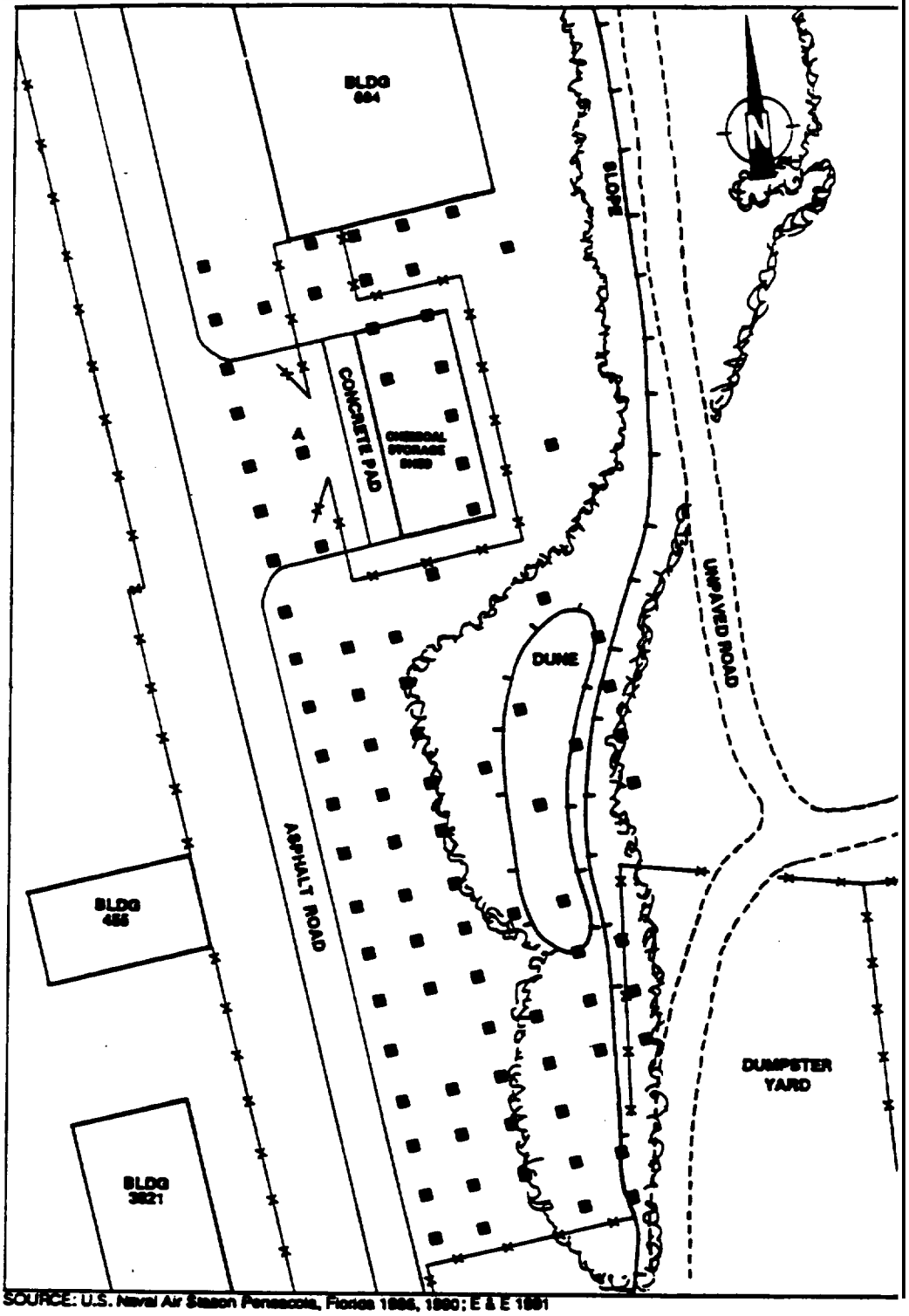
3.5 RADIATION SURVEY

A radiation survey was conducted at Site 26 [as described in Section 2.51. Background radiation levels [for gamma radiation at] for NAS Pensacola are 2 to 3 microRoentgens per hour (µR/h). Radiation readings observed during the radiation survey [ranged from background to 16 µR/h] (see Appendix B).

3.6 GEOPHYSICAL SURVEY

Geophysical survey readings, grid coordinates, and field data are presented in appendices B, C, and D.

Positive metal detections were obtained during the metal detector survey over a large area of the site (see Figure 3-2). Metal detector



SOURCE: U.S. Naval Air Station Pensacola, Florida 1986, 1990; E & E 1991

SCALE 0 100 FEET

KEY:

BLDG 455 Building

Fence

A Asphalt Paved Area

Trees

Positive Metal Detector Reading

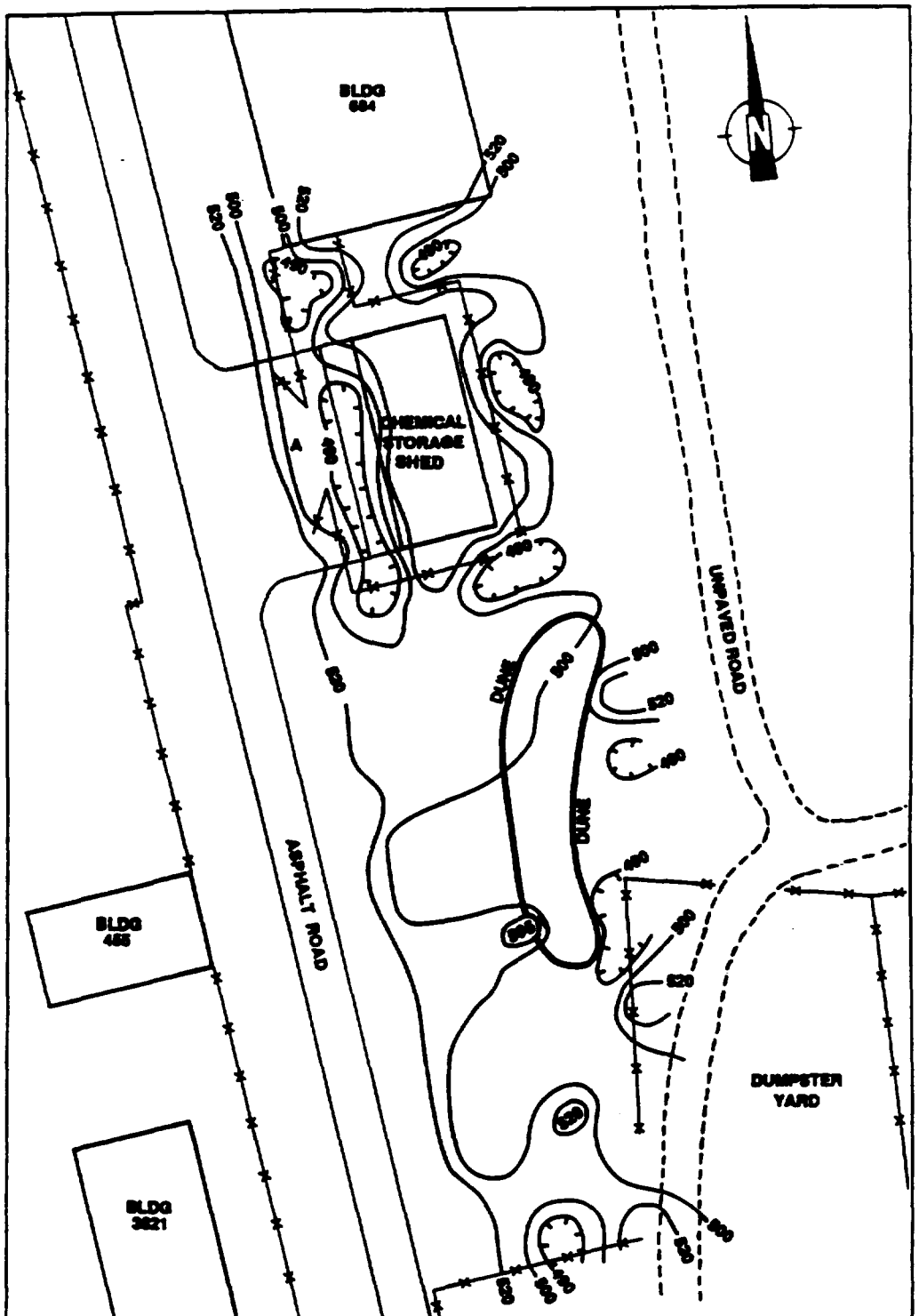
2600490

Figure 3-2 METAL **DETECTOR** SURVEY MAP — NAS **PENSACOLA SITE 26**

survey readings are presented in Appendix B. Hetal detected in the north portion of the site is most likely attributable to the fence and metallic equipment present on the surface in the chemical storage shed area. In the west portion of the site, positive metal detections are due to an underground utility located along the east side of the asphalt-paved road. Positive metal detections in the west-central portion of the site may be attributable to metal in the reinforced-concrete structures/foundations located in this area. Positive metal detections in the area around and south of the dune are most likely due to metal buried near the surface (see Figure 3-2).

During the magnetometer survey, anomalies in the total magnetic field were observed across the site area (an undisturbed background reading on Site 26 is on the order of 50,000 gammas). The magnetometer survey readings are presented in Appendix C. Figure 3-3 shows the contoured total magnetic field values (in units of gammas x 100) across the site. A strong, positive magnetic anomaly, located along the asphalt-paved road, is a buried utility line. Strong positive and negative magnetic anomalies in the north portion of the site are associated with surface metal and fencing located around the chemical storage shed area. Other anomalies along the east edge of the site are most likely due to fencing and refuse bins located in this area. A weak, positive anomaly, extending east from the asphalt road to the south edge of the dune, may be associated with a buried former utility or buried metal. A strong, localized, positive magnetic anomaly in the south-central area of the site is probably associated with metal buried in this area.

The EM-31 survey was performed by obtaining deep (vertical dipole) and shallow (horizontal dipole) readings along the east-west survey grid traverses. The results of the EH-31 vertical dipole survey are presented on Figure 3-4 and in Appendix D. Average conductivity values recorded were 7 to 15 millimhos per meter (mmhos/m) and can be considered background values for subsurface materials in this vicinity. Values greater than 20 mmhos/m or, in some cases due to dipole orientation, a negative value (less than 0 mmhos/m) in the north portion of the site are attributed to the surface metal around the chemical storage shed area and to utilities along the road; these values



SOURCE: U.S. Naval Air Station Pensacola, Florida 1988, 1990 ; E & E 1991

SCALE 0 100 FEET

KEY:

2000491

BLDG 465 Building

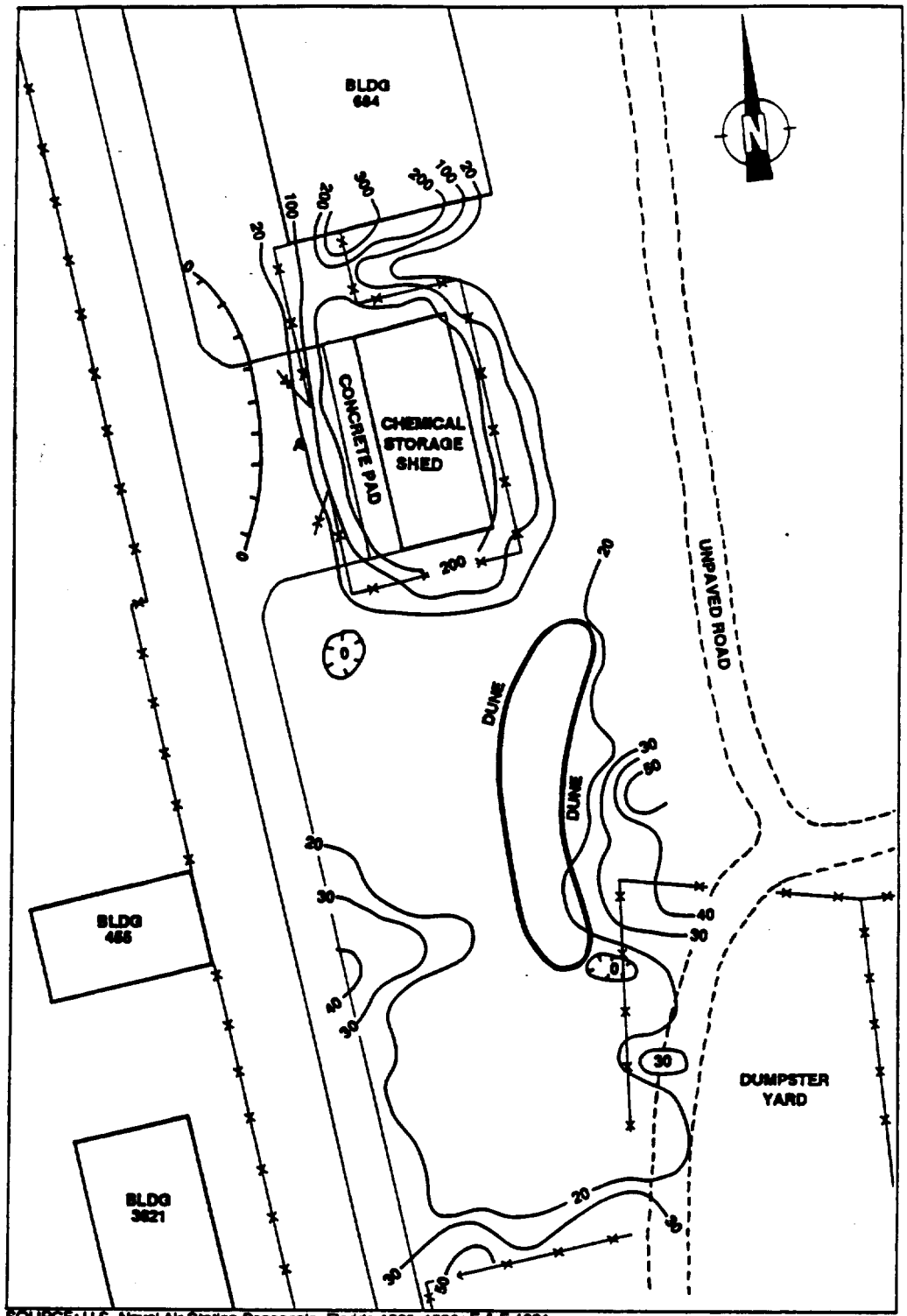
Fence

A Asphalt Paved Area

—— 500 —— Total Magnetic Field Isopleth (gammas x 100)

Area of Lower Total Magnetic Field Values

Figure 3-3 MAGNETOMETER SURVEY *MAP*— **NAS PENSACOLA SITE**26



SOURCE: U.S. Naval Air Station Pensacola, Florida 1986, 1990; E & E 1991

0 100 FEET

KEY:

BLDG 466 Building

Fence

A Asphalt Paved Area

20 Electromagnetic Conductivity Isopleth (millimhos/meter)

Area of Lower EM-31 Values

Figure 3-4 EM-31 SURVEY MAP, VERTICAL DIPOLE — NAS PENSACOLA SITE 26

corresponded to magnetometer data in this area. Values greater than 20 mmhos/m vere also located along the southeast, south, and southvest perimeters of the survey grid. Anomalies in the south and southeast are most likely associated vith fencing and refuse bins located adjacent to the site in these areas. The anomaly located in the vest portion of the site across the road from Building 455 is possibly associated vith buried metal or a former utility and corresponds to a magnetic anomaly in this area (see Figure 3-3). An anomaly located near the unpaved road east of the dune corresponds to a magnetic anomaly and is probably due to refuse bins located in this area.

An EU-34 conductivity survey was perforaed on Site 26 using horizontal dipoles (coils oriented vertically) at 10- and 20-meter intercoil spacings. Results of the 20-meter spacing survey are presented on Figure 3-5 and in Appendix C. Average EU-34 readings were betveen 15 and 20 mmhos/m. Similar to the magnetometer and EU-31 results, anomalies in the north portion of the site are associated vith the fence and other surface metal around the chemical storage shed area. A very strong anomaly, exhibiting conductivities from 100 to 300 mmhos/m, is located near the south end of the dune and is possibly due to a former utility or buried metal (see Figure 3-5). A pronounced, elongated negative anomaly (values less 0 mmhos/m) is located in the south portion of the survey grid area. These conductivity anomalies may indicate changes in groundwater conditions; however, they are probably due to metal buried in this area and also correspond to the magnetic anomalies discussed above and presented on Figure 3-4.

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3.7 HYDROLOGIC ASSESSMENT

3.7.1 Shallow Subsurface Lithology

Appendix E presents the lithologic logs for the five soil borings completed at Site 26. Based on information collected during completion of the borings, the shallow subsurface lithology beneath Site 26 can be generally characterized as a brovn to light brovn, silty, fine- to medium-grained quartz sand that grades to a tan, fine- to medium-grained quartz sand, then a white, medium-grained quartz sand near the vater table. At borings B003 and 8004, a light orange, silty, fine- to medium-grained quartz sand vas encountered from 0 to 5 feet BLS. During

[Bold items enclosed in brackets denote changes to the last version of document]

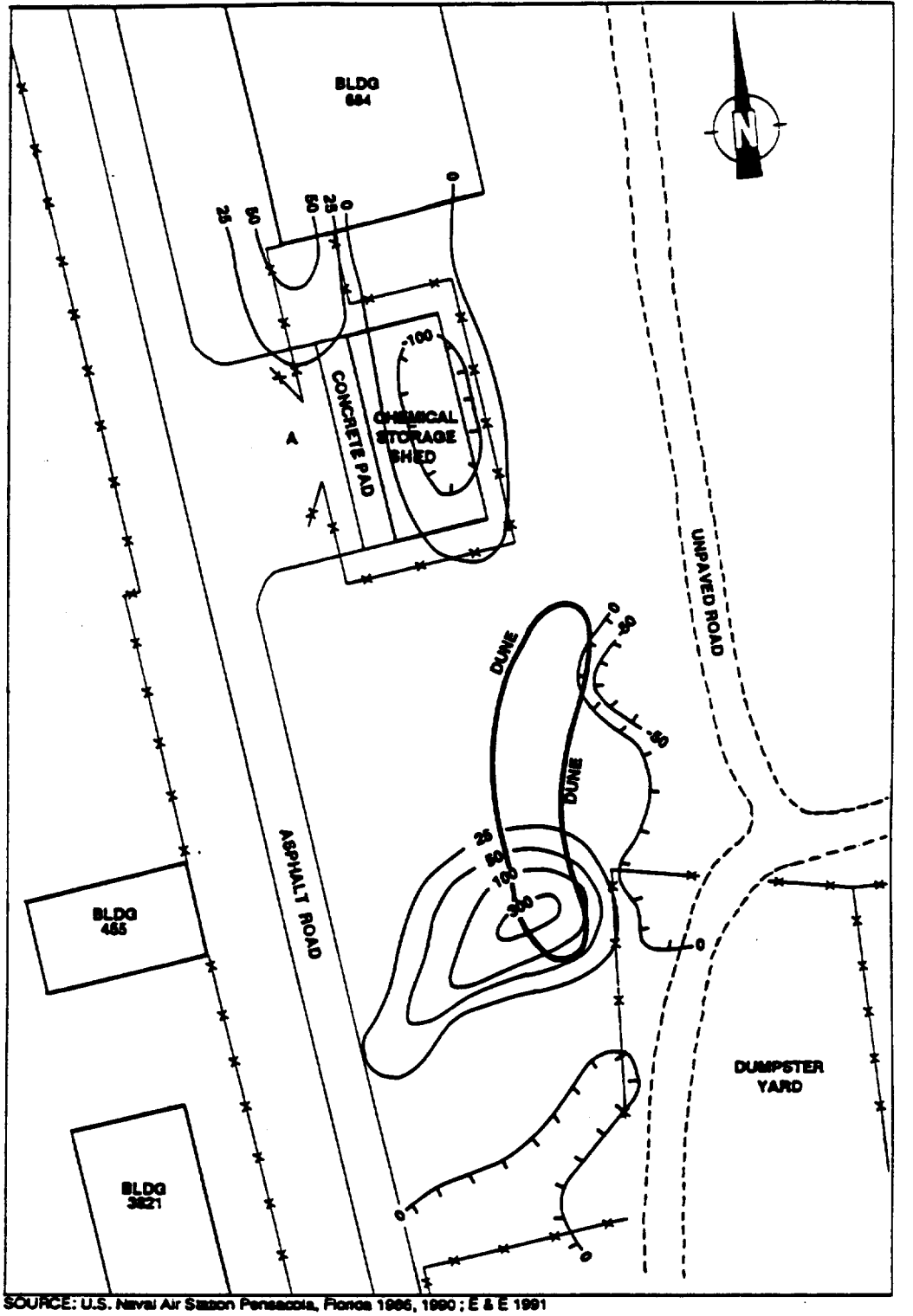


Figure 3-5 EM-34 SURVEY MAP, PO-METER INTERCOIL SPACING, HORIZONTAL DIPOLE
NAS PENSACOLA SITE 26

completion of boring B002, located east of the chemical storage shed, concrete and asphalt fragments and pebbles were encountered at 3.5 feet BLS. Two thin, dark brown, silty quartz sand layers vere also encountered in boring B002 at approximately 5 and 15 feet BLS.

[OVA readings taken from tbe open boreholes during drilling ranged from 0 to 3 ppm. The OVA readings are presented in Appendix E.]

3.7.2 Water Levels and Groundvater Flov

Table 3-1 presents the vater level elevations measured in the temporary monitoring wells at Site 26. Based on the measurements obtained from the temporary monitoring wells, the depth to the vater table across the site ranges from 15.66 to 16.77 feet BLS.

Figure 3-6 illustrates the vater level elevations and the groundwater flow direction in the upper portion of the surficial zone of the Sand-and-Gravel Aquifer at Site 26. Based on groundvater elevations, the direction of shallow groundwater flov is to the east-southeast, and the horizontal hydraulic gradient is approximately 0.002.

3.8 CHEMICAL ANALYSES

[The following section presents the results of the laboratory analyses of the soil and groundvater samples. The specific analytical parameters and parameter groups are listed or referenced in Table 2-2.]

2000493

3.8.1 Soil

Table 3-2 summarizes the analytical screening results for soil samples collected at Site 26. Figure 2-2 shows the boring locations at Site 26. The complete analytical screening results for soil samples are presented in Appendix P.

In general, all of the soil samples collected at Site 26 exhibited one or more metals, total recoverable petroleum hydrocarbons (TRPHs), polynuclear aromatic hydrocarbons (PAHs), and one volatile organic compound (VOC) above detection limits. The highest analytical screening concentrations were usually detected in the A sampling interval (0 to 5 feet BLS). Pesticides, phenols, and polychlorinated biphenyls (PCBs) were not detected in any of the soil samples.

Table 3-1

TEMPORARY MONITORING WELL CONSTRUCTION INFORMATION AND WATER LEVEL ELEVATIONS NAS PENSACOLA SITE 26

Well Number	Total Dopth (BLS)	Depth to Wator (BLS)	Depth to Wator BTOC	TOC Elevation	Wator Level Elevation	Date Measured
TWO02	19.37	15.66	El. 29	23.70	2.41	1-9-91
TU003	18.43	15.80	17.37	19.91	2.54	1-9-91
TWO04	20.87	16.77	20.98	23.33	2.35	1-9-91

14[NASP]UH6027:T0229/316/22

Notes:

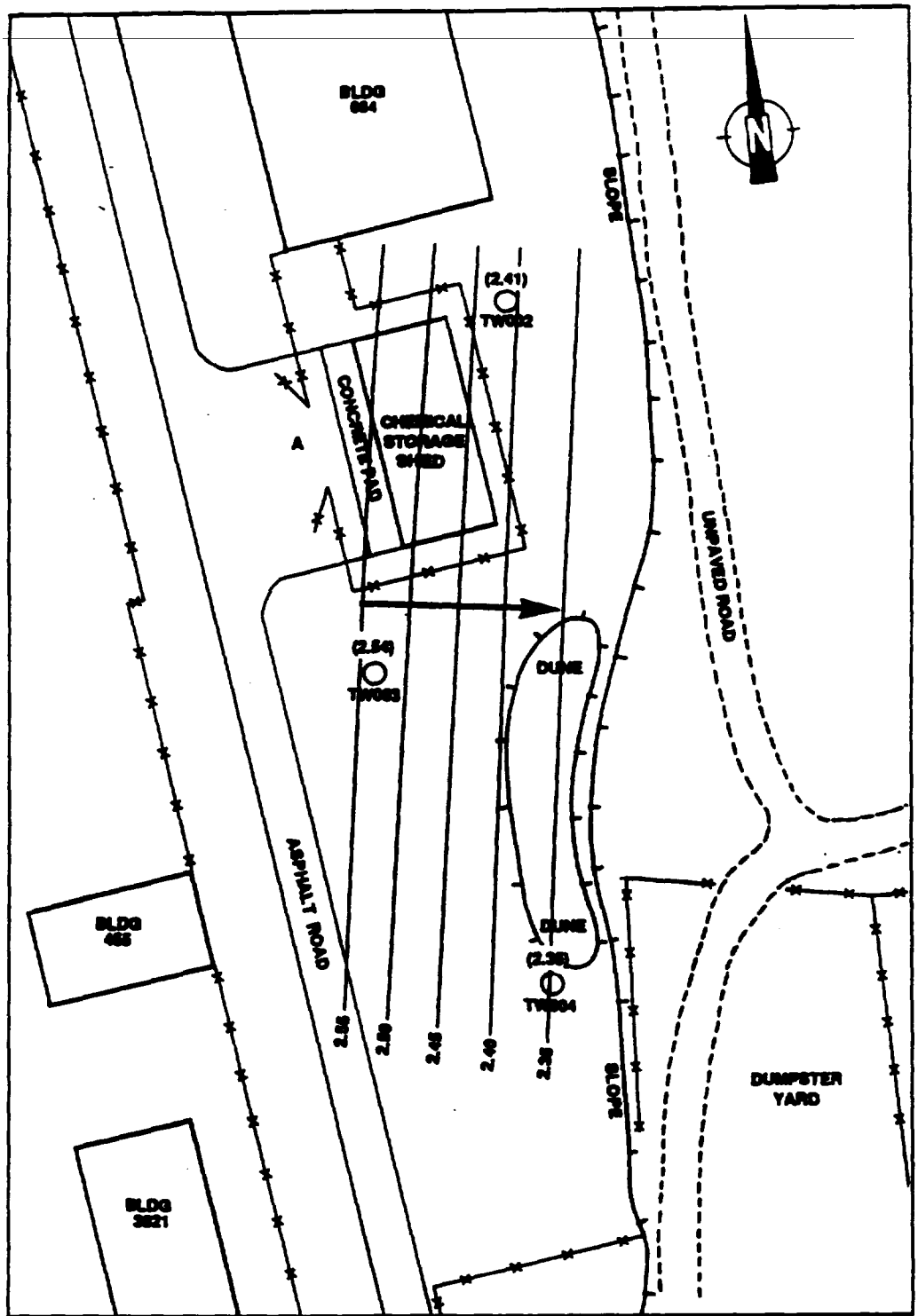
All depths are in foot.
A11 elevations are in foot referenced to mean sea level (MSL).
A11 wells were conrtructod of 2-inch diameter stainless stool with 5 feet of 0.01-inch screen.

Key:

BLS = Below land surface.
TOC = top of casing.
BTOC = Below top of casing.

Source: Ecology and Environment, Inc., 1991.

[Bold items enclosed io brackets denote changes to tho last version of document]



SOURCE: U.S. Naval Air Station Pensacola, Florida 1988, 1990; E & E 1991

SCALE 0 100 FEET

KEY:

- BLDG 465 — Building
- Fence
- A — Asphalt Paved Area
- Temporary Monitoring Well
- (2.41) — Water Level Elevations (feet above MSL)
- 2.5 — Water Level Elevation Isopleth (feet above MSL)
- Groundwater Flow Direction

2000494

Figure 3-6 SURFICIAL ZONE WATER LEVEL ELEVATIONS
NAS PENSACOLA SITE 26

Table 3-2

SUMMARY ANALYTICAL SCREENING RESULTS FOR SOIL SAMPLES
NAS PENSACOLA SITE 26
(All results in µg/kg, unless noted)

Parameter	[Detection Limit	Sample Number (Location and Depth Interval)						
		P26S001A (B001A)	P26S001AD[a] (B001A)	P26S001B (B001B)	P26S001C (B001C)	P26S001D (B001D)	P26S002A (B002A)	P26S002B (B0028)
Chromiun (mg/kg)	1	1.6	1.3	1.7	1.0	--	3.7	1.2
Zinc (mg/kg)	2	17	16	2.4	--	--	9.5	--
Cadniun (mg/kg)	0.5	0.51	--	--	--	--	--	--
Nickel (mg/kg)	4	--	--	--	--	--	--	--
Copper (mg/kg)	2.5	--	3.4	--	--	--	2.6	--
TRPHs (mg/kg)	5	--	--	20	54	18	--	--
Methylene Chloride	1,000	--	--	--	1,800(B)	2,500(B)	2,6001B)	1,200(B)
Total PAHs as Benzo-a-pyrene	1,000]	2,000	3,500	--	--	--	4,400	--

14[NASP]UH6027:T0229/274/5

Key at end of table.

[Bold items enclosed in brackets denote changes to the last version of document]

Table 3-2 (Cont.)

Parameter	[Detection Limit	Sample Number (Location and Depth Interval) P26S002C (B002C)	P26S002D (B002D)	P26S003A (B003A)	P26S003B (B003B)	P26S003C (B003C)	P26S003D (B003D)	P26S004A (B004A)
Chromium (mg/kg)	1	1.2	2.0	2.4	1.3	--	--	1.4
Zinc (mg/kg)	2	--	2.5	4.4	--	--	--	2.0
Cadmium (mg/kg)	0.5	--	--	1.4	--	--	--	--
Nickel (mg/kg)	4	--	--	--	--	--	--	--
Copper (mg/kg)	2.5	--	--	--	--	--	--	--
TRPHs (mg/kg)	5	22	21	--	8.4	6.9	18	220
Methylene Chloride	1,000	2,100(B)	2,600(B)	1,500(B)	2,400(B)	5,000(B)	3,100(B)	4,800(B)
Total PAHs as Benzo-a-pyrene	1,000]	--	--	1,800	2,000	--	--	--

14[NASP]UH6027:T0229/274/5

Key at end of table.

[Bold items enclosed in brackets denote changes to the last version of document]

Table 3-2 (Cont.)

Parametor	[Detection Limit	Sample Number (Location and Depth Interval) P26S004B (B004B)	P26S004C (B004C)	P26S004D (B004D)	P26S005A (B005A)	P26S005B (B005B)	P26S005C (B005C)	P26S005D (B005D)
Chromium (mg/kg)	1	1.7	--	1.0	1.1	18	--	1.2
Zinc (mg/kg)	2	--	--	--	2.7	2.7	2.2	--
Cadmium (mg/kg)	0.5	--	--	--	--	--	--	--
Nickel (mg/kg)	4	--	--	--	--	7.3	--	--
Copper (mg/kg)	25	--	--	--	--	--	--	--
TRPHs (mg/kg)	5	11	16	12	13	17	9.2	12
Methylene Chlor do	1,000	--	--	--	--	--	2,000 B)	2,600(B)
Total PAHs as Benzo-a-pyrene	1,000]	--	--	--	--	--	--	--

14[NASP]UH6027:T0229/274/5

Roto: These results were reported on a wet-weight basis.

Key:

[a] Duplicate of sample P26S001A.

Dash (--) indicates coapound not detected.

Qualifier:
(B) = Coapound also present in method blank.

Soucco: Ecology and Envitonmont, Inc., 1991.

[Bold items enclosed in brackets denote changes to tho last version of document]

Metals

Chromium (15 samples) and zinc (nine samples) vere detected in many of the soil samples across the site; cadmium, copper, and nickel vere detected in only one or tvo samples. Metals vere primarily detected in A-interval samples. Figure 3-7 shovs total metals concentrations for each A-interval soil sample collected at each of the Site 26 borings. Zinc contributed the greatest percentage to the total metals concentration in each of the A-interval samples. The highest total metals concentrations in the A-interval samples were in borings B001 and B002 (see Table 3-2 and Figure 3-7). However, although the B-interval samples generally exhibited much lower total metals concentrations than the A-interval samples, the total metals concentration (28 mg/kg) in B-interval sample S005B vas the highest detected in Site 26 soil samples and is mostly attributable to the concentrations of chromium (18 mg/kg) and nickel (7.3 mg/kg). Neither cadmium nor copper vere detected in any of the B-, C- , or D-interval samples.

TRPHs

TRPHs were detected in all the soil samples, except the A-interval samples from borings B001, B002, and B003, or the B-interval sample from boring B002. Host soil TRPE concentrations were between 6.9 mg/kg and 22 mg/kg. The highest concentration of TRPHs (220 mg/kg) was in the A-interval sample S004A (boring B004; see Table 3-2 and Figure 3-8). TRPHs vere present in A-interval samples only from the south portion of the site. TRPH concentrations in the B- , C- , and D-interval samples were relatively uniform and evenly distributed across the site; the highest C-interval concentration (54 mg/kg) was detected in sample S001C (boring B001). The TRPE concentrations were the most uniform across Site 26 in the D-interval samples, vith detected concentrations ranging from 12 mg/kg to 21 mg/kg (see Table 3-2).

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PAHs

Total PAH concentrations vere detected in samples from the north portion of the site in A-interval samples S001A, S002A, and S003A, and in B-interval sample S003B (see Table 3-2 and Figure 3-8). The highest concentration of total PAHs (4,400 µg/kg) vas detected in sample S002A

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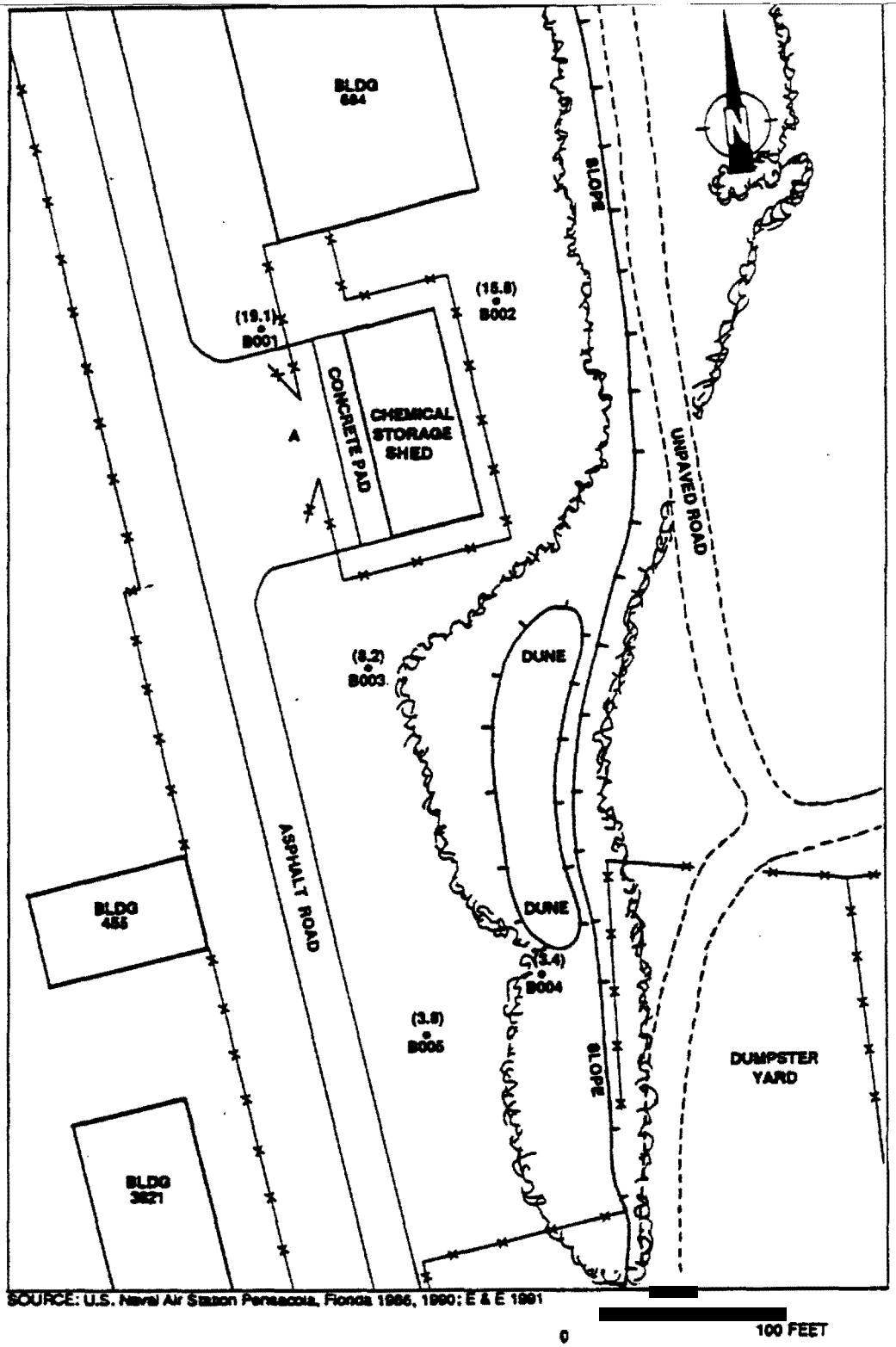
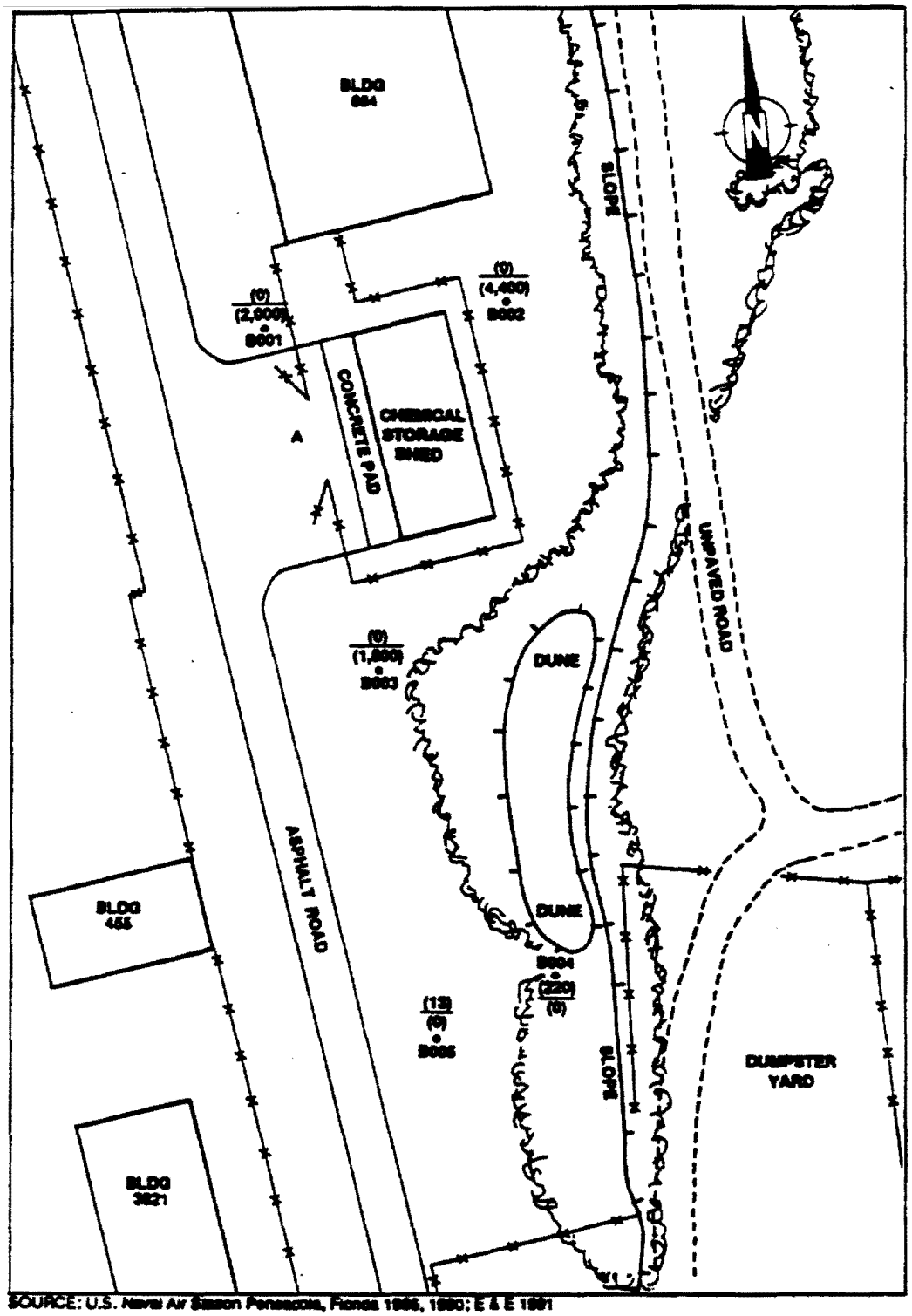


KEY:

BLDG 455	Building		Trees
	Fence	•	Soil Boring
A	Asphalt Paved Area	(8.2)	Total Metals Concentration (mg/kg)

Figure 3-7 TOTAL METALS CONCENTRATIONS IN A-INTERVAL SOIL SAMPLES NAS PENSACOLA SITE 26



SOURCE: U.S. Naval Air Station Pensacola, Florida 1986, 1990; E & E 1991

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KEY:

BLDG 455	Building		Trees
—x—x—	Fence	•	Soil Boring
A	Asphalt Paved Area	(9) / (2,000)	TRPH Concentration (mg/kg) / PAH Concentration (ug/kg)

Figure 3-8 *TRPH AND PAH **CONCENTRATIONS** IN **A-INTERVAL SOIL** SAMPLES
NAS PENSACOLA SITE 26

(boring B002 A-interval sample). No PAHs were detected in C- or D-interval samples. In light of the limited areal extent of sampling, occurrences of PAHs are limited to the area of the former chemical storage building which was located in the north portion of the site until 1989 (see Section 3.2). It should be noted that total PAHs were reported as benzo-a-pyrene for laboratory reporting purposes; however, PAHs other than benzo-a-pyrene may be present in the samples.

VOCs

Methylene chloride was detected in many of the Site 26 soil samples at concentrations as high as 5,000 µg/kg. However, this common laboratory solvent was also detected at similar levels in the associated laboratory method blanks (see Section 3.10.2); therefore, its presence in the soil samples is attributable to laboratory-derived contamination.

3.8.2 Groundvater

Field Parameters

Table 3-3 lists the groundwater temperature, pH, and specific conductance values measured for the groundwater samples collected from the three temporary monitoring wells at Site 26. The field parameter measurements for these wells are within the reported range of values for ambient groundwater in Escambia County (Clemens ~~et al.~~ 1989). [pH values ranged from 6.23 to 6.86.) No floating or [sinking] immiscible hydrocarbons were observed or indicated by the oil/water interface probe in any of the wells. Appendix E presents the temporary monitoring well information including field parameters and groundwater elevation data.

Analytical Screening Parameters

Table 3-4 summarizes the analytical screening results for the groundwater samples collected from the three temporary monitoring wells installed at Site 26. Figure 2-2 shows the temporary monitoring well locations at Site 26. The complete analytical screening results for the groundwater samples are presented in Appendix G. In general, three to five metals were detected in each groundwater sample collected at Site 26, and one VOC was detected in one groundwater sample. However, as

Table 3-3

GROUNDWATER FIELD PARAMETERS
NAS PENSACOLA SITE 26

Well Number	Temperature (°C)	pH (unit.)	Specific Conductance (umhos/cm)	Date Measured
TW002	22.6	6.23	325	1-9-91
TU003	22.8	6.28	360	1-9-91
TU004	23.2	6.86	392	1-9-91

14[NASP]UH6027:T0229/243/26

Source: Ecology and Environment, Inc., 1991.

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Table 3-4

SUMMARY ANALYTICAL SCREENING RESULTS FOR GROUNDWATER SAMPLES
(FROM TEMPORARY MONITORING WELLS)
NAS PENSACOLA SITE 26
(All results in µg/L, unless noted)

Parameter	[Detection Limit	Sample Number (Location)				[FPDWS/ FSDWS
		P26GW002 (TW002)	P26GW002D[a] (TW002)	P26GW003 (TW003)	P26GW004 (TW004)	
Arsonic	69	590	500	--	--	**50**
Chromium	10	*200*	190	130	53	SO
Zinc	20	31	30	900	61	5,000
Cadmium	5	6.2	--	31	9.0	10
Nickel	40	57	42	37	--	
Copper	25	--	--	31	--	1,000
1,1,1-Trichloroethane	10]	--	--	25	--	31

14[NASP]UH6027:T0229/277/14

Key:

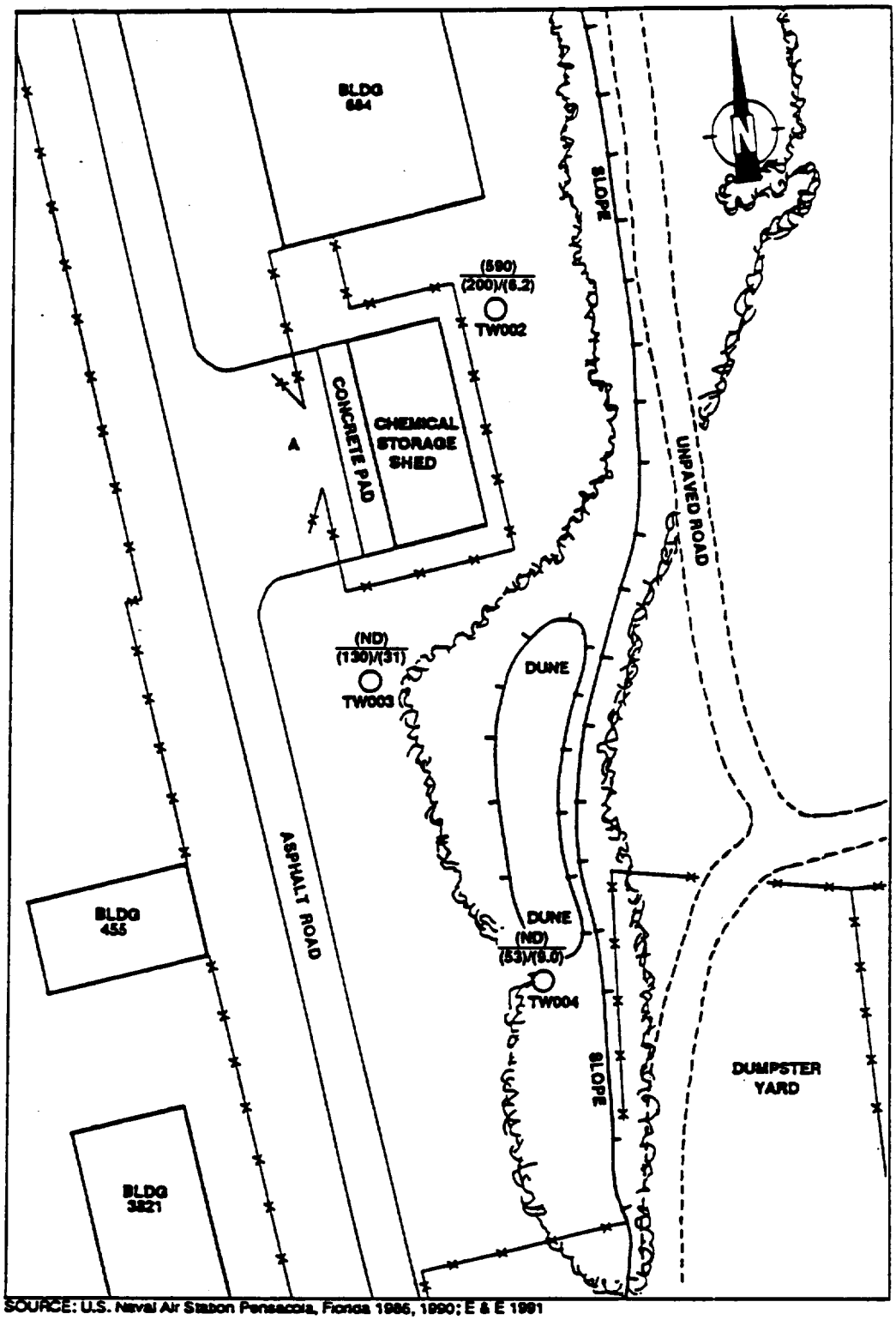
[a]Duplicate of sample P26GW002.

[FPDWS = Florid. Primary Drinking Water Standard.

FSDWS = Florid. Secondary Drinking Water Standard.]

Dash (--) indicates compound not detected.

Source: Ecology and Environment, Inc., 1991.



SOURCE: U.S. Naval Air Station Pensacola, Florida 1986, 1990; E & E 1991

SCALE 0 100 FEET

KEY:

- BLDG. 455 — Building
- Fence
- A — Asphalt Paved Area
- Trees
- Temporary Monitoring Well
- (590) / (200)/(6.2) — Arsenic Concentration (ug/L) / Chromium/Cadmium Concentrations (ug/L)
- (ND) — Not Detected

Figure 3-9 ARSENIC, CHROMIUM, AND CADMIUM CONCENTRATIONS IN GROUNDWATER SAMPLES — NAS PENSACOLA SITE 26

groups (metals, TRPHs, VOCs, and PAHs) included in the Phase I analytical screening investigation. In some cases the detected contamination appears to be associated with former chemical storage activities on the site. However, the Phase I results also indicate the presence of other potential sources of contamination impacting Site 26.

In the following sections, each of the sampled media will be discussed separately regarding the nature, distribution, and potential source(s) of contamination.

3.9.1 Soil

Elevated levels of metals, TRPHs, and/or PAHs were detected in one or more of the soil samples collected at Site 26. The highest contaminant concentrations were usually detected in the A- and B-interval samples. Pesticides, phenols, and PCBs were not detected in any of the soil samples. A single VOC (methylene chloride) was detected in several soil samples; however, this compound is a common laboratory-derived contaminant that was also detected in the associated laboratory method blanks (see Section 3.10.2.).

The highest total metals concentrations were detected in the A-interval samples collected in the north portion of the site--in the location of the former chemical storage building. However, the highest total metals concentration was detected in the B-interval sample from boring B005 which was located in the south portion of the site.

Chromium and zinc are the most uniformly distributed metal contaminants detected. In general, these metals constitute the major fraction of total metals concentrations in soils.

TRPHs were present in the A-interval samples only in the south portion of the site; however, TRPHs were distributed uniformly across the site in samples from the B, C, and D intervals. PAHs were detected in A- and B-interval soil samples collected in the north portion of the site. PAHs were not found in C- or D-interval samples.

Two of the three highest total metals, PAH, and TRPH concentrations were detected in soil samples collected near the probable, historical, on-site source area, the former chemical storage building. In addition, the elevated concentrations of TRPHs in the B and C intervals and the

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noted that total metals concentrations in corresponding soil samples (from the A and B intervals of borings B002 and B003) included at least trace concentrations of the metals (except arsenic) detected in these groundwater samples.

Arsenic, detected at a very high concentration in the groundwater sample from well TW002 was not detected in any soil samples from Site 26. A possible off-site source of arsenic is Site 12 (Scrap Bin Area) located adjacent to and west of Site 26; arsenic was detected in three Site 12 soil samples (from boring P12B008) during the corresponding Phase I investigation. As groundwater flows eastward across Site 12 and Site 26, it is possible that dissolved concentrations of arsenic migrated from a source area on Site 12.

No TRPHs or PAHs were detected in groundwater samples from Site 26. The absence of these contaminants in the groundwater, although they are present in soil (particularly in soil near the water table; see Section 3.8.1), probably reflects the relative insolubility of PAHs and TRPHs in water. Furthermore, the occurrence of the VOC 1,1,1-trichloroethane in the groundwater sample from TW003 but not in the corresponding soil samples (from boring B003) possibly reflects a greater solubility/ mobility of VOCs (i.e., VOCs are more readily flushed from the soil column than PAHs or TRPHs). However, at present, no on-site or ambient source of 1,1,1-trichloroethane is known.

3.10 QA/QC

3.10.1 Field QA/QC Samples

One field duplicate sample was collected per sampling medium for the Site 26 screening samples. The analytical results for the duplicate samples are presented in the summary tables for the respective media (tables 3-2 and 3-4). The soil duplicate sample (S001AD) was in general agreement, within acceptable limits, with the results for the original sample. The results for the duplicate groundwater sample (GW002D) were also in general agreement, within acceptable limits, with the results for the original sample.

4. CONCLUSIONS

Soil and groundwater contamination are present on Site 26. Metals, TRPHs, PAHs, and VOCs are the primary contaminants. Some of the detected contamination is probably associated with the historical source area, the former chemical storage building. However, additional sources of contamination may be impacting Site 26.

Although Site 26 soils show only traces of total metals, it is apparent that isolated areas of soil contamination exist. These areas are limited in lateral and vertical extent. Soil metals contamination in the north portion of the site may be associated with the area of the former chemical storage building. Soil metals contamination in the south portion of the site may be associated with other endemic or ambient sources in this area.

PAH contamination is present in the A and B intervals in the north portion of the site. TRPH contamination is found only in the A interval in the south portion of the site; however, TRPH contamination appears to be distributed uniformly across the site area at deeper intervals and may be attributable to an off-site ambient source.

Groundwater contamination also is present at Site 26. Metals concentrations exceeding Florida standards were detected for arsenic, chromium, and cadmium and could reflect that turbid groundwater samples were not filtered prior to acid preservation. However, the arsenic concentration, occurring only in well TW002 in the north portion of the site, nay be attributable to an off-site source adjacent to Site 26, possibly Site 12, the Scrap Bin Area. Arsenic was detected in three Site 12 soil samples (from boring P12B008). In addition, chromium, which was elevated with respect to the FPDWS in all three temporary wells, also was detected in nearly all Site 26 soil samples, which suggests the presence of an endemic source on Site 26. At present,

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6. FLORIDA PROFESSIONAL GEOLOGIST SEAL

I hereby affix my seal to the Interim Data Report for the Supply Department Outside Storage (Site 26) located at the Naval Air Station in Pensacola, Escambia County, Florida, in accordance with Chapter 492 of the Florida Statutes and rules and regulations developed pursuant thereto:

Name:	Richard J. Rudy
License Number:	P.G. No. 97
State:	Florida
Expiration Date:	July 31, 1992

Richard J. Rudy

10-13-91
Date

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APPENDIX A

BIRDS OBSERVED DURING HABITAT/BIOTA SURVEY

BIRDS OBSERVED DURING HABITAT/BIOTA SURVEY
OCTOBER 1990

Hature pine forest, including grassy margins along dirt roads and thickets bordering forests.

Gray Catbird	Dumetella carolinensis
Rufous-sided Towhee	Pipilo erythrophthalmus
Yellow-throated Vireo	Vireo flavifrons
House Vren	Troglodytes aedon
Bluejay	Cyanocitta cristata
Eastern Phoebe	Sayornis phoebe
Hourning Dove	Zenaida macroura
Common Grackle	Quiscalus quiscula
White-eyed Vireo	Vireo griseus
Northern Mockingbird	Himus polyglottos
Cardinal	Cardinalis cardinalis
Carolina Wren	Thryothorus ludovicianus
Boat-tailed Grackle	Quiscalus major
Brown Thrasher	Toxostoma rufum

Upland mature hardwood forest vith some mix of pines.

Prairie Warbler	Dendroica discolor
Northern Mockingbird	Himus polyglottos
Hississippi Kite	Ictinia mississippiensis
Red-tailed Havk	Buteo jamaicensis
Hourning Dove	Zenaida macroura
Ovenbird	Seiurus aurocapillus
Tufted Titmouse	Parus bicolor
Carolina Chickadee	Parus carolinensis
Golden Crovned Kinglet	Regulus satrapa
Ruby Crovncd Kinglet	Regulus calendula
Nashville Warbler	Vermivora ruficapilla
Bluejay	Cyanocitta cristata

Beachfront, including shoreline along waterfront apron; Pensacola Bay open water; Bayou Grande open water; shoreline dong dredge spoil fill area; interior mudflats of dredge spoil fill area; and primary dune/scrubby areas of beach.

Forester's Tern	Sterna porsteri
Herring Gull	Larus argentatus
Semi-palmated Plover	Charadrius semipalmatus
Great Blue Eeron	Ardea herodias
Semi-palmated Sandpiper	Calidris pusilla
Villet	Catoptrophorus semipalmatus
Ruddy Turnstone	Arenaria interpres
Royal Tern	Sterna maxima
Sandvich Tern	Sterna sandirccnsis
Roseate Tern	Sterna dougallii
Common Tern	Sterna hirundo
Brovn Pelican	Pelecanus occidentalis
Killdeer	Charadrius vociferus
Chipping Sparrov	Spizella passerina
Eastern Wood Pevee	Contopus borealis
Bluejay	Cyanocitta cristata
Osprey	Pandion haliaetus
Belted Kingfisher	Ceryle alcyon
Pish Crov	Corvus ossifragus
Mourning Dove	Zenaida macroura
Double Crcstcd Cormorant	Phalacrocorax auritus
Northern Mockingbird	Mimus polyglottos
Sander1ing	Calidris alba
Least Sandpiper	Calidris minutilla
Little Blue Beron	Egrettr caerulea
Short-billed Dowitcher	Limnodromus griseus
Laughing Gull	Larus rtricilla
Black-bellied Plover	Pluvialis squrtarolr
Tree Swallow	Tachycineta bicolor
Acadian Flycatcher	Empidonax vircsccns
House Wren	Troglodytes aedon

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Marshland, including emergent vegetation found along Bayou Grande, Pensacola Bay, and brackish-vater ponds.

Pied-billed Grebe	Podilymbus podiceps
Great Blue Heron	Ardea herodias
Great Egret	Casmerodius albus
Snowy Egret	Egretta thula
Little Blue Heron	Egretta caerulea
Tricolored Heron	Egretta tricolor
Green-vinged Teal	Anas crecea
Mottled Duck	Anas fulvigula
Blue-vinged Teal	Anas discors
Northern Shoveler	Anas clypeata
Lesser Scaup	Aythya affinis
American Coot	Fulica americana
Mourning Dove	Zenaida macroura
Northern Flicker	Colaptes auratus
Bluejay	Cyanocitta cristata
Red-vinged Blackbird	Agelaius phoeniceus
Belted Kingfisher	Ceryle alcyon
Rufous-sided Towhee	Pipilo erythrophthalmus
Cardinal	Cardinalis cardinalis
Yellovthroat	Geothlypis trichas
Forester's Tern	Sterna forsteri
Osprey	Pandion haliaetus
House Wren	Troglodytes aedon
Yellow-rumped Uarbler	Dendroica coronata
Northern Mockingbird	Mimus polyglottos

Forested wetland area, including mature hardwoods and thick undergrowth mixed with emergent vegetation such as cattails.

Yellov-bellied Sapsucker	Sphyrapicus varius
Brown Thrasher	Toxostoma rufum
Harsh Wren	Cirtothorus palustris
American Goldfinch	Carduelis tristis
Prairie Warbler	Dendroics discolor
Northem Flicker	Colaptes auratus
Cardinal	Cardinalis cardinalis
Bluejay	Cyanocitta cristata
Northern Mockingbird	Mimus polyglottos
Wood Thrush	Hylocichla mustelina

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APPENDIX B

SURFACE EMISSIONS, RADIATION, AND METAL DETECTOR SURVEY DATA

SITE 26

GRID COORDIBATES	OVA (ppm)	RADIATIOS (uR/h)	METAL DETECTOR (yes/no)
S0+00E0+00	1	5	Y
S0+00E0+25	1	5	N
S0+00E0+50	1	3	1'
S0+00E0+75	1	5	Y
S0+00E1+00	SD	ND	Y
S0+00E1+25	1	9	Y
S0+00E1+50	1	7	N
S0+25E0+00	1	5	1'
S0+25E0+25	1	5	Y
S0+25E0+50	1	5	Y
S0+25E0+75	ND	ND	Y
S0+25E1+00	ND	ND	Y
S0+25E1+25	1	4	N
S0+25E1+50	1	5	Y
S0+50E0+00	1	5	Y
S0+50E0+25	1	3	N
S0+50E0+50	1	5	N
S0+50E0+75	1	5	Y
S0+50E1+00	1	3	Y
S0+50E1+25	1	5	N
S0+50E1+50	1	5	N
S0+75E0+00	1	5	Y
S0+75E0+25	1	5	N
S0+75E0+50	1	5	N
S0+75E0+75	1	3	Y
S0+75E1+00	1	5	Y
S0+75E1+25	1	4	N
S0+75E1+50	1	5	N
S1+00E0+00	1	5	Y
S1+00E0+25	1	5	Y
S1+00E0+50	1	5	N
S1+00E0+75	1	16	N
S1+00E1+00	1	5	Y
S1+00E1+25	1	4	N
S1+00E1+50	1	5	N
S1+25E0+00	1	5	Y
S1+25E0+25	1	5	N
S1+25E0+50	1	5	N
S1+25E0+75	1	5	Y
S1+25E1+00	1	5	Y
S1+25E1+25	1	3	N
S1+25E1+50	1	5	Y
S1+50E0+00	1	5	Y
S1+50E0+25	1	5	Y
S1+50E0+50	1	'5	N
S1+50E0+75	1	5	N
S1+50E1+00	1	5	N
S1+50E1+25	1	4	N

SITE 26

GRID COORDINATES	OVA (ppm)	RADIATIOK (uR/h)	METAL DETECTOR (yes/no)
S1+50E1+50			N
S1+75E0+00	1	5	Y
S1+75E0+25	1	5	N
S1+75E0+50	1	5	N
S1+75E0+75	1	5	Y
S1+75E1+00	1	5	N
S1+75E1+25	1	4	N
S1+75E1+50			N
S2+00E0+00	1	5	Y
S2+00E0+25	1	5	Y
S2+00E0+50	1	5	Y
S2+00E0+75	1	5	N
S2+00E1+00	1	5	N
S2+00E1+25	1	4	Y
S2+00E1+50	1	4	N
S2+25E0+00	1	5	Y
S2+25E0+25	1	5	Y
S2+25E0+50	1	5	Y
S2+25E0+75	1	5	N
S2+25E1+00	1	5	N
S2+25E1+25	1	4	N
S2+25E1+50	1	4	Y
S2+50E0+00	1	5	Y
S2+50E0+25	1	5	Y
S2+50E0+50	1	5	Y
S2+50E0+75	1	5	N
S2+50E1+00	1	5	Y
S2+50E1+25	1	4	N
S2+50E1+50	1	4	Y
S2+75E0+00	1	5	Y
S2+75E0+25	1	5	Y
S2+75E0+50	1	5	Y
S2+75E0+75	1	5	Y
S2+75E1+00	1	5	N
S2+75E1+25	1	4	Y
S2+75E1+50	1	4	Y
S3+00E0+00	1	5	Y
S3+00E0+25	1	3	Y
S3+00E0+50	1	5	Y
S3+00E0+75	1	5	N
S3+00E1+00	1	5	Y
S3+00E1+25	1	7	N
S3+00E1+50	1	5	Y
S3+25E0+00	1	5	Y
S3+25E0+25	1	5	Y
S3+25E0+50	1	5	Y
S3+25E0+75	1	5	N
S3+25E1+00	1	4	N

2C0544

SITE 26

GRID COORDISATES	OVA (ppm)	RADIATION (uR/h)	METAL DETECTOR (yes/no)
S3+25E1+25	1	4	N
S3+25E1+50			
S3+50E0+00	1	5	Y
S3+50E0+25	1	5	Y
S3+50E0+50	1	5	Y
S3+50E0+75	1	5	Y
S3+50E1+00	1	3	Y
S3+50E1+25	1	4	N
S3+50E1+50			
S3+75E0+00	1	5	Y
S3+75E0+25	1	5	Y
S3+75E0+50	1	5	Y
S3+75E0+75	1	5	N
S3+75E1+00	1	3	Y
S3+75E1+25	1	4	Y
S3+75E1+50			
S4+00E0+00	1	5	Y
S4+00E0+25	1	5	N
S4+00E0+50	1	5	Y
S4+00E0+75	1	5	Y
S4+00E1+00	1	4	Y
S4+00E1+25	1	4	Y
S4+00E1+50	1	3	
S4+25E0+00	1	5	Y
S4+25E0+25	1	5	Y
S4+25E0+50	1	5	Y
S4+25E0+75	1	5	Y
S4+25E1+00			Y
S4+25E1+25	1	4	Y
S4+25E1+50	1	4	
S4+50E0+00	1	5	Y
S4+50E0+25	1	5	Y
S4+50E0+50	1	5	Y
S4+50E0+75	1	4	Y
S4+50E1+00			N
S4+50E1+25			
S4+50E1+50	1	4	
S4+75E0+00	1	5	Y
S4+75E0+25	1	3	Y
S4+75E0+50	1	5	Y
S4+75E0+75	1	9	Y
S4+75E1+00			Y
S4+75E1+25			
S4+75E1+50	1	4	
S5+00E0+00	1	5	Y
S5+00E0+25	1	5	Y
S5+00E0+50	1	5	
S5+00E0+75	1	9	Y

APPENDIX C

EM-34 AND MAGNETOMETER SURVEY DATA

SITE 26

GRID COORDINATES	EM-34 10 METER (mmhos/m)	EM-34 20 METER (mmhos/m)	MAGKETOMETER (gammas)
S0+00E0+00	4.1	9	52126.9
S0+00E0+25			49252
S0+00E0+50	26.5	65	52103
S0+00E0+75			52118.3
S0+00E1+00	-6	-13	52123.2
S0+00E1+25			52119.8
S0+00E1+50	-70	4	45627
S0+25E0+00			52126.1
S0+25E0+25			19708
S0+25E0+50			47517
S0+25E0+75			52120.5
S0+25E1+00			49098
S0+25E1+25			49265
S0+25E1+50			49853
S0+50E0+00	4.5	12	52127.6
S0+50E0+25			49893
S0+50E0+50	26.4	25	52105
S0+50E0+75			52119.3
S0+50E1+00	-18	-32	52056
S0+50E1+25			52083
S0+50E1+50	3	16	49999
S0+75E0+00			52126.8
S0+75E0+25			49986
S0+75E0+50			47403
S0+75E0+75			ND
S0+75E1+00			ND
S0+75E1+25			48891
S0+75E1+50			50089
S1+00E0+00	25	16	52129
S1+00E0+25			49737
S1+00E0+50	10	12	45557
S1+00E0+75			ND
S1+00E1+00	ND	>300	ND
S1+00E1+25			47074
S1+00E1+50	16.5	10	49733
S1+25E0+00			52129.3
S1+25E0+25			49592
S1+25E0+50			45668
S1+25E0+75			SD
S1+25E1+00			ND
S1+25E1+25			52130.5
S1+25E1+50			49168
S1+50E0+00	1.8	10	52128.9
S1+50E0+25			52123.4
S1+50E0+50	25	24	15570
S1+50E0+75			ND
S1+50E1+00	ND	ND	ND
S1+50E1+25			52060

SITE 26

GRID COORDIKATES	EM-34 10 METER (mmhos/m)	EM-34 20 METER (mmhos/m)	MAGNETOMETER (gammas)
S1+50E1+50	9.5	6	49348
S1+75E0+00			52125.5
S1+75E0+25			49900
S1+75E0+50			48369
S1+75E0+75			52077
S1+75E1+00			48371
S1+75E1+25			48539
S1+75E1+50			49793
S2+00E0+00	-2.5	12	52115.1
S2+00E0+25			52113.3
S2+00E0+50	5	9	50031
S2+00E0+75			50219
S2+00E1+00	4.4	10	50157
S2+00E1+25			50132
S2+00E1+50	5.8	12.2	50044
S2+25E0+00			52119.8
S2+25E0+25			50320
S2+25E0+50			50200
S2+25E0+75			50213
S2+25E1+00			50179
S2+25E1+25			50022
S2+25E1+50			49711
S2+50E0+00	4.8	10	52126.2
S2+50E0+25			50257
S2+50E0+50	4.2	I0	50155
S2+50E0+75			50129
S2+50E1+00	3.8	10.5	50120
S2+50E1+25			49840
S2+50E1+50	-9.3	5.3	52081
S2+75E0+00			52128.2
S2+75E0+25			52081
S2+75E0+50			50093
S2+75E0+75			50074
S2+75E1+00			49964
S2+75E1+25			49935
S2+75E1+50			45579
S3+00E0+00	5.2	10	52146.1
S3+00E0+25			49944
S3+00E0+50	5.8	17.5	39965
S3+00E0+75			49983
S3+00E1+00	4.8	13	49889
S3+00E1+25			49646
S3+00E1+50	4.0	4	49406
S3+25E0+00			52153.7
S3+25E0+25			49810
S3+25E0+50			49934
S3+25E0+75			49943
S3+25E1+00			49819

260054?

recycled paper
ecology and environment

SITE 26

GRID COORDINATES	EM-34 10 METER (mmhos/m)	EM-34 20 METER (mmhos/m)	MAGNETOMETER (gammas)
S3+25E1+25			49437
S3+25E1+50			ND
S3+50E0+00	-2.5	18	52149.4
S3+50E0+25			50276
S3+50E0+50	53	80	50089
S3+50E0+75			50683
S3+50E1+00	120	>300	39263
S3+50E1+25			48320
S3+50E1+50	-50	-4	ND
S3+75E0+00			52141.5
S3+75E0+25			50213
S3+75E0+50			50135
S3+75E0+75			49879
S3+75E1+00			49876
S3+75E1+25			47827
S3+75E1+50			ND
S4+00E0+00	10.4	30	52144.8
S4+00E0+25			50137
S4+00E0+50	8	22	49992
S4+00E0+75			49892
S4+00E1+00	7	20	49278
S4+00E1+25			52122
S4+00E1+50	32	17	ND
S4+25E0+00			32144.6
S4+25E0+25			49825
S4+25E0+50			49762
S4+25E0+75			49840
S4+25E1+00			49443
S4+25E1+25			49299
S4+25E1+50			ND
S4+50E0+00	5	18	52145.0
S4+50E0+25			47950
S4+50E0+50	5.5	10	48919
S4+50E0+75			52079
S4+50E1+00	6.9	-6	49783
S4+50E1+25			ND
S4+50E1+50	11	15	ND
S4+75E0+00			52146.5
S4+75E0+25			52146.5
S4+75E0+50			50255
S4+75E0+75			50305
S4+75E1+00			49638
S4+75E1+25			SD
S4+75E1+50			ND
S5+00E0+00	-8.8	-9.5	52145.7
S5+00E0+25			52115
S5+00E0+50	-35	-7	47488
S5+00E0+75			49282

SITE 26

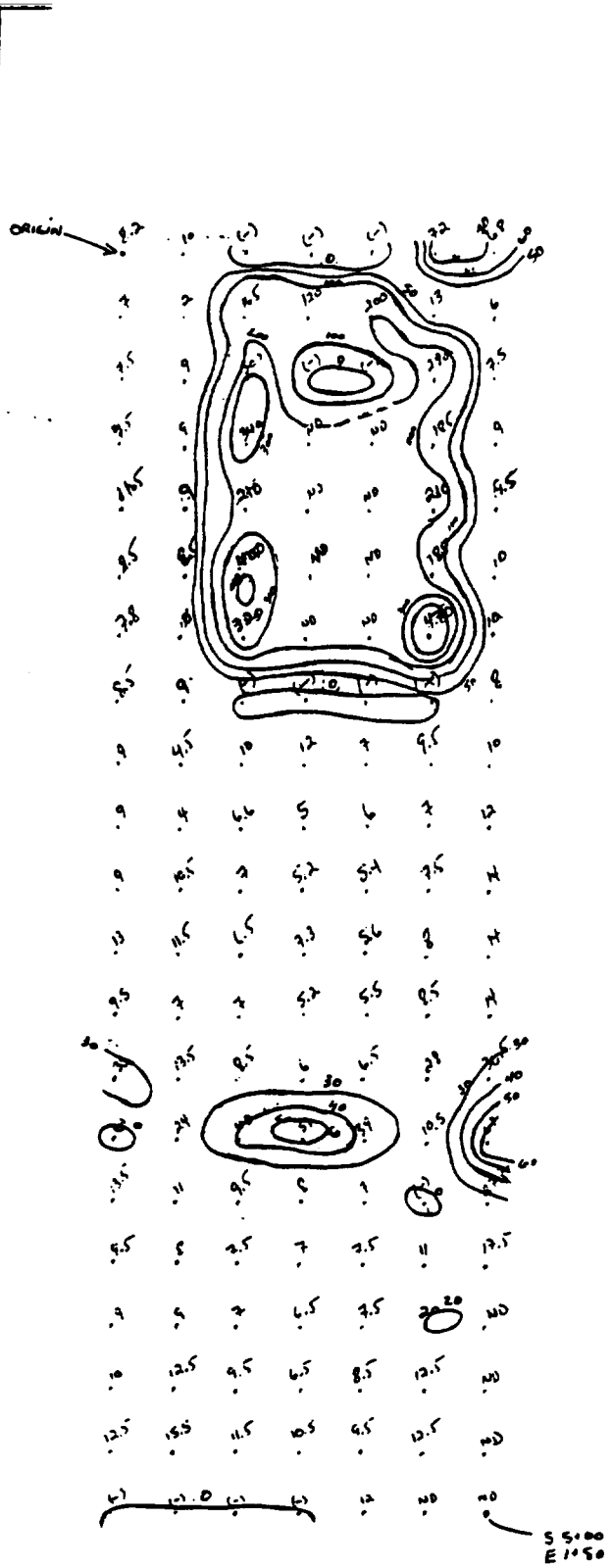
GRID COORDINATES	EM-34 10 METER (mmhos/m)	EM-34 20 METER (mmhos/m)	MAGNETOMETER (gammas)
S5+00E1+00	9.2	11	52161
S5+00E1+25			ND
S5+00E1+50	10.2	23	ND

2000548

EM-31 DATA DEEP (VERTICAL DIPOLE)

SITE 26 - NAS PENSACOLA

mmhos/m



EM-31 DATA SHALLOW (HORIZONTAL DIPOLE)

SITE 26 - NAS PENSACOLA

mmhos/m

APPENDIX D

En-31 SURVEY DATA

SITE 26

GRID COORDINATES	EM-31 SHALLOW (mmhos/m)	EM-31 DEEP (mmhos/m)	EM-31 SHALLOW 90 (mmhos/m)	EM-31 DEEP 90 (mmhos/m)
S0+00E0+00	8.2	2.5		
S0+00E0+25	10	13.5		
S0+00E0+50	NR	110	NR	75
S0+00E0+75	NR	460	NR	350
S0+00E1+00	NR	250	230	120
S0+00E1+25	72	250	180	125
S0+00E1+50	68	7.2	38	13.5
S0+25E0+00	7	NR		
S0+25E0+25	2	4		
S0+25E0+50	165	130	NR	330
S0+25E0+75	120	80	NR	130
S0+25E1+00	200	19.5	15	21
S0+25E1+25	13	14		
S0+25E1+50	6	14	18	NR
S0+50E0+00	7.5	NR		
S0+50E0+25	9	13		
S0+50E0+50	300	240	NR	290
S0+50E0+75	NR	230	300	220
S0+50E1+00	NR	240	185	130
S0+50E1+25	290	42	NR	29
S0+50E1+50	7.5	9.5	8	10
S0+75E0+00	7.5	NR		
S0+75E0+25	9	13		
S0+75E0+50	340	260	SR	280
S0+75E0+75	ND	ND		
S0+75E1+00	ND	ND		
S0+75E1+25	185	160	NR	100
S0+75E1+50	9	9.5	9.5	10.5
S1+00E0+00	11.5	NR		
S1+00E0+25	9	13		
S1+00E0+50	210	275	NR	245
S1+00E0+75	SD	ND		
S1+00E1+00	ND	ND		
S1+00E1+25	210	180	NR	135
S1+00E1+50	9.5	10.5	14	11.0
S1+25E0+00	8.5	2		
S1+25E0+25	8.5	13		
S1+25E0+50	400	275	NR	250
S1+25E0+75	SD	ND		
S1+25E1+00	SD	ND		
S1+25E1+25	185	180	NR	130
S1+25E1+50	10	11	14	11.5
S1+50E0+00	7.8	6		
S1+50E0+25	0	12		
S1+50E0+50	320	250	0	115
S1+50E0+75	ND	ND		
S1+50E1+00	ND	ND		
S1+50E1+25	470	185	NR	175

SITE 26

GRID COORDINATES	EM-31 SHALLOW (mmhos/m)	EM-31 DEEP (mmhos/m)	EM-31 SHALLOW 90 (mmhos/m)	EM-31 DEEP 90 (mmhos/m)
S1+50E1+50	10	12	11	11
S1+75E0+00	8.5	11		
S1+75E0+25	9	11.5		
S1+75E0+50	NR	57	180	105
S1+75E0+75	NR	160	220	205
S1+75E1+00	NR	200	175	125
S1+75E1+25	NR	25	NR	21.5
S1+75E1+50	8	9		
S2+00E0+00	9	17.5		
S2+00E0+25	4.5	NR		
S2+00E0+50	10	11		
S2+00E0+75	12	3.3		
S2+00E1+00	7	7.5		
S2+00E1+25	9.5	9		
S2+00E1+50	10	20		
S2+25E0+00	9	16		
S2+25E0+25	4	6.5		
S2+25E0+50	6.6	6.8		
S2+25E0+75	5	6.5		
S2+25E1+00	6	6.3		
S2+25E1+25	7	8		
S2+25E1+50	12	18		
S2+50E0+00	9	15		
S2+50E0+25	10.5	4.3		
S2+50E0+50	7	8		
S2+50E0+75	5.2	6.5		
S2+50E1+00	5.4	6.4		
S2+50E1+25	7.5	9		
S2+50E1+50	14	25		
S2+75E0+00	13	17		
S2+75E0+25	11.5	9		
S2+75E0+50	6.5	8		
S2+75E0+75	7.3	3.9		
S2+75E1+00	5.6	7.0		
S2+75E1+25	8	9.0		
S2+75E1+50	14	22		
S3+00E0+00	9.5	23		
S3+00E0+25	7	12.5		
S3+00E0+50	7	9.5		
S3+00E0+75	5.2	7.2		
S3+00E1+00	5.5	7.8		
S3+00E1+25	8.5	12		
S3+00E1+50	14	52	30	62
S3+25E0+00	35	32		
S3+25E0+25	13.5	19.5		
S3+25E0+50	8.5	15		
S3+25E0+75	6	8.5		
S3+25E1+00	6.5	9		

recycled paper

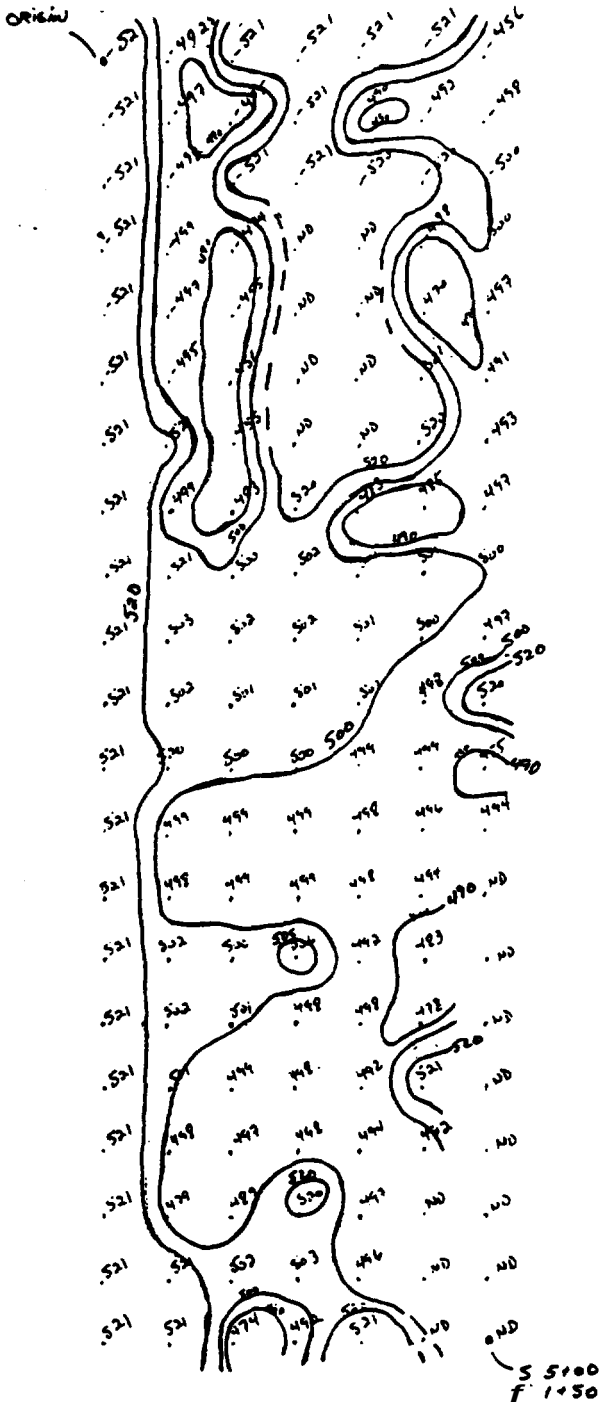
SITE 26

GRID COORDINATES	EM-31 SHALLOW (mmhos/m)	EM-31 DEEP (mmhos/m)	EM-31 SHALLOW 90 (mmhos/m)	EM-31 DEEP 90 (mmhos/m)
S3+25E1+25	28	30	15	25
S3+25E1+50	36.5	34		
S3+50E0+00	NR	41		
S3+50E0+25	24	34		
S3+50E0+50	40	23.5	9.5	12
S3+50E0+75	51	9	10	NR
S3+50E1+00	39	19.3	5.5	6.5
S3+50E1+25	10.5	31		
S3+50E1+SO	67	45	78	52
S3+75E0+00	13.5	23.5		
S3+75E0+25	11	12		
S3+75E0+50	9.5	11		
S3+75E0+75	8	11.5		
S3+75E1+00	7	11		
S3+75E1+25	NR	NR	NR	105
S3+75E1+50	27.5	26.5		
S4+00E0+00	9.5	21		
S4+00E0+25	8	11.5	8	11.5
S4+00E0+50	7.5	9.5		
S4+00E0+75	7	8.5		
S4+00E1+00	7.5	9.5		
S4+00E1+25	11	14.5		
S4+00E1+50	17.5	20		
S4+25E0+00	9	20		
S4+25E0+25	9	11		
S4+25E0+50	7	8		
S4+25E0+75	G.5	8		
S4+25E1+00	7.5	12		
S4+25E1+25	20	30	18	27
S4+25E1+50	SD	ND		
S4+50E0+00	10	22.5		
S4+50E0+25	12.5	11.5		
S4+50E0+50	9.5	8.5		
S4+50E0+75	6.5	7.5		
S4+50E1+00	8.5	13.5		
S4+50E1+25	12.5	12.5		
S4+50E1+50	ND	SD		
S4+75E0+00	12.5	24.5		
S4+75E0+25	15.5	11.5		
S4+75E0+50	11.5	9.5		
S4+75E0+75	10.5	7		
S4+75E1+00	9.5	13		
S4+75E1+25	12.5	13.5		
S4+75E1+50	ND	SD		
S5+00E0+00	NR	38.5	23	31
S5+00E0+25	NR	33	45	19.5
S5+00E0+50	NR	29	38	13.5
S5+00E0+75	NR	38	41.5	14

SITE 26

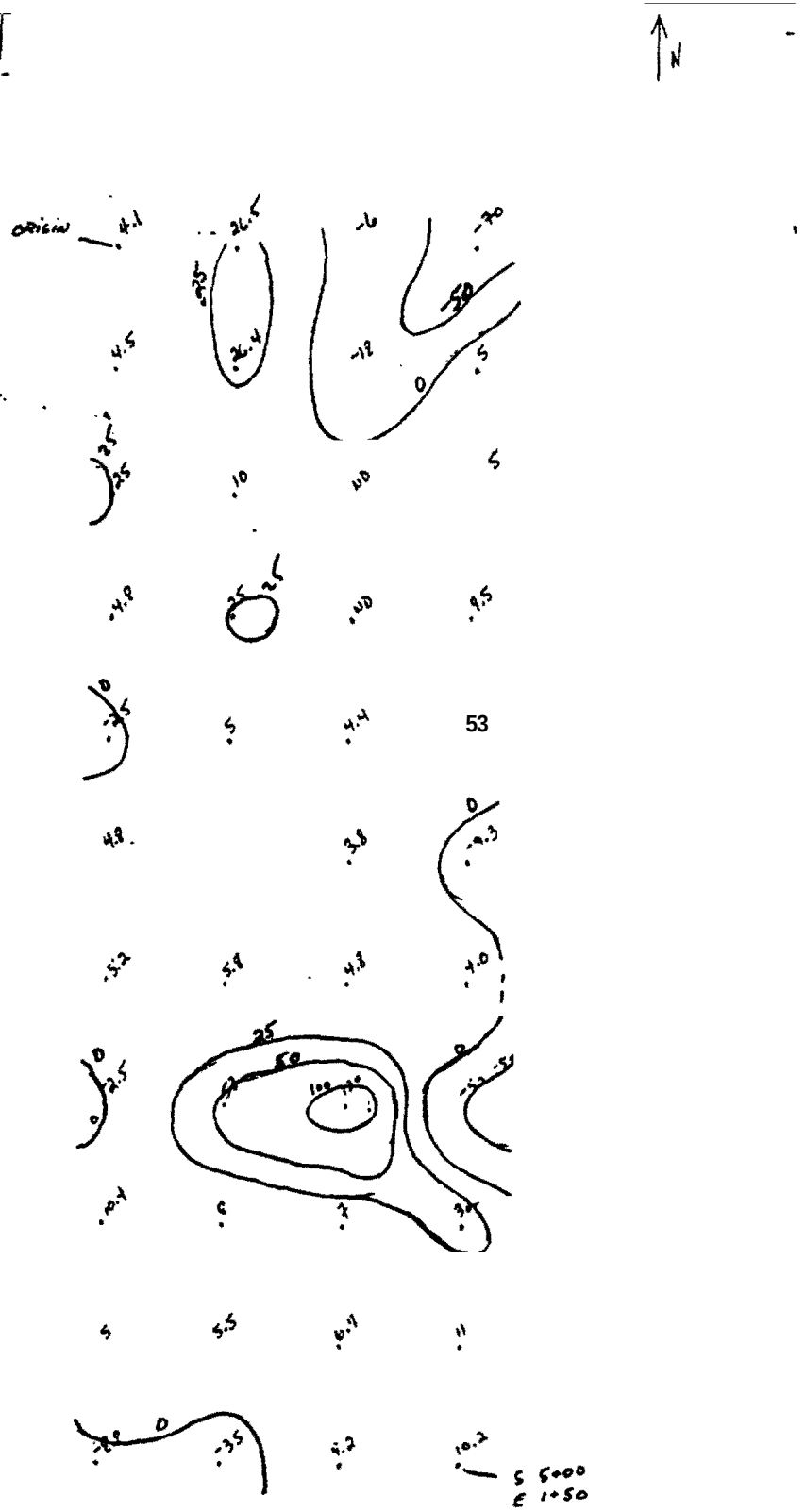
GRID COORDINATES	EM-31 SHALLOW (mmhos/m)	EM-31 DEEP (mmhos/m)	E!!-31 SHALLOW 90 (mmhos/m)	EM-31 DEEP 90 (mmhos/m)
S5+00E1+00	12	44	20	31
S5+00E1+25	ND	ND		
S5+00E1+50	ND	ND		

2000553



MAGNETOMETER DATA
NAS PENSACOLA - SITE 26 11/24/60

GAMMAS(γ) X 100



SITE 26 NAS PENSACOLA
EM-34 DATA
10 meter spacing (Horizontal Dipole)
mmhos/m

SITE 26 NAS PENSACOLA
EM-34 DATA
20 meter spacing Horizontal Dipole
mmhos/m

APPENDIX B

TEMPORARY MONITORING WELL, SOIL BORING, AND LITHOLOGIC INFORMATION

SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

1) Site no.: 26
2) Boring no./Well no. : P26B001
3) Drilling firm: Griner Drilling Service
4) Drilling method: SSA
5) Date drilled/installed: 01/06/91
6) Geologist: J. Fugitt
7) Depth of boring (BLS): 20.0
8) Depth to water in borehole (BLS): 18.5
9) Highest open-borehole OVA/HnU reading (ppm): 1
10) Depth of well (BLS): NA
11) Length of well screen: NA
12) Length of casing (BLS): NA
13) Aprox. height of casing above land surface: NA
14) Depth to water in well (BTOC): NA
15) Elevation of TOC: NA
16) Water level elevation: NA
17) Date groundwater sampled: / /
18) pH (units): NA
19) Temperature (degrees C): NA
20) Specific conductance (umhos/cm): NA
21) Borehole/Well abandonment method: Backfilled with cuttings.
22) Comments:

BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0-5	Silty sand, brown, to sand, light tan.
5-10	Silty sand, tan to brown, medium grained.
10-15	Sand, very light, medium grained.
15-20	Sand, very light , medium grained. Water at 18.5 ft.

Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) vas used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable
SSA = solid stem auger
HA = hand auger

BLS = below land surface
TOC = top of casing
BTOC = below top of casing

SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

1) Site no.: 26
2) Boring no./Well no.: P26B002/P26TW002
3) Drilling firm: Griner Drilling Service
4) Drilling method: HA
5) Date drilled/installed: 01/06/91
6) Geologist: J. Fugitt
7) Depth of boring (BLS): 23.0
8) Depth to water in borehole (BLS): 18.5
9) Highest open-borehole OVA/HnU reading (ppm): 3
10) Depth of well (BLS): 19.4
11) Length of well screen: 5
12) Length of casing (BLS): 12.37
13) Aprox. height of casing above land surface: 5.63
14) Depth to water in well (BTOC): 21.29
15) Elevation of TOC: 23.70
16) Water level elevation: 2.41
17) Date groundwater sampled: 01/09/91
18) pH (units): 6.23
19) Temperature (degrees C): 22.6
20) Specific conductance (umhos/cm): 325
21) Borehole/Well abandonment method: Backfilled vitb cuttings.
22) Comments: No sheen on water samples.

BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0-5	Sand, light brown, silty and light tan at 3.5 ft., some asphalt pebbles and concrete.
5-10	Sand, white, fine to medium grained vith a dark brown silty sand layer.
10-15	Sand, light tan, fins to medium grained, slightly silty.
15-20	Sand. light tan, fine to medium grained with a layer of dark brown silty sand.

Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable
SSA = solid stem auger
EA = hand auger

BLS = below land surface
TOC = top of casing
BTOC = below top of casing

2000558

SOIL BORING/TEMPORARY HONITORING WELL INFORMATION

1) Site no.: 26
2) Boring no./Well no.: P26B003/P26TW003
3) Drilling firm: Griner Drilling Service
4) Drilling method: SSA
5) Date drilled/installed: 01/06/91
6) Geologist: J. Fugitt
7) Depth of boring (BLS): 20.0
8) Depth to water in borehole (BLS): 16.0
9) Highest open-borehole OVA/HnU reading (ppm): 2
10) Depth of well (BLS): 18.4
11) Length of well screen: 5
12) Length of casing (BLS): 13.43
13) Aprox. height of casing above land surface: 1.57
14) Depth to water in well (BTOC): 17.37
15) Elevation of TOC: 19.91
16) Water level elevation: 2.54
17) Date groundvater sampled: 01/09/91
18) pH (units): 6.28
19) Temperature (degrees C): 22.8
20) Specific conductance (umhos/cm): 360
21) Borehole/Well abandonment method: Backfilled with cuttings.
22) Comments:

BOREHOLE LITEOLOGIC LOG

Sample Depth (BLS)	Sample Description
0-5	Slightly silty sand, light orange, medium grained.
5-10	Sand, light orange to dark brown, becomes medium grained and slightly silty at 7.5 ft.
10-15	Sand, very light, fine to medium grained.
15-20	Sand, light colored, medium grained, becomes saturated at 16 ft. Water at 16 ft., chemical odor noted.

Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) vas used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable
SSA = solid stem auger
HA = hand auger

BLS = belov land surface
TOC = top of casing
BTOC = belov top of casing

SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

1) Site no.: 26
2) Boring no./Well no.: P26B004/P26TW004
3) Drilling firm: Griner Drilling Service
4) Drilling method: SSA
5) Date drilled/installed: 01/06/91
6) Geologist: J. Fugitt
7) Depth of boring (BLS): 20.0
8) Depth to vater in borehole (BLS): 20.0
9) Highest open-borehole OVA/HnU reading (ppm): 1
10) Depth of vell (BLS): 20.9
11) Length of vell screen: 5
12) Length of casing (BLS): 15.87
13) Aprox. height of casing above land surface: 4.21
14) Depth to vater in vell (BTOC): 20.98
15) Elevation of TOC: 23.33
16) Vater level elevation: 2.35
17) Date groundvater sampled: 01/09/91
18) pH (units): 6.86
19) Temperature (degrees C): 23.2
20) Specific conductance (umhos/cm): 392
21) Borehole/Well abandonment method: Backfilled vith cuttings.
22) Comments:

BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0-5	Slightly silty sand, light orange-brovn, fine to medium grained.
5-10	Sand, light brovn, fine to medium grained.
10-15	Sand, light tan to vhite.
15-20	Sand, clean vhite, fine to medium grained, vater encountered just above 20 ft.

Notes: All depths, lengths, heights, urd elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; vell screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal of grout) vu used in vell installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable
SSA = solid stem auger
EA = hand auger

BLS = below land surface
TOC = top of cuing
BTOC = below top of casing

2000559

SOIL BORING/TEMPORARY HONITORING WELL INFORMATION

1) Site no.: 26
2) Boring no./Well no.: P26B005
3) Drilling firm: Griner Drilling Service
4) Drilling method: HA
5) Date drilled/installed: 01/05/91
6) Geologist: A. Twitty
7) Depth of boring (BLS): 18.0
8) Depth to water in borehole (BLS): 17.0
9) Highest open-borehole OVA/HnU reading (ppm): 0
10) Depth of well (BLS): NA
11) Length of well screen: NA
12) Length of casing (BLS): NA
13) Aprox. height of casing above land surface: NA
14) Depth to water in well (BTOC): NA
15) Elevation of TOC: NA
16) Water level elevation: NA
17) Date groundwater sampled: / /
18) pH (units): NA
19) Temperature (degrees C): NA
20) Specific conductance (umhos/cm): NA
21) Borehole/Well abandonment method: Backfilled with cuttings.
22) Comments:

BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0-0.8	Grass. leaves.
0.8-1.5	Sand, moderate yellow brown, fine to medium grained.
1.5-5	Sand, light yellow brown, fine to medium grained.
5-7	Sand, dark yellow brown, fine to medium grained.
7-7.5	Sand, light brown, fine to medium grained.
7.5–10	Sand, light tan, fine to medium grained.
10–18	Sand,, white, fine to medium grained, water at 17 ft.

Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable
SSA = solid stem auger
EA = hand auger

BLS = below land surface
TOC = top of casing
BTOC = below top of casing

APPENDIX F

SOIL SAMPLING
ANALYTICAL SCREENING RBSULTS

M E M O R A N D U M

TO: John Barksdale

FROM: Gary Hahn G. Hahn/lik

DATE: January 17, 1991

SUBJECT: UH-6000 Pensacola Report

REF: 9100.029

CC: Lab File

Attached is the laboratory report of the analysis conducted on twenty-one samples received at the Analytical Services Center on January 8, 1991. Analysis vas performed according to the screening procedures set forth in "Generic Ouality Assurance Project Plan, Contamination Assessments and Remedial Activities, Naval Air Station Pensacola, Pensacola, Florida," July 1990.

All samples on vhich this report is based will be retained by E & E for a period of 30 days from the date of this report, unless otherwise instructed by the client. If additional storage of samples is requested by the client, a storage fee of $1.00 per sample container per month will be charged for each sample, vith such charges accruing until destruction of the samples is authorized by the client.

GH: tms
enclosure

ecology and environment, inc.

300 PLEASANTVIEW DRIVE, LANCASTER, NEW YORK 14086, TEL. 716/684 8060
International Specialists in the Environment

CHAIN-OF-CUSTODY RECORD

Project No.: UH6020

Project Name: NASP PHASE I GP. A-E

Project Manager: J. BARKSDALE

Samplers: (Signatures) J. Fugitt / Arnold C. Rank / Daniel Cassalia

Field Team Leader: J. FUGITT

STATION NUMBER	DATE 1991	TIME	SAMPLE TYPE COMP	GRAB	AIR	SAMPLE INFORMATION E PECTE ⊢——⊣ (Concentration)*	STATION LOCATION	NUMBER OF CONTAINERS	SUBSURFACE PAINS	SUBSURFACE ORGANICS	SUBSURFACE PESTICIDES	SUBSURFACE TOTAL PCBS	SUBSURFACE METALS	VOLS	SUBSURFACE VOLS	REMARKS
P26 S004B	1-6	1350	X			LOW LEVEL	SITE 26, BORING 4	3	X	X	X	X	X	X	X	
P26 S004C	1-6	1358					SITE 26, BORING 4									
P26 S004D	1-6	1400					SITE 26, BORING 4									
P26 S005A	1-5	1455					SITE 26, BORING 5									
P26 S005B	1-5	1508					SITE 26, BORING 5									
P26 S005C	1-5	1520					SITE 26, BORING 5									
P26 S005D	1-5	1530					SITE 26, BORING 5									

Relinquished By (Signature)	Date/Time	Received By (Signature)	Relinquished By (Signature)	Date/Time	Received By (Signature)
[signature]	1-7-91 1805	Fed Ex			
Relinquished By (Signature)	Date/Time	Received By (Signature)	Relinquished By (Signature)	Date/Time	Received By (Signature)
Relinquished By (Signature)	Date/Time	Received For Laboratory By (Signature)	Relinquished By (Signature)	Date/Time	Received For Laboratory By (Signature)
Fed Ex	1-8-91 12:30	[signature]			

Ship Via: FEDERAL EXPRESS

BL/Airbill Number: 7501718033

Date: 1-7-91

D n Original Accompanies Shipment; Copy to Coordinator Field Files

*CENTRATION RANGE on back of form

234055

JOB NUMBER : 9100.029

Ecology and Environment, Inc.
SAHPLE TRACKING REPORT

LAB SAHPLE ID	CLIENT SAHPLE ID	TEST CODE	DATE SAHPLED	DATE EXTRACTED	DATE ANALYZED
144.01	P26-S001A	SPNPRGl	01/06/91		01/08/91
144.02	P26-S001A	SPNTPH1	01/06/91		01/09/91
144.03	P26-S001A	SPNMET1	01/06/91		01/09/91
		SPNP&P1	01/06/91		01/09/91
		SPNPAHl	01/06/91		01/15/91
		SPNPHLl	01/06/91		01/15/91
145.01	P26-S001A DUP	SPNPRG1	01/06/91		01/08/91
145.02	P26-S001A DUP	SPNTPH1	01/06/91		01/09/91
145.03	P26-S001A DUP	SPNMETl	01/06/91		01/09/91
		SPNP&P1	01/06/91		91/09/91
		SPNPAHl	01/06/91		01/15/91
		SPNPHL1	01/06/91		01/15/91
146.01	P26-S001B	SPNPRGl	01/06/91		01/08/91
146.02	P26-S001B	SPNTPHl	01/06/91		01/09/91
146.03	P26-S001B	SPNHET1	01/06/91		01/09/91
		SPNP&P1	01/06/91		01/09/91
		SPNPAHl	01/06/91		01/15/91
		SPNPHLl	01/06/91		01/15/91
147.01	P26-S001C	SPNPRGl	01/06/91		01/08/91
147.02	P26-S001C	SPNTPHl	01/06/91		01/99/91
147.03	P26-S001C	SPNMETl	01/06/91		01/09/91
		SPNP&P1	01/06/91		01/09/91
		SPNPAHl	01/06/91		01/15/91
		SPNPHLl	01/06/01		01/15/91
148.01	P26-S001D	SPNPRG1	01/06/91		01/08/91
148.02	P26-S001D	SPNTPHl	01/06/91		01/09/91
148.03	P26-S001D	SPNMETl	01/06/01		01/09/91
		SPNP&P1	01/06/91		01/09/91
		SPNPAHl	01/06/91		01/15/91
		SPNPHLl	01/06/91		01/15/91
149.01	P26-S002A	SPNPRGl	01/06/91		01/08/91
149.02	P26-S002A	SPNTPHl	01/06/91		01/09/91
149.03	P26-S002A	SPNHETl	01/06/91		01/09/91
		SPNP&P1	01/06/91		01/09/91
		SPNPAHl	01/06/91		01/15/91
		SPNPHLl	01/06/91		01/15/91
150.01	P26-S002B	SPNPRGl	01/06/91		01/08/91
150.02	P26-S002B	SPNTPHl	01/06/91		01/09/91
150.03	P26-S002B	SPNHETl	01/06/91		01/09/91
		SPNP&P1	01/06/91		01/09/91
		SPNPAHl	01/06/91		01/15/91
		SPNPHLl	01/06/91		01/15/91
151.01	P26-S002C	SPNPRG1	01/06/91		01/08/91
151.02	P26-S002C	SPNTPHl	01/06/91		01/09/91
151.03	P26-S002C	SPNHETl	01/06/91		01/09/91
		SPNP&P1	01/06/91		01/09/91
		SPNPAHl	01/06/91		01/15/91

JOB NUMBER : 9100.029

Ecology and Environment, Inc.
SAMPLE TRACKING REPORT

LAB SAUPLE ID	CLIENT SAMPLE ID	TEST CODE	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED
151.03	P26-S002C	SPNPHL1	01/06/91		01/15/91
152.01	P26-S002D	SPNPRG1	01/06/91		01/08/91
152.02	P26-S002D	SPNTPH1	01/06/91		01/09/91
152.03	P26-S002D	SPNMET1	01/06/91		01/99/91
		SPNPLPI	01/06/91		01/09/91
		SPNPAH1	01/06/91		01/15/91
		SPNPHL1	01/06/91		01/15/91
153.01	P26-S003A	SPNPRG1	01/06/91		01/08/91
153.02	P26-S003A	SPNTPH1	01/06/91		01/09/91
153.03	P26-S003A	SPNMET1	01/06/91		01/09/91
		SPNPLPI	01/06/91		01/09/91
		SPNPAH1	01/06/91		01/15/91
		SPNPELI	01/06/91		01/15/91
154.01	P26-S003B	SPNPRGI	01/06/91		01/08/91
154.02	P26-S003B	SPNTPH1	01/06/91		01/09/91
154.03	P26-S003B	SPNMET1	01/06/91		01/09/91
		SPNPLP1	01/06/91		01/09/91
		SPNPAH1	01/06/91		01/15/91
		SPNPHL1	01/06/91		01/15/91
155.01	P26-S003C	SPNPRG1	01/06/91		01/08/91
155.02	P26-S003C	SPNTPH1	01/06/91		01/09/91
155.03	P26-S003C	SPNMET1	01/06/91		01/09/91
		SPNP&P1	01/06/91		01/09/91
		SPNPAH1	01/06/91		01/15/91
		SPNPHL1	01/06/91		01/15/91
156.01	P26-S003D	SPNPRG1	01/06/91		01/08/91
156.02	P26-S003D	SPNTPH1	01/06/91		01/09/91
156.03	P26-S003D	SPNMET1	01/06/91		01/99/91
		SPNP&P1	01/06/91		01/09/91
		SPNPAH1	01/06/91		01/15/91
		SPNPHL1	01/06/91		01/15/91
157.01	P26-S004A	SPNPRGI	01/06/91		01/08/91
157.02	P26-S004A	SPNTPH1	01/06/91		01/09/91
157.03	P26-S004A	SPNMET1	01/06/91		01/09/91
		SPNPLPI	01/06/91		01/09/91
		SPNPAH1	01/06/91		01/15/91
		SPNPELI	01/06/91		01/15/91
158.01	P26-S004B	SPNPRG1	01/06/91		01/08/91
158.02	P26-S004B	SPNTPH1	01/06/91		01/09/91
158.03	P26-S004B	SPNMET1	01/06/91		01/09/91
		SPNPLPI	01/06/91		01/09/91
		SPNPAH1	01/06/91		01/15/91
		SPNPHL1	01/06/91		01/15/91
159.01	P26-S004C	SPNPRG1	01/06/91		01/08/91
159.02	P26-S004C	SPNTPH1	01/06/91		01/09/91
159.03	P26-S004C	SPNMET1	01/06/91		01/09/91
		SPNPLPl	01/06/91		01/09/91

2000563

JOB NUMBER : 9100.029

Ecology and Environment, Inc.
SAMPLE TRACKING REPORT

LAB SAHPLE ID	CLIENT SAMPLE ID	TEST CODE	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED
159.03	P26-S004C	SPNPAHl	01/06/91		01/15/91
		SPNPHLl	01/06/91		01/15/91
160.01	P26-S004D	SPNPRGl	01/06/91		01/08/91
160.02	P26-S004D	SPNTPHl	01/06/91		01/09/91
160.03	P26-S004D	SPNHETl	01/06/91		01/09/91
		SPNP&P1	01/06/91		01/09/91
		SPNPAHl	01/06/91		01/15/91
		SPNPHLl	01/06/91		01/15/91
161.01	P26-S005A	SPNPRGl	01/05/91		01/08/91
161.02	P26-S005A	SPNTPHl	01/05/91		01/09/91
161.03	P26-S005A	SPNHETl	01/05/91		01/09/91
		SPNP&P1	01/05/91		01/09/91
		SPNPAHl	01/05/91		01/15/91
		SPNPHLl	01/05/91		01/15/91
162.01	P26-S005B	SPNPRG1	01/05/91		01/08/91
162.02	P26-S005B	SPNTPHl	01/05/91		01/09/91
162.03	P26-S005B	SPNHETl	01/05/91		01/09/91
		SPNP&P1	01/05/91		01/09/91
		SPNPAHl	01/05/91		01/15/91
		SPNPHLl	01/05/91		01/15/91
163.01	P26-S005C	SPNPRGl	01/05/91		01/08/91
163.02	P26-S005C	SPNTPHl	01/05/91		01/09/91
163.03	P26-S005C	SPNMET1	01/05/91		01/09/91
		SPNP&P1	01/05/91		01/09/91
		SPNPAHl	01/05/91		01/15/91
		SPNPHLl	01/05/91		01/15/91
164.01	P26-S005D	SPNPRGl	01/05/91		01/08/91
164.02	P26-S005D	SPNTPHl	01/05/91		01/09/91
164.03	P26-S005D	SPNHETl	01/05/91		01/09/91
		SPNP&P1	01/05/91		01/09/91
		SPNPAHl	01/05/91		01/15/91
		SPNPHLl	01/05/91		01/15/91

METALS SECTION JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
SAUPLE ID LAB : EE-91-00144 MATRIX: SOLID
SAHPLE ID CLIENT: P26-S001A

PARAMETER	RESULTS	Q	DET. LIMIT	UNITS
Arsenic	ND		6.9	MG/KG
Chromium	1.6		1.0	MG/KG
Zinc	17		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	0.51		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000564

METALS SECTION JOB NUHBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT . : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
SAMPLE ID LAB : EE-91-00145 HATRIX: SOLID
SAMPLE ID CLIENT: P26-S001A DUP

PARAMETER	RESULTS	Q	DET. LIMIT	UNITS
Arsenic	ND		6.9	MG/KG
Chromium	1.3		1.0	MG/KG
Zinc	16		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	3.4		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COHHENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

METALS SECTION JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PRASE I GROUPS A-E
RESULTS IN WET WEIGHT
SAMPLE ID LAB : EE-91-00146 MATRIX: SOLID
SAHPLE ID CLIENT: P26-S001B

PARAMETER	RESULTS	Q	DET. LIMIT	UNITS
Arsenic	ND		6.9	MG/KG
Chromium	1.7		1.0	MG/KG
Zinc	2.4		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2C00565

METALS SECTION JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN VET VEIGHT
SAMPLE ID LAB : EE-91-00147 MATRIX: SOLID
SAMPLE ID CLIENT: P26-S001C

PARAMETER	RESULTS	Q	DET. LIMIT	UNITS
Arsenic	ND		6.9	MG/KG
Chromium	1.0		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

METALS SECTION JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
SAUPLE ID LAB : EE-91-00148 MATRIX: SOLID
SAMPLE ID CLIENT: P26-S001D

PARAMETER	RESULTS	Q	DET. LIMIT	UNITS
Arsenic	ND		6.9	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000566

METALS SECTION JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UA-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
SAMPLE ID LAB : EE-91-00149 MATRIX: SOLID
SAMPLE ID CLIENT: P26-S002A

PARAMETER	RESULTS	Q	DET. LIHIT	UNITS
Arsenic	ND		6.9	MG/KG
Chromium	3.7		1.0	MG/KG
Zinc	9.5		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	2.6		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

METALS SECTION JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
SAMPLE ID LAB : EE-91-00150 MATRIX: SOLID
SAHPLE ID CLIENT: P26-S002B

PARAMETER	RESULTS	Q	DET. LIMIT	UNITS
Arsenic	ND		6.9	MG/KG
Chromium	1.2		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000567

HETALS SECTION JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT . : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN VET VEIGHT
SAMPLE ID LAB : EE-91-00151 MATRIX: SOLID
SAMPLE ID CLIENT: P26-S002C

PARAMETER	RESULTS	Q	DET. LIMIT	UNITS
Arsenic	ND		6.9	MG/KG
Chromium	1.2		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

HETALS SECTION JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PEASE I GROUPS A-E
RESULTS IN WET WEIGHT
SAMPLE ID LAB : EE-91-00152 MATRIX: SOLID
SAMPLE ID CLIENT: P26-S002D

PARAMETER	RESULTS	Q	DET. LIMIT	UNITS
Arsenic	ND		6.9	MG/KG
Chromium	2.0		1.0	MG/KG
Zinc	2.5		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000568

METALS SECTION JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN VET WEIGHT
SAHPLE ID LAB : EE-91-00153 MATRIX: SOLID
SAMPLE ID CLIENT: P26-S003A

PARAMETER	RESULTS	Q	DET. LIMIT	UNITS
Arsenic	ND		6.9	MG/KG
Chromium	2.4		1.0	MG/KG
Zinc	4.4		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	1.4		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

METALS SECTION JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
SAMPLE ID LAB : EE-91-00154 MATRIX: SOLID
SAMPLE ID CLIENT: P26-S003B

PARAMETER	RESULTS	Q	DET. LIHIT	UNITS
Arsenic	ND		6.9	MG/KG
Chromium	1.3		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadsium	ND		0.SO	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2600569

METALS SECTION JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
SAMPLE ID LAB : EE-91-00155 MATRIX: SOLID
SAMPLE ID CLIENT: P26-S003C

PARAMETER	RESULTS	Q	DET. LIMIT	UNITS
Arsenic	ND		6.9	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	ND		2.0	HG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

METALS SECTION JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PEASE I GROUPS A-E
RESULTS IN WET WEIGHT
SAMPLE ID LAB : EE-91-00156 HATRIX: SOLID
SAMPLE ID CLIENT: P26-S003D

PARAMETER	RESULTS	Q	DET. LIMIT	UNITS
Arsenic	ND		6.9	MG/KG
Chroaium	ND		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.S	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2600570

APPENDIX G

TEMPORARY MONITORING WELL GROUNDWATER SAMPLING ANALYTICAL SCREENING RESULTS

M E M O R A N D U M

TO: John Barksdale

FROM: Gary Hahn

DATE: February 1, 1991

SUBJECT: UH-6000 Pensacola Report

REF: 9100.057

CC: Lab File

Attached is the laboratory report of the analysis conducted on four samples received at the Analytical Services Center on January 10, 1991. Analysis was performed according to the screening procedures set forth in "Generic Quality Assurance Project Plan, Contamination Assessments and Remedial Activities, Naval Air Station Pensacola, Pensacola, Florida," July 1990.

All samples on which this report is based will be retained by E 6 E for a period of 30 days from the date of this report, unless otherwise instructed by the client. If additional storage of samples is requested by the client, a storage fee of $1.00 per sample container per month will be charged for each sample, with such charges accruing until destruction of the samples is authorized by the client.

GH: tms
enclosure

Sample Range - 111 x 111
Job# 9100.057

Analyze all parameters according to the site specific QAPP (See Barb Krajewski)

ecology and environment, inc.
368 PLEASANTVIEW DRIVE, LANCASTER, NEW YORK 14086, TEL. 716/684-8060
International Specialists in the Environment

CHAIN-OF-CUSTODY RECORD

26 0619

Project No.: UH6050
Project Name: NASP Phase I A-E
Project Manager: John Barksdale
Samplers: (Signature) Keith Delhanne Gerald Walker
Field Team Leader: Gerald Walker

	STATION NUMBER	DATE	TIME	SAMPLE TYPE: COMP	SAMPLE TYPE: GRAB	SAMPLE TYPE: AIR	SAMPLE INFORMATION / EXPECTED COMPOUNDS (Concentration)*	STATION LOCATION	NUMBER OF CONTAINERS	Scheduling VOCs	Scheduling PAHs	Scheduling Phenols	Scheduling Pesticides+PCBs	Scheduling Metals	TRPHs (HIRI)	REMARKS
P26	GW002	1-9	1401		X		Low level	Site 26, Temp Well 002	5	X	X	X	X	X	X	VOCs: Lot # B251043
P26	GW002-D	1-9	1401		X		" "	Site 26, Temp Well 002-D	5	X	X	X	X	X	X	QC # B886C
P26	GW003	1-9	1442		X		" "	Site 26, Temp Well 003	5	X	X	X	X	X	X	½ gal ambers: Lot # X0218013
P26	GW004	1-9	1005		X		" "	Site 26, Temp Well 004	5	X	X	X	X	X	X	QC # X0711C
																1 L ambers: Lot # 9223013
																QC # 3282C
																1 L polys: Lot # 0304013
																QC # 0889C
																① VOCs preserved w/ HCL
																② TRPHs preserved w/ H_2SO_4
																③ Metals preserved w/ HNO_3

Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Ship Via:
		Fed Ex	Fed Ex	11:00 1-11-91		Federal Express
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	BL/Airbill Number: 9548745533
Relinquished By: (Signature) Keith Delhanne	Date/Time: 1/9/91	Received For Laboratory By: (Signature) Beverly Jensen	Relinquished By: (Signature)	Date/Time:	Received For Laboratory By: (Signature)	Date: 1/9/91

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

*See CONCENTRATION RANGE on back of form.

234055

JOB NUMBER : 9100.057

Ecology and Environment, Inc.
SAMPLE TRACKING REPORT

LAB SAMPLE ID	CLIENT SAMPLE ID	TEST CODE	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED
491.01	P26-GW002	WPNPRG1	01/09/91		01/14/91
491.03	P26-GW002	WPNP&P1	01/09/91		01/11/91
		WPNPAH1	01/09/91		01/24/91
		WPNPHL1	01/09/91		01/24/91
491.04	P26-GW002	WPNTPH1	01/09/91		01/11/91
491.05	P26-GW002	WPNMET1	01/09/91		01/11/91
492.01	P26-GW002-D	WPNPRG1	01/09/91		01/14/91
492.03	P26-GW002-D	WPNP&P1	01/09/91		01/11/91
		WPNPAH1	01/09/91		01/24/91
		WPNPHL1	01/09/91		01/24/91
492.04	P26-GW002-D	WPNTPH1	01/09/91		01/11/91
492.05	P26-GW002-D	WPNMET1	01/09/91		01/11/91
493.01	P26-GW003	WPNPRG1	01/09/91		01/14/91
493.03	P26-GW003	WPNP&P1	01/09/91		01/11/91
		WPNPAH1	01/09/91		01/24/91
		WPNPHL1	01/09/91		01/24/91
493.04	P26-GW003	WPNTPH1	01/09/91		01/11/91
493.05	P26-GW003	WPNMET1	01/09/91		01/11/91
494.01	P26-GW004	WPNPRG1	01/09/91		01/14/91
494.03	P26-GW004	WPNP&P1	01/09/91		01/11/91
		WPNPAH1	01/09/91		01/24/91
		WPNPHL1	01/09/91		01/24/91
494.04	P26-GW004	WPNTPH1	01/09/91		01/11/91
494.05	P26-GW004	WPNMET1	01/09/91		01/11/91

JOB NUMBER :9100.057

Ecology and Environment, Ine.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I CROUPS A-B
SAMPLE ID LAB :EE-91-00491 MATRIX: WATER
SAMPLE ID CLIENT: P26-GW002

PARAMETER	RESULTS	Q	DET. LIMIT	UNITS
Arsenic	590		69	UG/L
Chromium	260		10	UG/L
Zinc	31		20	UG/L
Lead	ND		40	UG/L
Cadmium	6.2		5.0	UG/L
Nickel	57		40	UG/L
Copper	ND		25	UG/L
Silver	ND		10	UG/L

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000620

JOB NUMBER :9100.057

Ecology urd Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
SAMPLE ID LAB :EE-91-00492 MATRIX: WATER
SAMPLE ID CLIENT: P26-GW002-D

PARAMETER	RESULTS	Q	DET. LIMIT	UNITS
Arsenic	500		69	UG/L
Chromium	190		10	UG/L
Zinc	30		20	UG/L
Lard	ND		40	UG/L
Cadmium	ND		5.0	UG/L
Nickel	42		40	UG/L
Copper	ND		25	UG/L
Silver	ND		10	UG/L

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATBD DETECTION LIMIT

JOB NUMBER :9100.057

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
SAMPLE ID LAB :EE-91-00493 MATRIX: WATER
SAMPLE ID CLIENT: P26-GW003

PARAMETER	RESULTS	Q	DET. LIMIT	UNITS
Arsenic	ND		69	UG/L
Chromium	130		10	UG/L
Zinc	900		20	UG/L
Lead	ND		40	UG/L
Cadmium	31		5.0	UG/L
Nickel	37		40	UG/L
Copper	31		25	UG/L
Silver	ND		10	UG/L

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000621

JOB NUMBER :9100.057

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PEASE I GROUPS A-E
SAHPLE ID LAB :EE-91-00494 MATRIX: WATER
SAHPLE ID CLIENT: P26-GW004

PARAMETER	RESULTS	Q	DET. LIMIT	UNITS
Arsenic	ND		69	UG/L
Chromium	53		10	UG/L
Zinc	61		20	UG/L
Lead	ND		40	UG/L
Cadmium	9.0		5.0	UG/L
Nickel	ND		40	UG/L
Copper	ND		25	UG/L
Silver	ND		10	UG/L

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

JOB NUMBER :9100.057

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
SAMPLE ID LAB :METHOD BLANK MATRIX: WATER

PARAMETER	RESULTS	Q	DET. LIMIT	UNITS
Arsenic	ND		69	UG/L
Chromium	ND		10	UG/L
Zinc	ND		20	UG/L
Lead	ND		40	UG/L
Cadmium	ND		5.0	UG/L
Nickel	ND		40	UG/L
Copper	ND		25	UG/L
Silver	ND		10	UG/L

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000622

TEST CODE :WPNTPH1 JOB NUMBER :9100.057

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PEASE I GROUPS A-E
TEST NAME : PNC TRPE UNITS : MG/L
PARAMETER : TRPH

SAMPLE ID	RESULTS	Q	DET. LIMIT
BE-91-00491			
P26-GW002	ND		1.0
EE-91-00492			
P26-GW002-D	ND		1.0
EE-91-00493			
P26-GW003	ND		1.0
EE-91-00494			
P26-GW004	ND		1.0

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT
NA = NOT APPLICABLE

TEST CODE :WPNTPH1 JOB NUMBER :9100.057

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PEASE I GROUPS A-E
TEST NAME : PNC TRPE UNITS : MG/L
PARAMETER : TRPE

SAMPLE ID	RESULTS	Q	DET. LIMIT
METHOD BLANK	ND		1.0

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT
NA = NOT APPLICABLE

2010623

TEST CODE :WPNPRG1 JOB NUMBER :9100.057

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
TEST NAME : PNC PURGABLES- GC UNITS : UG/L
SAMPLE ID LAB : EE-91-00491 MATRIX: VATER
SAMPLE ID CLIENT: P26-GW002

PARAMETER	RESULTS	Q	DET. LIMIT
Benzene	ND		lo
Toluene	ND		10
Ethylbenzene	ND		10
Total Xylenes	ND		10
1,2 - Dichlorobenzene	ND		10
1,3 - Dichlorobenzene	ND		10
1,4 - Dichlorobenzene	ND		10
1,1 - Dichloroethene	ND		10
Methylene Chloride	ND		10
Trans - 1,2 - Dichloroethene	ND		10
1,1 - Dichloroethane	ND		10
1,1,1 - Trichloroethane	ND		10
1,2 - Dichloroethane	ND		10
Trichloroethene	ND		10
Tetrachloroethene	ND		10

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPRG1 JOB NUMBER :9100.057

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
TEST NAME : PNC PURGABLES- GC UNITS : UG/L
SAMPLE ID LAB : EE-91-00492 MATRIX: WATER
SAMPLE ID CLIENT: P26-GW002-D

PARAMETER	RESULTS	Q	DET. LIMIT
Benzene	ND		10
Toluene	ND		10
Ethylbenzene	ND		10
Total Xylenes	ND		10
1,2 - Dichlorobenzene	ND		10
1,3 - Dichlorobenzene	ND		10
1,4 - Dichlorobenzene	ND		10
1,1 - Dichloroethene	ND		10
Methylene Chloride	ND		10
Trans - 1,2 - Dichloroethene	ND		10
1,1 - Dichloroethane	ND		10
1,1,1 - Trichloroethane	ND		10
1,2 - Dichloroethane	ND		10
Trichloroethene	ND		10
Tetrachloroethene	ND		10

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000624

TEST CODE :WPNPRG1 JOB NUMBER :9100.057

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
TEST NAME : PNC PURGABLES- GC UNITS : UG/L
SAMPLE ID LAB : EE-91-00493 MATRIX: WATER
SAMPLE ID CLIENT: P26-GW003

PARAMETER	RESULTS	Q	DET. LIHIT
Benzene	ND		lo
Toluene	ND		10
Ethylbenzene	ND		10
Total Xylenes	ND		10
1,2 - Dichlorobenzene	ND		10
1,3 - Dichlorobenzene	ND		10
1,4 - Dichlorobenzene	ND		10
1,1 - Dichloroethene	ND		10
Methylene Chloride	ND		10
Trans - 1,2 - Dichloroethene	ND		10
1,1 - Dichloroethane	ND		10
1,1,1 - Trichloroethane	25		10
1,2 - Dichloroethane	ND		10
Trichloroethene	ND		10
Tetrachloroethene	ND		10

OUALIPIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPRG1 JOB NUMBER :9100.057

Ecology urd Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-B
TEST NAME : PNC PURGABLES- GC UNITS : UG/L
SAMPLE ID LAB : EE-91-00494 MATRIX: WATER
SAMPLE ID CLIENT: P26-GW004

PARAMETER	RESULTS	Q	DET. LIMIT
Benzene	ND		10
Toluene	ND		10
Bthylbenzene	ND		10
Total Xylenes	ND		10
1,2 - Dichlorobenzene	ND		10
1,3 - Dichlorobenzene	ND		10
1,4 - Dichlorobenzene	ND		10
1,1 - Dichloroethene	ND		10
Methylene Chloride	ND		10
Trans - 1,2 - Dichloroethene	ND		10
1,1 - Dichloroethane	ND		10
1,1,1 - Trichloroethane	ND		10
1,2 - Dichloroethane	ND		10
Trichloroethene	ND		10
Tetrachloroethene	ND		10

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000625

TEST CODE :WPNPRG1 JOB NUMBER :9100.057

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PEASE I GROUPS A-E
TEST NAME : PNC PURGABLES- GC UNITS : UG/L
SAMPLE ID LAB : METHOD BLANK MATRIX: WATER

PARAMETER	RESULTS	Q	DET. LIMIT
Benzene	ND		10
Toluene	ND		10
Ethylbenzene	ND		10
Total Xylenes	ND		10
1,2 - Dichlorobenzene	ND		10
1,3 - Dichlorobenzene	ND		10
1,4 - Dichlorobenzene	ND		10
1,1 - Dichloroethene	ND		10
Methylene Chloride	ND		10
Trans - 1,2 - Dichloroethene	ND		10
1,1 - Dichloroethane	ND		10
1,1,1 - Trichloroethane	ND		10
1,2 - Dichloroethane	ND		10
Trichloroethene	ND		10
Tetrachloroethane	ND		10

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPAH1 JOB NUMBER :9100.057

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
TEST NAME : PNC PAH - LC UNITS : UG/L
SAMPLE ID LAB : BE-9140491 MATRIX: WATER
SAMPLE ID CLIENT: P26-GW002

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Benzo-a-pyrene	ND		100

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2003628

TEST CODE :WPNPAH1 JOB NUMBER :9100.057

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
TEST NAME : PNC PAH - LC UNITS : UG/L
SAMPLE ID LAB : EE-91-00492 MATRIX: WATER
SAMPLE ID CLIENT: P26-GW002-D

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Benzo-a-pyrene	ND		100

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPAH1 JOB NUMBER :9100.057

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PEASE I GROUPS A-B
TEST NAME : PNC PAH - LC UNITS : UG/L
SAMPLE ID LAB : EE-91-00493 MATRIX: WATER
SAMPLE ID CLIENT: P26-GW003

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Benzo-a-pyrene	ND		100

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000627

TEST CODE :WPNPAH1 JOB NUMBER :9100.057

Ecology and Environment, Inc.
Analytical Services Center

CLIENT UH-6000 NASP PHASE I *GROUPS* A-E
TEST NAME : PNC PAH - LC UNITS : UG/L
SAMPLE ID LAB : *EE-91-00494* MATRIX: WATER
SAMPLE ID CLIENT: P26-GW004

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Benzo-a-pyrene	ND		100

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY FOR SPIKED WATER SAMPLES

9100.057

(ug)

Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
Benzo(A)pyrene	494	ND	50	40	80
	BLANK	ND	50	38	75

2000628

TEST CODE :WPNPHL1 JOB NUMBER :9100.057

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PEASE I GROUPS A-E
TEST NAME : PNC PHENOL - LC UNITS : UG/L
SAMPLE ID LAB : EE-91-00491 MATRIX: WATER
SAMPLE ID CLIENT: P26-GW002

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Trichlorophenol	ND	-	100

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODB :WPNPHL1 JOB NUMBER :9100.057

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PEASE I GROUPS A-B
TEST NAME : PNC PHENOL - LC UNITS : UG/L
SAMPLE ID LAB : EE-91-00492 MATRIX: WATER
SAMPLE ID CLIENT: P26-GW002-D

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Trichlorophenol	ND		100

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2600629

TEST CODE :WPNPHL1 JOB NUMBER :9100.057

Ecology and Bnvironment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
TEST NAME : PNC PHENOL - LC UNITS : UG/L
SAMPLE ID LAB : EE-91-00493 MATRIX: VATER
SAMPLE ID CLIENT: P26-GW003

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Trichlorophenol	ND		100

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATBD DETECTION LIMIT

TEST CODE :WPNPHL1 JOB NUMBER :9100.057

Bcology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
TEST NAME : PNC PHENOL - LC UNITS : UG/L
SAMPLE ID LAB : EE-91-00494 MATRIX: WATER
SAMPLE ID CLIENT: P26-GW004

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Trichlorophenol	ND		100

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2600030

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY
FOR SPIKED WATER SAMPLES

9100.057

(ug)

Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
Trichlorophcnol	BLANK 1	ND	50	39	78
	BLANK 2	ND	50	44	88
	BLANK 3	ND	50	24	49

TEST CODE :WPNP&P1 JOB NUMBER 89100.057

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
TEST NAME : PNC PEST./PCB UNITS : UG/L
SAMPLE ID LAB : BE-91-00491 MATRIX: WATER
SAMPLE ID CLIENT: P26-GW002

PARAMETER	RESULTS	Q	DET. LIMIT
Heptachlor	ND		5.0
Lindane	ND		5.0
Aldrin	ND		5.0
4,4 - DDT	ND		5.0
Dieldrin / 4,4 - DDE	ND		5.0
Endrin	ND		5.0
Chlordane	ND		5.0
Total PCBS	ND		10

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2600631

TEST CODE :WPNP&P1 JOB NUMBER :9100.057

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
TEST NAME : PNC PEST./PCB UNITS : UG/L
SAMPLE ID LAB : EE-91-00492 MATRIX: VATER
SAUPLE ID CLIENT: P26-GW002-D

PARAMETER	RESULTS	Q	DET. LIHIT
Heptachlor	ND		5.0
Lindane	ND		5.0
Aldrin	ND		5.0
4p4 - DDT	ND		5.0
Dieldrin / 4,4 - DDE	ND		5.0
Endrin	ND		5.0
Chlordane	ND		5.0
Total PCBS	ND		10

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNP&P1 JOB NUMBER :9100.057

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
TEST NAME : PNC PEST./PCB UNITS : UG/L
SAMPLE ID LAB : 591-00493 MATRIX: WATER
SAMPLE ID CLIENT: P26-GW003

PARAMETER	RESULTS	Q	DET. LIMIT
Heptachlor	ND		5.0
Lindane	ND		5.0
Aldrin	ND		5.0
4,4 - DDT	ND		5.0
Dieldrin / 4,4 - DDE	ND		5.0
Endrin	ND		5.0
Chlordane	ND		5.0
Total PCBS	ND		10

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000632

TEST CODE :WPNP&P1 JOB NUMBER :9100.057

Ecology and Environment, Inc.
Analytical Services Canter

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
TEST NAME : PNC PEST./PCB UNITS : UG/L
SAMPLE ID LAB : EE-91-00494 MATRIX: WATER
SAMPLE ID CLIENT: P26-GW004

PARAMETER	RESULTS	Q	DET. LIMIT
Heptachlor	ND		5.0
Lindane	ND		5.0
Aldrin	ND		5.0
4,4 - DDT	ND		5.0
Dieldrin / 4,4 - DDE	ND		5.0
Endrin	ND		5.0
Chlordane	ND		5.0
Total PCBS	ND		10

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

QUALITY CONTROL FOR ACCURACY AND PRECISION:
PERCENT RECOVERY AND RELATIVE PERCENT DIFFERENCE (RPD)
OF WATER MATRIX SPIKE (MS) FOR PENSACOLA SCREENING
(Sample # 00492)

9100.057

(ug/L)

Compound	Original Result	Amount Added MS	Amount Determined MS	Percent Recovery MS
Lindane	ND	2.0	2.4	120
Heptachlor	ND	2.0	2.1	105
Aldrin	ND	2.0	2.1	105
Dieldrin	ND	5.0	5.8	116
Endrin	ND	5.0	5.0	100
4,4'-DDT	ND	5.0	4.7	94

2000633

TEST CODE :WPNP&P1 JOB NUMBER :9100.057

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PEASE I GROUPS A-E
TEST NAME : PNC PEST./PCB UNITS : UG/L
SAMPLE ID LAB : METHOD BLANK MATRIX: VATER

PARAMETER	RESULTS	Q	DET. LIHIT
Haptachlor	ND		5.0
Lindane	ND		5.0
Aldrin	ND		5.0
4,4 - DDT	ND		5.0
Dieldrin / 4,4 - DDE	ND		5.0
Endrin	ND		5.0
Chlordane	ND		5.0
Total PCBS	ND		10

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BBLOV STATED DETECTION LIHIT

TEST CODE :SPNPRG1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAME : PNC PURGABLES- GC UNITS : UG/KG
SAMPLE ID LAB : EE-91-00149 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S002A

PARAMETER	RESULTS	Q	DET. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	2600	B	1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I CROUPS A-E
RESULTS IN VET WEIGHT
TEST NAME : PNC PURGABLES- GC UNITS : UG/KG
SAMPLE ID LAB : EE-91-00150 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S002B

PARAMETER	RESULTS	Q	DET. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	1200	B	1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichlorocthanc	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichlorocthene	ND		1000
Tetrachloroethene	ND		1000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000635

TEST CODE :SPNPRG1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAME : PNC PURGABLES- GC UNITS : UG/KG
SAMPLE ID LAB : EE-91-00147 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S001C

PARAMETER	RESULTS	Q	DET. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	1800	B	1000
Trans-1,2, - Dichloroethene	ND		1000
1.1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PEASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAME : PNC PURGABLES- CC UNITS : UG/KG
SAMPLE ID LAB : EE-91-00148 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S001D

PARAMETER	RESULTS	Q	DET. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	2500	B	1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethanc	ND		1000
1,2 - Dichlorocthanc	ND		1000
Trichloroethene	ND		1000
Tetrachloroethane	ND		1000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000636

TEST CODE :SPNPRG1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I CROUPS A-E
RESULTS IN WET VEIGHT
TEST NAME : PNC PURGABLES- GC UNITS : UG/KG
SAMPLE ID LAB : EE-91-00145 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S001A DUP

PARAMETER	RESULTS	Q	DET. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichlorocthene	ND		1000
Tetrachloroethene	ND		1000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAME : PNC PURGABLES- GC UNITS : UG/KG
SAHPLE ID LAB : EE-91-00146 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S001B

PARAMETER	RESULTS	Q	DET. LIMIT
Benzene	ND		1000
Tolucne	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichlorocthcne	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichlorocthanc	ND		1000
1,2 - Dichlorocthanc	ND		1000
Trichloroethenc	ND		1000
Tetrachlorocthcnc	ND		1000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000037

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY
FOR SPIKED SOIL SAHPLES

9100.029

(mg/kg)

Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
T.Petroleum Hydrocarbons	00144	ND	850	800	94

TEST CODE :SPNPRG1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PEASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAME : PNC PURGABLES- GC UNITS : UG/KG
SAHPLE ID LAB : EE-91-00144 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S001A

PARAMETER	RESULTS	Q	DET. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dlchlorocthcnc	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethanr	ND		1000
1,1,1 - Trichlorosthane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000

QUALIFIERS: C = COMMENT IUD = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000858

TEST CODE : SPNTPH1 JOB NUMBER : 9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
TEST NAME : PNC TRPH UNITS : MG/KG
PARAMETER : TRPH

SAMPLE ID	RESULTS	Q	DET. LIMIT
EE-91-00157 P26-S004A	220		5.0
EE-91-00158 P26-S004B	11		5.0
EE-91-00159 P26-S004C	16		5.0
EE-91-00160 P26-S004D	12		5.0
EE-91-00161 P26-S005A	13		5.0
EE-91-00162 P26-S005B	17		5.0
EE-91-00163 P26-S005C	9.2		5.0
EE-91-00164 P26-S005D	12		5.0

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT
NA = NOT APPLICABLE

QUALITY CONTROL FOR PRECISION
'RESULTS OF ANALYSIS OF REPLICATE
ANALYSES OF SOIL SAMPLES

9100.029

(mg/kg)

Parameter	E & E Laboratory No. 91-	Original Analysis	Replicate Analysis	Relative Percent Difference (RPD)
T. Petroleum Hydrocarbons	00149	ND	ND	--
	00159	16	26	48

2600659

METALS SECTION JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
SAMPLE ID LAB : METHOD BLANK MATRIX: SOLID

PARAMETER	RESULTS	a	DET. LIMIT	UNITS
Arsenic	NO		6.9	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE: B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNTPH1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PRASE I GROUPS A-E
TEST NAME : PNC TRPH UNITS : MG/KG
PARAMETER : TRPH

SAMPLE ID	RESULTS	Q	DET. LIMIT
EE-91-00144 P26-S001A	ND		5.0
EE-91-00145 P26-S001A DUP	ND		5.0
EE-91-00146 P26-S001B	20		5.0
EE-91-00147 P26-S001C	54		5.0
EE-91-00148 P26-S001D	18		5.0
EE-91-00149 P26-S002A	ND		5.0
EE-91-00150 P26-S002B	ND		5.0
EE-91-00151 P26-S002C	22		5.0
EE-91-00152 P26-S002D	21		5.0
EE-91-00153 P26-S003A	ND		5.0
EE-91-00154 P26-S003B	8.4		5.0
EE-91-00155 P26-S003C	6.9		5.0
EE-91-00156 P26-S003D	18		5.0

2000040

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT
NA = NOT APPLICABLE

QUALITY CONTROL FOR PRECISION
RESULTS OF ANALYSIS OF REPLICATE
ANALYSES OF SOIL SAMPLES

9100.029

(mg/kg)

Parameter	E & E Laboratory No. 91-00164	Original Analysis	Replicate Analysis	Relative Percent Difference (RPD)
Arsenic		ND	ND	--
Chromium		1.2	ND	--
Zinc		ND	ND	--
Lead		ND	ND	--
Cadmium		ND	ND	--
Nickel		ND	ND	--
Copper		ND	ND	--
Silver		ND	ND	--

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY
FOR SPIKED SOIL SAMPLES

9100.029

(mg/kg)

Parameter	E & E Laboratory No. 91-00164	Original Value	Amount Added	Aaount Determined	Percent Recovery
Arsenic		ND	200	220	110
Chronium		1.2	20	23	109
Zinc		ND	50	56	112
Lead		ND	50	53	106
Cadmium		ND	5.0	6.0	120
Nickel		ND	50	56	112
Copper		ND	25	26	104
Silver		ND	5.0	5.0	100

2000641

Ecology and Environment, Inc.
Analytical Services Center

CLIENT **UH-6000** NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
SAMPLE ID LAB : **EE-91-00163** MATRIX: SOLID
SAMPLE ID CLIENT: P26-S005C

PARAMETER	RESULTS	Q	DET. LIMIT	UNITS
Arsenic	ND		6.9	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	2.2		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

METALS SECTION JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROWS A-E
RESULTS IN WET WEIGHT
SAMPLE ID LAB : EE-91-00164 MATRIX: SOLID
SAMPLE ID CLIENT: P26-S005D

PARAMETER	RESULTS	Q	DET. LIMIT	UNITS
Arsenic	ND		6.9	MG/KG
Chromium	1.2		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000642

METALS SECTION JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UMI-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
SAMPLE ID LAB : EE-91-00161 MATRIX: SOLID
SAMPLE ID CLIENT: P26-S005A

PARAMETER	RESULTS	Q	DET. LIMIT	UNITS
Arsenic	ND		6.9	MG/KG
Chromium	1.1		1.0	MG/KG
Zinc	2.7		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

METALS SECTION JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLTENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
SAMPLE ID LAB : EE-91-00162 MATRIX: SOLID
SAMPLE ID CLIENT: P26-S005B

PARAMETER	RESULTS	Q	DET. LIHIT	UNITS
Arsenic	ND		6.9	MG/KG
Chromium	18		1.0	MG/KG
Zinc	2.7		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	7.3		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000043

METALS SECTION JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
SAMPLE ID LAB : EE-91-00159 MATRIX: SOLID
SAMPLE ID CLIENT: P26-S004C

PARAMETER	RESULTS	Q	DET. LIMIT	UNITS
Arsenic	ND		6.9	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

a.

METALS SECTION JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
SAMPLE ID LAB : EE-91-00160 MATRIX: SOLID
SAMPLE ID CLIENT: P26-S004D

PARAMETER	RESULTS	Q	DET. LIMIT	UNITS
Arsenic	ND		6.9	MG/KG
Chromium	1.0		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000644

METALS SECTION JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
SAMPLE ID LAB : EE-91-00157 MATRIX: SOLID
SAMPLE ID CLIENT: P26-S004A

PARAMETER	RESULTS	Q	DET. LIMIT	UNITS
Arsenic	ND		6.9	MG/KG
Chromium	1.4		1.0	MG/KG
Zinc	2.0		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

METALS SECTION JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UR-6000 NASP PBASE I GROUPS A-E
RESULTS IN WET WEIGHT
SAMPLE ID LAB : EE-91-00158 MATRIX: SOLID
SAMPLE ID CLIENT: P26-S004B

PARAMETER	RESULTS	Q	DET. LIMIT	UNITS
Arsenic	ND		6.9	MG/KG
Chromium	1.7		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOU STATED DETECTION LIHIT

2000645

TEST CODE :SPNPAH1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAME : PNC PAH - LC UNITS : UG/KG
SAMPLE ID LAB : EE-91-00155 HATRIX : SOLID
SAMPLE ID CLIENT: P26-S003C

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Benzo-a-pyrene	ND		1000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAME : PNC PAR - LC UNITS : UG/KG
SAMPLE ID LAB : EE-91-00156 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S003D

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Benzo-a-pyrene	ND		1000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000646

TEST CODE :SPNPAH1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAME : PNC PAA - LC UNITS : UG/KG
SAMPLE ID LAB : EE-91-00157 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S004A

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Benzo-a-pyrene	ND		1000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAME : PNC PAH - LC UNITS : UG/KG
SAHPLE ID LAB : EE-91-00158 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S004B

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Benzo-a-pyrene	ND		1000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000047

TEST CODE : SPNPAH1 JOB NUMBER : 9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAME : PNC PAH - LC UNITS : UG/KG
SAMPLE ID LAB : EE-91-00159 MATRIX : SOLID
SAHPLE ID CLIENT: P26-S004C

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Benzo-a-pyrene	ND		1000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PEASE I CROUPS A-E
RESULTS IN VET WEIGHT
TEST NAME : PNC PAH - LC UNITS : UG/KG
SAMPLE ID LAB : EE-91-00160 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S004D

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Benzo-a-pyrene	ND		1000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000648

TEST CODE :SPNPAH1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET VEIGHT
TEST NAME : PNC PAH - LC UNITS : UG/KG
SAMPLE ID LAB : €E-91-00161 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S005A

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Benzo-a-pyrene	ND		1000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLTENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN VET WEIGHT
TEST NAME : PNC PAH - LC UNITS : UG/KG
SAMPLE ID LAB : EE-91-00162 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S005B

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Benzo-a-pyrene	ND		1000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000649

TEST CODE : SPNPAH1 JOB NUMBER : 9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAME : PNC PAH - LC UNITS : UG/KG
SAMPLE ID LAB : EE-91-00163 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S005C

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Benzo-a-pyrene	ND		1000

QUALIFIERS: C = COHHENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PEASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAME : PNC PAR - LC UNITS : UG/KG
SAHPLE ID LAB : EE-91-00164 MATRIX : SOLID
SAHPLE ID CLIENT: P26-S005D

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Benzo-a-pyrene	ND		1000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2660650

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY
FOR SPIKED SOIL SAMPLES

9100.029

(ug)

Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
Benzo(a)pyrene					
	154.03	ND	50	49	98
	164.03	ND	50	32	64

TEST CODE :SPNPHL1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PEASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAME : PNC PHENOL - LC UNITS : UG/KG
SAHPLE ID LAB : EE-91-00144 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S001A

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Trichlorophenol	ND		2000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000051

TEST CODE :SPNPHL1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN VET WEIGHT
TEST NAME : PNC PHENOL - LC UNITS : UG/KG
SAHPLE ID LAB : EE-91-00145 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S001A DUP

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Trichlorophenol	ND		2000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIHIT

TEST CODE :SPNPHL1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PRASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAME : PNC PHENOL - LC UNITS : UG/KG
SAMPLE ID LAB : EE-91-00146 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S001B

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Trichlorophenol	ND		2000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000652

TEST CODE :SPNPHL1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : OH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAME : PNC PHENOL - LC UNITS : UG/KG
SAMPLE ID LAB : EE-91-00147 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S001C

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Trichlorophenol	ND		2000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE : SPNPHL1 JOB NUMBER : 9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PEASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAHE : PNC PHENOL - LC UNITS : UG/KG
SAMPLE ID LAB : EE-91-00148 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S001D

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Trichlorophenol	ND	-	2000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000053

TEST CODE :SPNPHL1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN VET VEIGHT
TEST NAME : PNC PHENOL - LC UNITS : UG/KG
SAMPLE ID LAB : EE-91-00149 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S002A

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Trichlorophenol	ND		2000

QUALIFIERS: C = COHHENT ND = NOT DETECTED
J = ESTIHATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE : SPNPHL1 JOB NUMBER : 9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PEASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAME : PNC PHENOL - LC UNITS : UG/KG
SAMPLE ID LAB : EE-91-00150 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S002B

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Trichlorophenol	ND		2000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000654

TEST CODE :SPNPHL1 JOB NUHBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAME : PNC PHENOL - LC UNITS : UG/KG
SAMPLE ID LAB : EE-91-00151 MATRIX : SOLID
SAMPLE ID CLIENT: P26-SOO2C

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Trichlorophenol	ND		2000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PEASE I GROUPS A-E
RESULTS IN VET WEIGHT
TEST NAME : PNC PHENOL - LC UNITS : UG/KG
SAMPLE ID LAB : EE-91-00152 MATRIX : SOLID
SAHPLE ID CLIENT: P26-S002D

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Trichlorophenol	ND		2000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000055

TEST CODE :SPNPHL1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET VEIGHT
TEST NAME : PNC PHENOL - LC UNITS : UG/KG
SAMPLE ID LAB : EE-91-00153 MATRIX : SOLID
SAHPLE ID CLIENT: P26-S003A

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Trichlorophenol	ND		2000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PRASE I GROUPS A-E
RESULTS IN VET WEIGHT
TEST NAME : PNC PHENOL - LC UNITS : UG/KG
SAMPLE ID LAB : EE-91-00154 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S003B

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Trichlorophenol	ND		2000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000656

TEST CODE :SPNPHL1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UB-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAME : PNC PHENOL - LC UNITS : UG/KG
SAHPLE ID LAB : EE-91-00155 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S003C

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Trichlorophenol	ND		2000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAME : PNC PHENOL - LC UNITS : UG/KG
SAMPLE ID LAB : EE-91-00156 MATRIX : SOLID
SAHPLE ID CLIENT: P26-S003D

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Trichlorophenol	ND		2000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION

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TEST CODE :SPNPHL1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAHE : PNC PHENOL - LC UNITS : UG/KG
SAMPLE ID LAB : &E-91-00157 MATRIX : SOLID
SAHPLE ID CLIENT: P26-S004A

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Trichlorophenol	ND		2000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIHATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOV STATED DETECTION LIHIT

TEST CODE :SPNPHL1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN VET VEIGRT
TEST NAME : PNC PHENOL - LC UNITS : UG/KG
SAHPLE ID LAB : €E-91-00198 MATRIX : SOLID
SAHPLE ID CLIENT: P26-S004B

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Trichlorophenol	ND		2000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000058

TEST CODE : SPNPHL1 JOB NUMBER : 9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAME : PNC PHENOL - LC UNITS : UG/KG
SAMPLE ID LAB : EE-91-00159 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S004C

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Trichlorophenol	ND		2000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1 JOB NUMBER :9100.029

Ecology and Environrent, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN VET WEIGHT
TEST NAME : PNC PHENOL - LC UNITS : UG/KG
SAMPLE ID LAB : EE-91-00160 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S004D

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Trichlorophenol	ND		2000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000059

TEST CODE : SPNPHL1 JOB NUMBER : 9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAME : PNC PHENOL - LC UNITS : UG/KG
SAMPLE ID LAB : €E-91-00161 MATRIX : **SOLID**
SAMPLE ID CLIENT: P26-S005A

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Trichlorophenol	ND		2000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN **BLANK**
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PEASE I GROUPS A-E
RESULTS IN VET WEIGHT
TEST NAUE : PNC PHENOL - LC UNITS : UG/KG
SAMPLE ID LAB : EE-91-00162 UATRIX : SOLID
SAMPLE ID CLIENT: P26-S005B

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Trichlorophenol	ND		2000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000000

TEST CODE : SPNPHL1 JOB NUMBER : 9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT . : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN VET WEIGHT
TEST NAME : PNC PHENOL - LC UNITS : UG/KG
SAHPLE ID LAB : EE-91-00163 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S005C

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Trichlorophenol	ND		2000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAME : PNC PHENOL - LC UNITS : UG/KG
SAMPLE ID LAB : EE-91-00164 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S005D

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Trichlorophenol	ND		2000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2080661

TEST CODE : SPNPHL1 JOB NUMBER : 9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET VEIGHT
TEST NAME : PNC PHENOL - LC UNITS : UG/KG
SAMPLE ID LAB : HETHOD BLANK HATRIX : SOLID

PARAMETER	RESULTS	Q	DET. LIMIT
Total as Trichlorophenol	ND		2000

QUALIFIERS: C = COHHENT ND = NOT DETECTED
J = ESTIHATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIHIT

TEST CODE : SPNP&P1 JOB NUMBER : 9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS Iff WET WEIGHT
TEST NAME : PNC PEST./PCB UNITS : UG/KG
SAMPLE ID LAB : EE-91-00144 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S001A

PARAMETER	RESULTS	Q	DET. LIMIT
Aeptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin / 4,4 - DDE	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
Total PCBS	ND		5000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000082

TEST CODE :SPNP&P1 JOB NUHBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAME : PNC PEST./PCB UNITS : UG/KG
SAHPLE ID LAB : EE-91-00145 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S001A DUP

PARAMETER	RESULTS	Q	DET. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	IUD		1000
Dieldrin / 4,4 - DDE	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
Total PCBS	ND		5000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLTENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAHE : PNC PEST./PCB UNITS : UG/KG
SAMPLE ID LAB : €E-91-00146 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S001B

PARAMETER	RESULTS	Q	DET. LIMIT
Eeptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin / 4,4 - DDE	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
Total PCBS	ND		5000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000063

TEST CODE :SPNP&P1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAME : PNC PEST./PCB UNITS : UG/KG
SAMPLE ID LAB : EE-91-00147 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S001C

PARAMETER	RESULTS	Q	DET. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin / 4,4 - DDE	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
Total PCBS	ND		5000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIHATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE : SPNP&P1 JOB NUMBER : 9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN VET WEIGHT
TEST NAME : PNC PEST./PCB UNITS : UG/KG
SAMPLE ID LAB : EE-91-00148 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S001D

PARAMETER	RESULTS	Q	DET. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin / 4,4 - DDE	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
Total PCBS	ND		5000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000664

TEST CODE :SPNP&P1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAME : PNC PEST./PCB UNITS : UG/KG
SAMPLE ID LAB : EE-91-00149 HATRIX : SOLID
SAMPLE ID CLIENT: P26-S002A

PARAMETER	RESULTS	Q	DET. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin / 4,4 - DDE	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
Total PCBS	ND		5000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UM-6000 NASP PRASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAME : PNC PEST./PCB UNITS : UG/KG
SAMPLE ID LAB : EE-91-00150 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S002B

PARAMETER	RESULTS	Q	DET. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin / 494 - DDE	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
Total PCBS	ND		5000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000665

TEST CODE :SPNP&P1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT . : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN VET VEIGHT
TEST NAME : PNC PEST./PCB UNITS : UG/KG
SAHPLE ID LAB : EE-91-00151 MATRIX : SOLID
SAHPLE ID CLIENT: P26-S002C

PARAMETER	RESULTS	Q	DET. LIHIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin / 4,4 - DDE	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
Total PCBS	ND		5000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIHIT

TEST CODE : SPNP&P1 JOB NUMBER : 9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAME : PNC PEST./PCB UNITS : UG/KG
SAMPLE ID LAB : EE-91-00152 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S002D

PARAMETER	RESULTS	Q	DET. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin / 4,4 - DDE	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
Total PCBS	ND		5000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2600606

TEST CODE :SPNP&P1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN VET VEIGHT
TEST NAME : PNC PEST./PCB UNITS : UG/KG
SAMPLE ID LAB : EE-91-00153 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S003A

PARAMETER	RESULTS	Q	DET. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin / 4,4 - DDE	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
Total PCBS	ND		5000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PEASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAME : PNC PEST./PCB UNITS : UG/KG
SAMPLE ID LAB : EE-91-00154 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S003B

PARAMETER	RESULTS	Q	DET. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin / 4,4 - DDE	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
Total PCBS	ND		5000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2660067

TEST CODE :SPNP&P1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PHASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAME : PNC PEST./PCB UNITS : UG/KG
SAHPLE ID LAB : EE-91-00157 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S004A

PARAMETER	RESULTS	Q	DET. LIHIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin / 4,4 - DDE	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
Total PCBS	ND		5000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1 JOB NUMBER :9100.029

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : UH-6000 NASP PEASE I GROUPS A-E
RESULTS IN WET WEIGHT
TEST NAME : PNC PEST./PCB UNITS : UG/KG
SAMPLE ID LAB : €E-91-00158 MATRIX : SOLID
SAMPLE ID CLIENT: P26-S004B

PARAMETER	RESULTS	a	DET. LIMIT
Haptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin / 4,4 - DDE	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
Total PCBS	ND		5000

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK
L = PRESENT BELOW STATED DETECTION LIMIT

2000008