

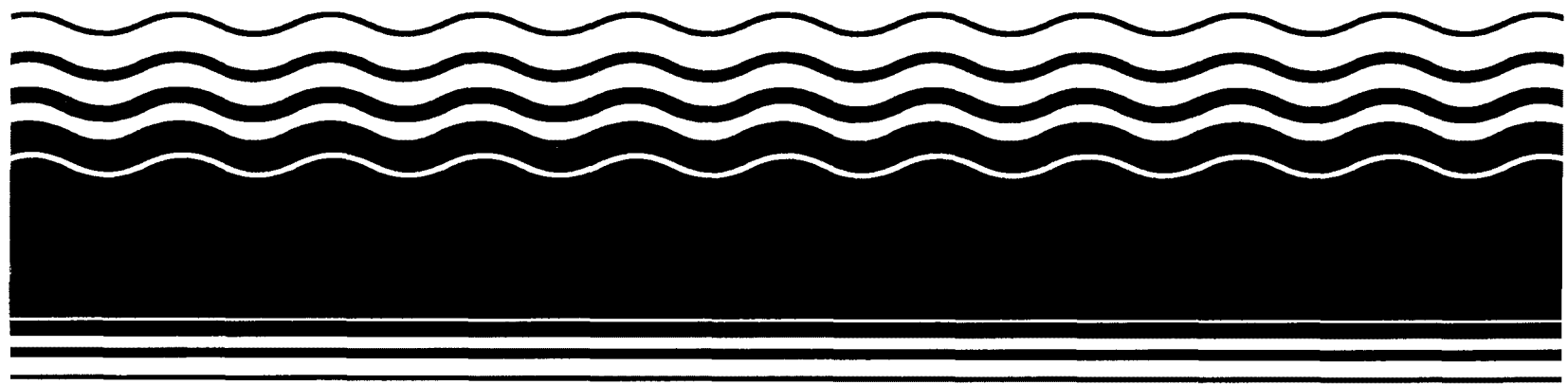
PB98-964017

EPA 541-R98-073

October 1998

**EPA Superfund
Record of Decision:**

**Pensacola Naval Air Station OU 14
Pensacola, FL
9/25/1998**





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW
ATLANTA, GEORGIA 30303-8909

SEP 25 1996

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

4WD-FFB

Commanding Officer
Naval Air Station Pensacola
190 Radford Boulevard
Pensacola, Florida 32508-5217

SUBJ: Record of Decision - Operable Unit 14
NAS Pensacola NPL Site
Pensacola, Florida

Dear Sir:

The U.S. Environmental Protection Agency (EPA) Region 4 has reviewed the above subject decision document and concurs with the selected remedy for the Remedial Action at Site 17. This remedy is supported by the previously completed Remedial Investigation and Baseline Risk Assessment Reports.

The selected remedial alternative is no further action. This involves taking no further remedial actions at the site and leaving the environmental media as they currently exist. This remedial action is protective of human health and the environment, complies with Federal and State requirements that are legally applicable or relevant and appropriate to the remedial action and is cost effective.

EPA appreciates the coordination efforts of NAS Pensacola and the level of effort that was put forth in the documents leading to this decision. EPA looks forward to continuing the exemplary working relationship with NAS Pensacola and Southern Division Naval Facilities Engineering Command as we move toward final cleanup of the NPL site.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard D. Green", written over a horizontal line.

Richard D. Green

Director

Waste Management Division

cc: Elsie Munsell, Deputy Assistant Secretary of the Navy
Ron Joyner, NAS Pensacola
Bill Hill, SOUTHDIV
David Grabka, FDEP

bcc: Allison Abernathy, FFRRO/OSWE

**FINAL RECORD OF DECISION
SITE 17 (OPERABLE UNIT 14) — FORMER TRANSFORMER
STORAGE YARD
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA**



SOUTHNAVFACENGCOM

Contract Number:

N62467-89-D-0318

CTO-083

Prepared for:

**Comprehensive Long-Term Environmental Action Navy
(CLEAN)**

**Naval Air Station
Pensacola, Florida**



Prepared by:

EnSafe Inc.

**5724 Summer Trees Drive
Memphis, Tennessee 38134
(901) 372-7962**

August 19, 1998

Table of Contents

DECLARATION OF THE RECORD OF DECISION	iv
1.0 SITE LOCATION AND DESCRIPTION	1
2.0 SITE HISTORY AND ENFORCEMENT ACTIVITIES	4
2.1 General Site History	4
2.2 Site-Specific History	4
2.3 Removal Action	5
3.0 HIGHLIGHTS OF COMMUNITY PARTICIPATION	6
4.0 SCOPE AND ROLE OF THE OPERABLE UNIT	7
5.0 SITE CHARACTERISTICS	8
5.1 Nature and Extent of Contamination	8
5.1.1 Soil/Sediment Contamination Assessment	9
5.1.2 Groundwater Contamination Assessment	11
5.1.3 Summary and Conclusions	11
5.2 Contaminant Fate and Transport	13
5.2.1 Contaminant Migration	13
5.2.2 Current and Potential Receptors	14
6.0 SUMMARY OF SITE RISKS	15
6.1 Area-Weighted PCB Concentrations	15
6.2 Discussion	16
6.3 Conclusion	18
7.0 THE SELECTED REMEDY	19
8.0 DOCUMENTATION OF NO SIGNIFICANT CHANGES	20
9.0 REFERENCES	21

List of Figures

Figure 1-1	Site Location Map	2
Figure 1-2	Site Area Map	3
Figure 5-1	Inorganics above PRGs and RCs in Soil/Sediment Samples	10
Figure 5-2	Organics above Preliminary Remediation Goals in Soil/Sediment Samples . .	12
Figure 6-1	PCB Threshold Analysis Diagram	17

List of Tables

Table 6-1	Site 17 Area Weighted — Analysis Values	18
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List of Appendices

Appendix A	Glossary
Appendix B	Responsiveness Summary

List of Abbreviations

The following list contains many of the abbreviations, acronyms, and symbols used in this document. A glossary of technical terms is provided in Appendix A.

ARAR	Applicable or Relevant and Appropriate Requirement
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
cy	Cubic yard
FDER	Florida Department of Environmental Regulation (since renamed Florida Department of Environmental Protection [FDEP])
FFA	Federal Facilities Agreement
NAS	Naval Air Station
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NEESA	Naval Energy and Environmental Support Activity since renamed Naval Facilities Engineering Service Center
NPL	National Priorities List
PAH	Polynuclear aromatic hydrocarbon
PCB	Polychlorinated biphenyl
PRG	Preliminary Remediation Goal
PWC	Public Works Center
RAB	Restoration Advisory Board
RC	Reference concentration
RCRA	Resource Conservation and Recovery Act
RI	Remedial investigation
ROD	Record of Decision
TRC	Technical Review Committee
USC	U.S. Code
USEPA	U.S. Environmental Protection Agency

DECLARATION OF THE RECORD OF DECISION

Site Name and Location

Site 17 (Operable Unit 14) Former Transformer Storage Yard
Naval Air Station Pensacola
Pensacola, Florida

Statement of Purpose

This decision document (Record of Decision) presents the selected remedy for Site 17 at Naval Air Station (NAS) Pensacola, Pensacola, Florida, developed in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986, 42 U.S. Code § 9601 *et seq.*, and to the extent practicable, the National Contingency Plan (NCP), 40 Code of Federal Regulations Part 300. This decision is based on the administrative record for Site 17 at the NAS Pensacola.


The U.S. Environmental Protection Agency and the Florida Department of Environmental Protection concur with the selected remedy.

Description of the Selected Remedy

This action is the final action planned for the operable unit. It was preceded by a removal action which addressed a single PCB "hot spot" identified during the remedial investigation. After removal of an estimated 6 tons of PCB-contaminated soil from this hot spot, the remedial investigation, including the human health risk assessment, supports a no-action remedial alternative for Site 17. The remedial investigation addressed all environmental media within Site 17; therefore, no other remedial actions will be considered for the site.

Declaration Statement

A removal action completed at the site has addressed all risks posed by the site; no further action is necessary at this operable unit. Because the no-action alternative was the only alternative considered for the operable unit, the nine criteria analysis do not apply. Because this remedy does not result in hazardous substances remaining onsite, a five-year review is not required.


CAPT, USN

Captain J.M. Denkler, NAS Pensacola

19 AUG 91

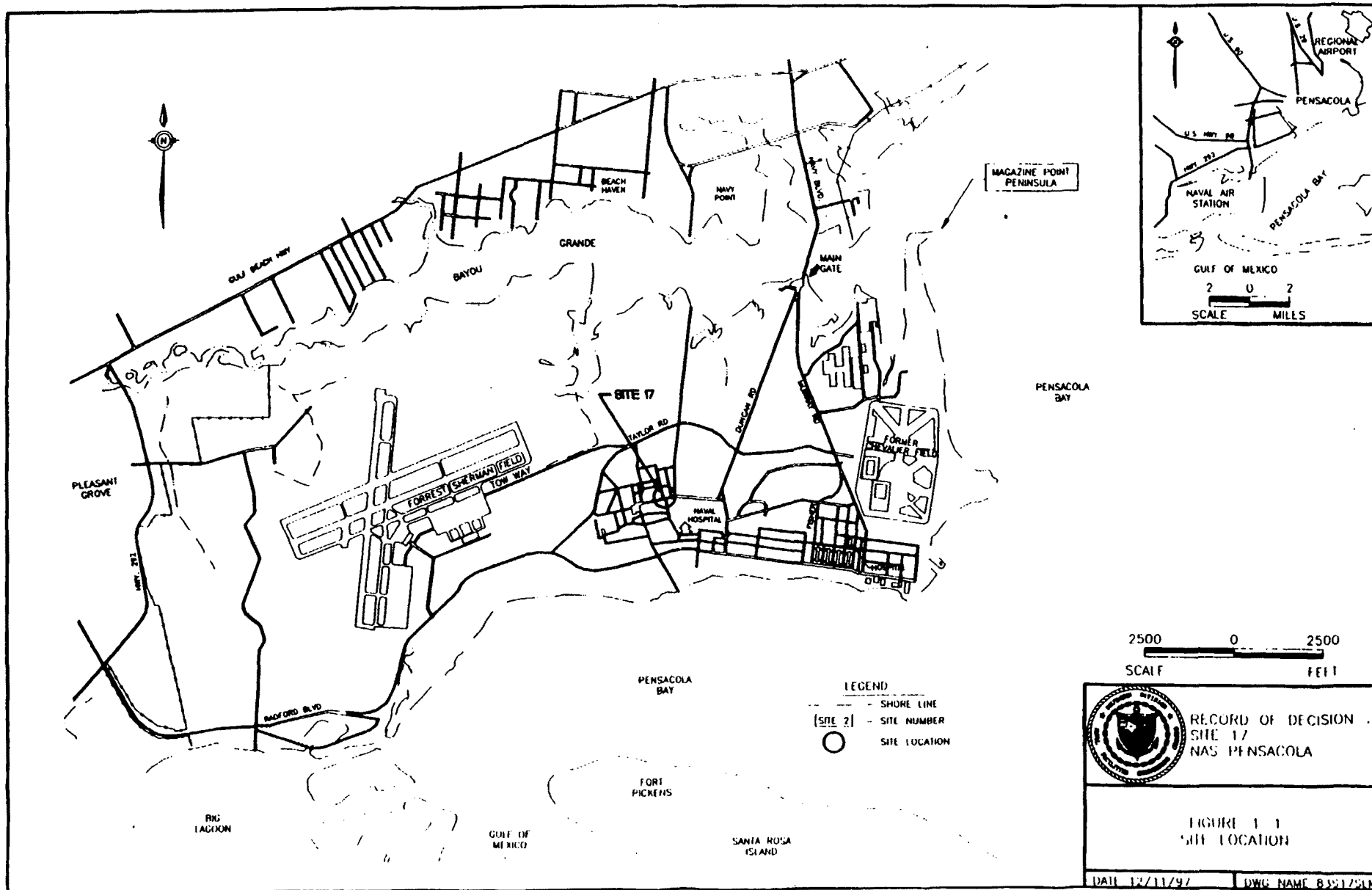
Date

1.0 SITE LOCATION AND DESCRIPTION

Site 17 (Operable Unit 14) is at Hovey and Brown roads, near the center of the installation, as shown on Figures 1-1 and 1-2. The site consists of an area roughly 150 feet by 250 feet mostly covered by asphalt paving. The site is divided into three storage yards separated by chain-link fencing. These yards are used by various departments of the Naval Air Station (NAS) Pensacola Public Works Center (PWC). The northernmost yard, known as the "Scrap Yard," currently stores scrap metal. The center yard, the "Goat Yard," currently stores vehicle trailers. The southern yard, the "High-Voltage Yard," stores various types of equipment, including vehicles, transformers, and wooden utility poles. Access to the Scrap and Goat yards is controlled by the PWC Tool Control Center, while the PWC Utilities Department controls access to the High-Voltage Yard.

Hovey Road, about 100 feet south of the site, is a main east-west thoroughfare for commands and facilities between Duncan and Taylor roads. A grassy landscaped area sparsely covered with trees lies between the site and Hovey Road. Brown Road abuts the site to the east. This north-south drive provides access to the Arriola Court housing area, about 200 feet north of the site. Arriola Court Drive parallels the border of the site approximately 50 feet to the north, where it intersects Brown Road. A grassy median is between the site and Arriola Court Drive. An asphalt parking lot and a tree-covered landscaped area are between Arriola Court Drive and the housing area. The area west of the site includes portions of the storage facilities described. The High-Voltage Yard has two storm drains.

The Site 17 area is generally flat with a land surface elevation averaging 20 to 25 feet above mean sea level. A number of other Installation Restoration Program (IRP) sites are about 1,200 to 1,500 feet northeast of Site 17. These include Site 8, the Rifle Range Disposal Area; Site 22, the Refueler Repair Shop; and Site 24, the DDT Mixing Area. The nearest monitoring wells include a Site 1 well cluster about 1,350 feet north of the site, and those installed for the IRP sites mentioned above.

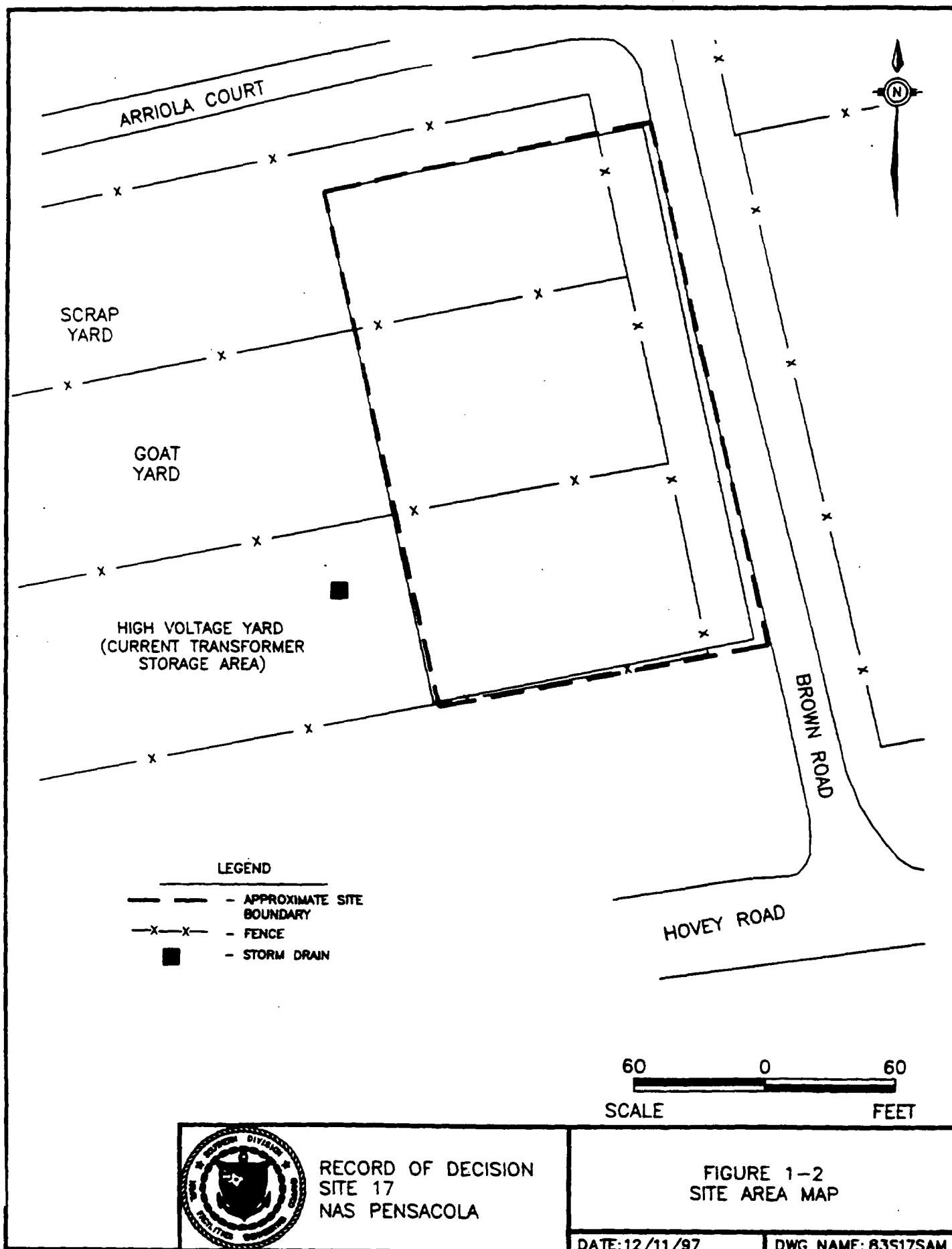


RECORD OF DECISION
SITE 17
NAS PENSACOLA

FIGURE 1-1
SITE LOCATION

DATE 12/11/97

DWG NAME B55125LM



2.0 SITE HISTORY AND ENFORCEMENT ACTIVITIES

2.1 General Site History

In December 1989, the base was placed on the U.S. Environmental Protection Agency's (USEPA) National Priorities List (NPL). A Federal Facilities Agreement (FFA) signed in October 1990 outlines the regulatory path to be followed at NAS Pensacola. NAS Pensacola must meet both the regulatory obligations associated with its NPL listing and the requirements of a Resource Conservation and Recovery Act (RCRA) permit issued in 1988. That permit addresses the treatment, storage, and disposal of hazardous waste and the investigation and remediation of any releases of hazardous waste and/or constituents from solid waste management units. RCRA and CERCLA cleanup activities are coordinated through the FFA, streamlining the remediation process.

2.2 Site-Specific History

Until 1976, Site 17 was an open storage area for 200-300 transformers, some with polychlorinated biphenyl (PCB)-laden dielectric fluids. No deliberate disposal of PCB oils occurred onsite; however, leakage was suspected given the many transformers stored there.

A 1983 Initial Assessment Study performed by the Naval Facilities Engineering Service Center (formerly the Naval Energy and Environmental Support Activity [NEESA]), noted a black oily substance on the asphalt surface within the transformer storage area. Seventy parts per thousand of Aroclor-1260, a PCB, were detected in a grab sample collected from the oily residue. Other chlorinated hydrocarbons also were detected in the sample. A high degree of contamination was suspected within the storage yard, with possible contamination of unpaved areas outside of the yard's fence line. Further study of the site was recommended (NEESA, 1983).

Site 17 was further investigated in a 1984 Verification Study conducted by Geraghty and Miller, Inc. (G&M). Three shallow borings were advanced through the pavement onsite, with soil

samples collected immediately below the pavement and at 12 and 24 inches deep. Samples from one boring contained up to 9 milligrams per kilogram (mg/kg) Aroclor-1260, with most samples containing less than 0.2 mg/kg of PCBs. The study suggested that PCBs had not permeated the asphalt, but may have been washed through joints or cracks in the pavement. The study also indicated the area of affected soil was small, and that it should be noted in the base master development plan. No further environmental investigation of the site was recommended (G&M, 1984).

2.3 Removal Action

The remedial investigation (RI) completed at Site 17 in September 1995 identified Aroclor-1260 at 4,200 micrograms per kilogram ($\mu\text{g/kg}$) above its preliminary remediation goal (PRG) of 83 $\mu\text{g/kg}$ in surface soil at a single boring (17S01). Benzo(a)pyrene (97 $\mu\text{g/kg}$) was also detected in surface soil at that location above its PRG. A removal action was completed in January 1998 to eliminate the single PCB "hot spot" identified at Site 17. An estimated 6 tons of PCB-contaminated soils were removed from the site for disposal as a Toxic Substances Control Act (TSCA)-regulated waste at a licensed landfill. Soil samples collected at the extent of the excavation confirmed that the contamination was removed to below its PRG.

3.0 HIGHLIGHTS OF COMMUNITY PARTICIPATION

Throughout the site's history, the community has been kept abreast of activities in accordance with CERCLA Sections 113(k)(2)(B)(i-v) and 117. In January 1989, a Technical Review Committee (TRC) was formed to review recommendations for and monitor progress of investigation and remediation at NAS Pensacola. The TRC was composed of representatives of the Navy, USEPA, Florida Department of Environmental Regulation (since renamed Florida Department of Environmental Protection [FDEP]), and the local community. In addition, a mailing list of interested community members and organizations was established and maintained by the NAS Pensacola Public Affairs Office. In July 1995, a Restoration Advisory Board (RAB) was established as a forum for communication between the community and decision-makers. The RAB absorbed the TRC and added members from the community and local organizations. The RAB members work together to monitor progress of the investigation and to review remediation activities and recommendations at NAS Pensacola. RAB meetings are held regularly, advertised, and are open to the public.

Before the removal action occurred at Site 17, a public notice was placed in the *Pensacola News Journal* on January 8, 1998. After finalizing the RI, the preferred alternative for Site 17 was presented in the Proposed Remedial Action Plan, also called the proposed plan. Everyone on the NAS Pensacola mailing list was sent a copy of the proposed plan. The notice of its availability, along with the RI document, was published in the *Pensacola News Journal* on December 4, 1997. A public comment period was held from December 8, 1997, to January 22, 1998 to encourage public participation in the remedy-selection process. In addition, the opportunity for a public meeting was provided during the comment period. Responses to comments received during the comment period are contained in Appendix B.

4.0 SCOPE AND ROLE OF THE OPERABLE UNIT

This selected remedy is the first and final remedial action for the site. The no-action alternative is selected for Site 17 due to the lack of any unacceptable risk to human health or the environment.

This is the only Record of Decision (ROD) contemplated for Site 17. Operable Unit 14, which consists of Site 17, is one of 13 operable units within NAS Pensacola. The purpose of each operable unit is defined in the *FY 1997 Site Management Plan* (SOUTHNAVFACENGCOM, 1996) for NAS Pensacola, which is in the Administrative Record. Separate investigations and assessments are being conducted for the other operable units at NAS Pensacola in accordance with CERCLA. Therefore, this ROD applies only to Site 17.

5.0 SITE CHARACTERISTICS

This section of the ROD presents an overview of the nature and extent of contamination at Site 17 with respect to known or suspected sources of contamination, types of contamination, and affected media. Known or potential routes of migration of contaminants also are discussed.

5.1 Nature and Extent of Contamination

The sampling approach, methods, and sample locations for this investigation were detailed in the RI report. The analytical results were compared to the following general and site-specific PRGs to evaluate the nature and extent of contamination at Site 17.

Soil

- Risk-based concentrations, soil ingestion scenario for residential soil (surface soil) and soil screening levels, transfer scenario from soil to groundwater (subsurface soil) (USEPA, 1996a).
- Selected Cleanup Goals residential scenario (surface soil)/leaching scenario (subsurface soil) (FDEP, 1995 and 1996).
- USEPA, Office of Solid Waste and Emergency Response draft revised *Interim Soil Lead Guidance* (USEPA, 1994a).
- Title 40 Code of Federal Regulations (CFR) Part 761.125 Requirements for PCB Spill Cleanup (1988).
- USEPA, Office of Solid Waste and Emergency Response *Soil Screening Guidance* (USEPA, 1994b).

Sediment

- Sediment Screening Values (SSVs; USEPA, 1995).
- Sediment Quality Assessment Guidelines, Threshold Effects Levels (TELs) (FDEP, 1994a).

Groundwater

- USEPA Maximum Contaminant Levels and Secondary Maximum Contaminant Levels (USEPA, 1996b).
- Florida Primary/Secondary Drinking Water Standards and Florida Groundwater Guidance Concentrations (FDEP, 1994b).

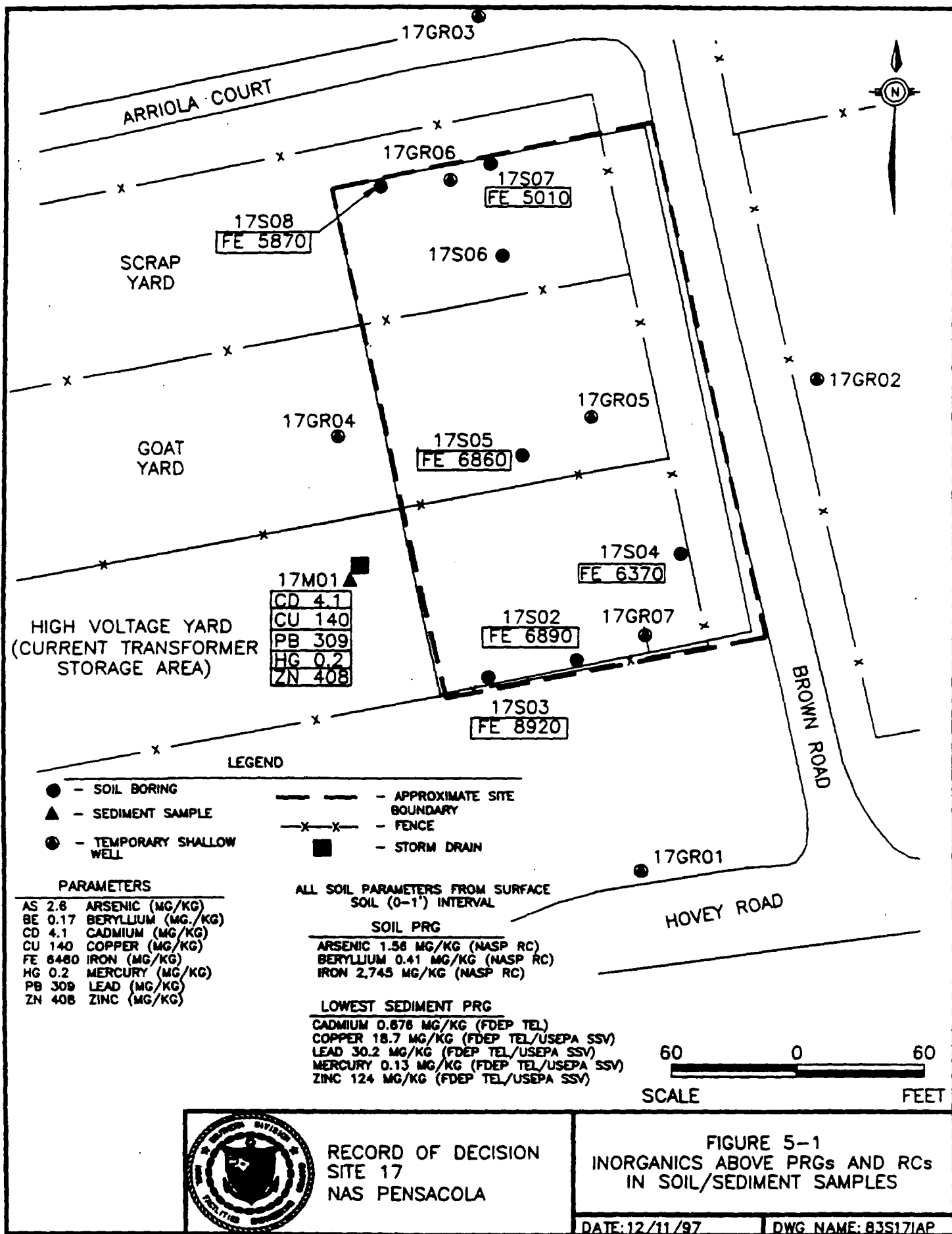
In addition to the PRGs, soil and groundwater inorganics results were compared to NAS Pensacola-specific reference concentrations developed by the Navy during the Site 1 investigation. These are equal to two times the detected mean for any given parameter (E/A&H, 1996).

5.1.1 Soil/Sediment Contamination Assessment

Inorganics

Figure 5-1 illustrates inorganics detected above PRGs and reference concentrations (RCs) in soil and sediment samples at Site 17. Iron was the only parameter in soil to exceed its PRG (2,300 mg/kg) and RC (2,745 mg/kg).

The single sediment sample contained cadmium (4.1 mg/kg), copper (140 mg/kg), lead (309 mg/kg), mercury (0.2 mg/kg), and zinc (408 mg/kg) above the USEPA SSV and/or FDEP TEL.



Organics

Figure 5-2 depicts organics detected above PRGS in soil and sediment samples. Surface soils at two borings (17S06 and 17S08) in the Scrap Yard contained the polycyclic aromatic hydrocarbon (PAH) benzo(a)pyrene (110 to 160 $\mu\text{g/kg}$) above its PRG (88 $\mu\text{g/kg}$).

The storm drain sediment sample (17M01) contained numerous PAHs above the FDEP TEL. These included 2-methylnaphthalene, 64 $\mu\text{g/kg}$; acenaphthene, 140 $\mu\text{g/kg}$; acenaphthylene, 41 $\mu\text{g/kg}$; anthracene, 170 $\mu\text{g/kg}$; benzo(a)anthracene, 1,000 $\mu\text{g/kg}$; benzo(a)pyrene, 600 $\mu\text{g/kg}$; chrysene, 1,500 $\mu\text{g/kg}$; dibenz(a,h)anthracene, 160 $\mu\text{g/kg}$; fluoranthene, 2,400 $\mu\text{g/kg}$; fluorene, 130 $\mu\text{g/kg}$; naphthalene, 66 $\mu\text{g/kg}$; phenanthrene, 1,800 $\mu\text{g/kg}$; and pyrene, 1,800 $\mu\text{g/kg}$. The pesticides 4,4'-DDE, 39 $\mu\text{g/kg}$; 4,4'-DDT, 520 $\mu\text{g/kg}$; dieldrin, 91 $\mu\text{g/kg}$; endrin, 530 $\mu\text{g/kg}$; and endrin aldehyde, 530 $\mu\text{g/kg}$, were also present above USEPA and/or FDEP sediment screening values, as was Aroclor-1260 (6,600 $\mu\text{g/kg}$).

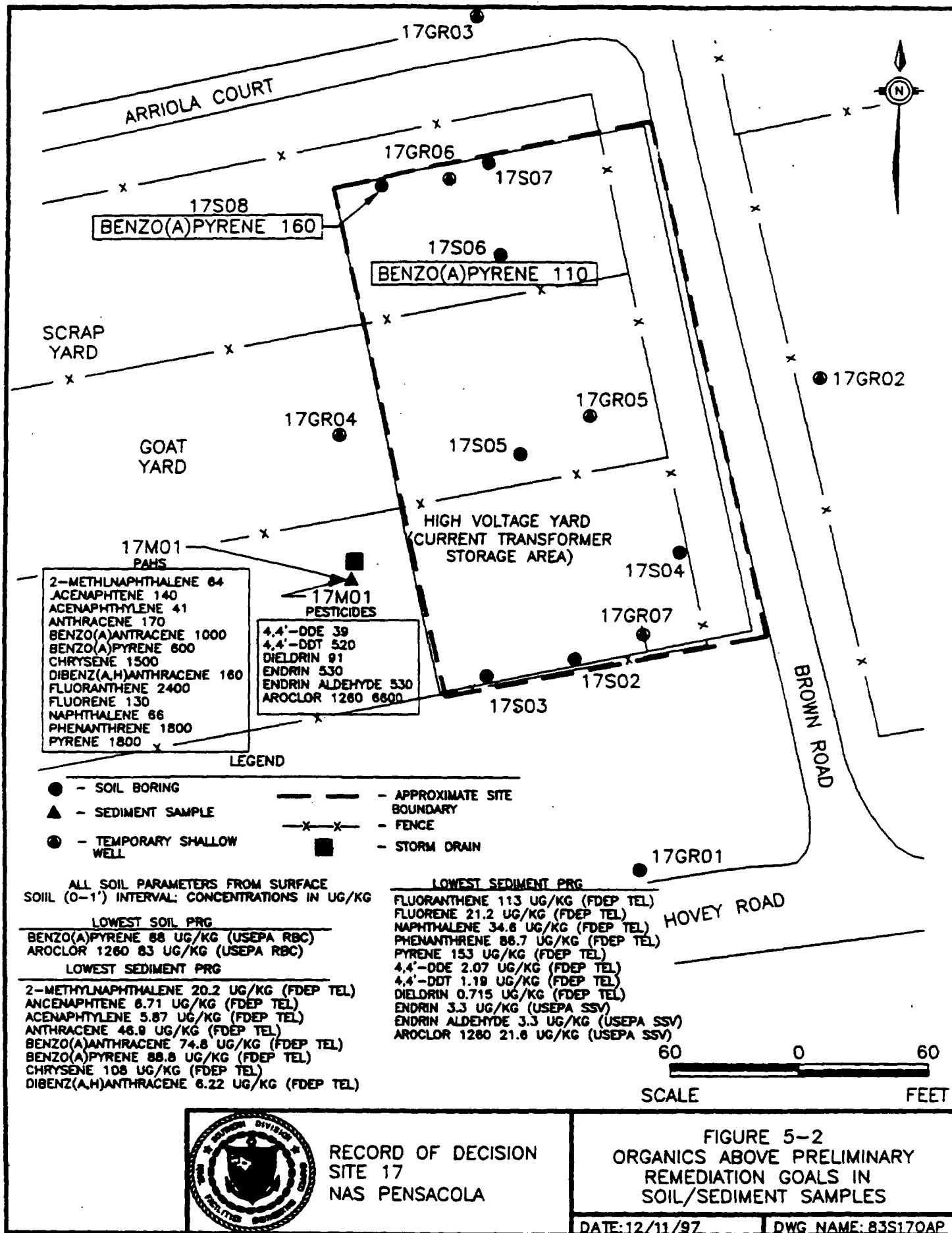
5.1.2 Groundwater Contamination Assessment

None of the inorganics detected in groundwater exceeded its RC and the lower of the state or federal standard. Organics detected in groundwater did not exceed their state or federal standards.

5.1.3 Summary and Conclusions

Iron was the only parameter in soil to exceed the PRG and RC. However, iron was not detected in site groundwater samples above its standard, indicating no significant leaching of inorganic parameters to groundwater is occurring at Site 17. None of the inorganic parameters detected in groundwater exceeded its standard and RC.

Historical site use involved a good deal of vehicular traffic; therefore, the surface soil benzo(a)pyrene concentrations above standards at borings 17S06 and 17S08 may have originated from residual petroleum products which leaked from vehicles or machinery stored near these sampling locations. Additionally, since samples from borings 17S06 and 17S08 were collected



from soil underlying asphalt pavement, the PAH constituent may have also originated from the asphalt. At any rate, the concentration and distribution of benzo(a)pyrene do not suggest a significant source of contamination at this site.

Surface soil PCB contamination below PRGs (15 to 41 $\mu\text{g}/\text{kg}$) is limited to the High-Voltage Yard, in the southern part of the site. This portion of the site, controlled by the PWC High-Voltage Shop, stores equipment and materials associated with electrical utilities, including transformers. The northern portion of the site area (Goat/Scrap yards) is used for different purposes and is controlled by the PWC Tool Room. Assuming historical use is consistent with this, it may explain the lack of PCB contamination in the northern two-thirds of the site.

Sediments collected from the storm sewer manhole on Site 17 contained numerous metals, pesticides, PAHs, and Aroclor-1260 above PRGs. The storm sewer manhole at Site 17 has been historically acting as a sink for parameters washed into it during storms. The sediments will be addressed during the maintenance of the storm sewer system on a base-wide scale in accordance with the Storm Water Management program. This recommendation is base-wide, and not reserved for Site 17 alone.

5.2 Contaminant Fate and Transport

5.2.1 Contaminant Migration

Leaching of Soil Constituents to Groundwater

Soil constituents leach to groundwater primarily via downward percolation of rainwater. The absence of most parameters in groundwater above their standards indicates that this pathway does is insignificant at Site 17. Soil within the site area is very permeable, resulting in quick infiltration and minimal contact time between percolating water and soil above the water table. Also, much of the site is covered by asphalt, which limits percolation, causing precipitation to pool and evaporate or run off via onsite storm drains.

Surface Water Transport

The site is surrounded by grassy and open patches of soil, as well as impervious surfaces which affect the transport of surface water in different ways. Much of Site 17 is covered by asphalt, on which precipitation either pools and evaporates, or is directed toward two storm sewer manholes in the site's southern portion. Rainwater collecting on turf or exposed soil percolates to the water table.

Groundwater Transport

Groundwater flows toward the southeast at Site 17 with an average calculated velocity of 0.5016 feet per day. The Intercoastal Waterway of Pensacola Bay is about 2,750 feet south of the site. Assuming advective transport only (equal to the rate of groundwater flow), travel time for constituents to the bay would be about 15 years. In addition, only four parameters (iron, beryllium, dieldrin, heptachlor epoxide) slightly exceeded their surface water quality criteria in groundwater samples collected at the site. Iron and beryllium were both detected below their corresponding groundwater reference concentrations. The potential for the detected concentrations to discharge to the surface water is not expected to be significant given the distance to the bay, transport mechanisms of the aquifer (i.e., dispersion, retardation, sorption), and natural attenuation.

5.2.2 Current and Potential Receptors

The current and potential receptors for site groundwater are the Intercoastal Waterway and Pensacola Bay. No wetlands exist in the site's vicinity. Potential impacts to the bay will be further addressed in the investigation for Site 42 – Pensacola Bay.

6.0 SUMMARY OF SITE RISKS

6.1 Area-Weighted PCB Concentrations

Surface soil Aroclor-1260 concentrations at Site 17 exceeded PRGs at one soil boring (17S01), located in the southeast corner of the site. Because a person would not be expected to spend all of his/her time onsite in exactly one spot, a simulation of potential PCB exposure was made based on the assumption of uniform exposure to all surface soils within the investigative area. An estimate of the potential chronic Aroclor-1260 exposure concentration was calculated for Site 17 by computing the area weighted average concentration for the whole site. Accordingly, the site was divided by estimating the affected area around each soil boring where Aroclor-1260 was detected. The surface soil Aroclor-1260 concentrations reported at these locations were used to approximate the average concentration within each estimated affected subarea.

The area weighted average was calculated using the following equation:

$$[T] = (A/T)([A]) + (B/T)([B]) + (C/T)([C]) + (D/T)([D]) \dots + \dots (Z/T)([Z])$$

where:

- A, B, C, D, represent the subarea (ft.²) affected by each Aroclor-1260 concentration, estimated for each boring location where Aroclor-1260 was present.
- Z equals the total unaffected area of site (ft.²) where Aroclor-1260 was not detected.
- T equals the total area of the site (ft.²).
- [A], [B], [C], [D], depict the Aroclor-1260 concentration (mg/kg) per each affected area.

- [Z] represents Aroclor-1260 concentration (mg/kg) assumed for the unaffected area of the site. For Site 17, $\frac{1}{2}$ the CRQL for Aroclor-1260 (.015 mg/kg) was used for this comparison.
- [T] equals the area weighted average (mg/kg) for Aroclor-1260 for the site.

6.2 Discussion

Figure 6-1 diagrams the site apportionment used to compute the area weighted average Aroclor-1260 concentrations for Site 17. Table 6-1 details the values calculated for the Site 17 area weighted analysis. To obtain the total area weighted average for the site, area weighted concentrations calculated for both affected and unaffected areas were summed. This mean total value was compared to the most stringent 40 CFR 761.125 standard, which details requirements for decontaminating PCB spills in non-restricted access (residential) areas (USEPA, 1988), as well as those spelled out in the USEPA *Soil Screening Guidance* (1994b). The first document outlines the Toxic Substance Control Act PCB decontamination requirement, which for residential scenarios states soil will be decontaminated to 10 mg/kg by weight, provided 10 inches are excavated and replaced with clean soil containing less than 1 mg/kg of PCBs. The second document states a surface soil PRG of 1 mg/kg for PCBs. These values are ostensibly based on potential risk to human receptors.

The area weighted analysis results show the estimated weighted average (mean concentration) for the site as 0.1209 mg/kg. This concentration is well below the USEPA action level for Aroclor-1260.

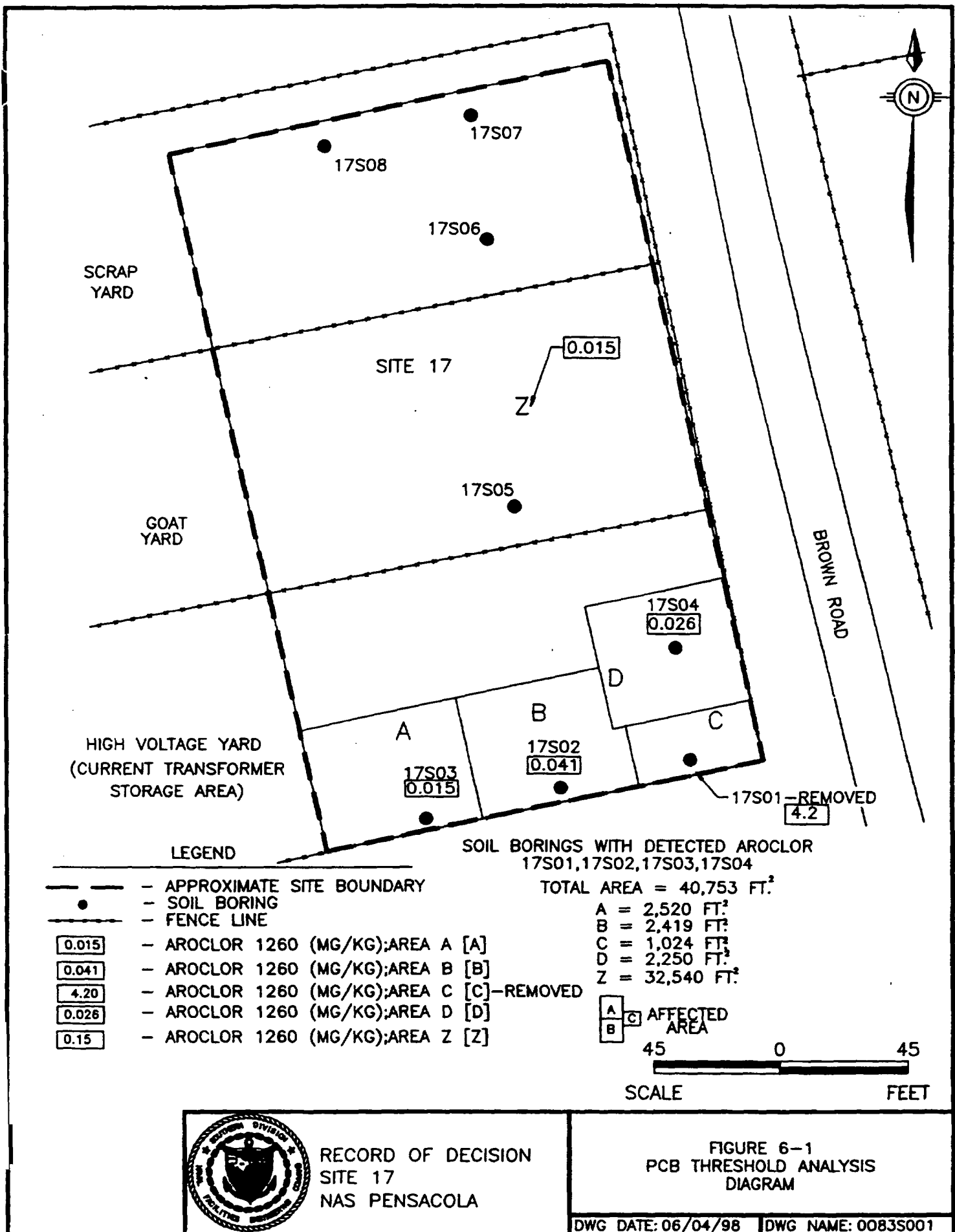


Table 6-1
Site 17 Area Weighted — Analysis Values

Area Identifier	Ft. ²	Aroclor-1260 Concentration (mg/kg)	Area Weighted Concentration (mg/kg)	Remarks
A	2,520	0.015	0.0010	Boring 17S03
B	2,419	0.041	0.0024	Boring 17S02
C	1,024	4.20	0.1055	Boring 17S01
D	2,250	0.026	0.0014	Boring 17S04
Z	32,540	0.015	0.0120	Unaffected Area
T	40,753	NA	0.1209	Total Site Area

Note:

NA = Not Applicable.

6.3 Conclusion

Although one surface soil Aroclor-1260 concentration was identified above PRGs in a single subarea at Site 17, using weighted averaging shows that the site overall is below required action levels under 40 CFR 761.125 and USEPA (1994b) guidance. Consideration was given to FDEP's concern for the surface soil PCB concentration at boring 17S01. Analysis of current and historical land use of Site 17 revealed that the site has always had an industrial use, and it can be reasonably anticipated that this use will not change. Hence, the concentration at 17S01 was compared to twice the industrial CG for PCBs, as requested by FDEP (FDEP, 1996b). The concentration at 17S01 (4,200 $\mu\text{g/kg}$) was under two-times the respective CG (7,000 $\mu\text{g/kg}$; FDEP, 1995).

Thus, on an area-weighted basis, the presence of one PCB "hot spot" within the fenced High Voltage Yard did not present an unacceptable human health risk under the conditions modeled by the method described above. In further consideration of FDEP's position and their reluctance to accept a weighted average approach, the single hot spot was the subject to a removal action after completion of the RI. An estimated six tons of affected soils were removed in January 1998 and sent to a TSCA-regulated land disposal facility. As a result, the maximum detected PCB concentrations remaining at Site 17 are below the applicable PRG.

7.0 THE SELECTED REMEDY

Based upon consideration of the requirements of CERCLA and the NCP, the lack of risk associated with Site 17, and public and state comments, the Navy has selected the no-action alternative as the preferred remedial action alternative for Site 17. The removal action eliminated the PRG exceedance at the site. Based on the results of the RI and the removal action, no remedial action is necessary to ensure protection of human health and the environment. Because the no-action alternative was the only alternative considered and there is no excess risk to human health and the environment, the nine-criteria analysis does not apply. Because this remedy does not result in hazardous substances remaining onsite, a five-year review is not required.

8.0 DOCUMENTATION OF NO SIGNIFICANT CHANGES

The proposed plan for Site 17 released on December 8, 1997 identified the no-action alternative as the preferred alternative. The no-action alternative presented in the proposed plan is the same as the no-action alternative described in this ROD. No comments were received during the public comment period.

9.0 REFERENCES

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Appendix A
Glossary

Glossary

This glossary defines terms used in this record of decision describing CERCLA activities. The definitions apply specifically to this record of decision and may have other meanings when used in different circumstances.

ADMINISTRATIVE RECORD: A file that contains all information used by the lead agency to make its decision in selecting a response action under CERCLA. This file is to be available for public review and a copy is to be established at or near the site, usually at one of the information repositories. Also a duplicate is filed in a central location, such as a regional or state office.

AQUIFER: An underground formation of materials such as sand, soil, or gravel that can store and supply groundwater to wells and springs. Most aquifers used in the United States are within a thousand feet of the earth's surface.

BASELINE RISK ASSESSMENT: A study conducted as a supplement to a remedial investigation to determine the nature and extent of contamination at a Superfund site and the risks posed to public health and/or the environment.

CARCINOGEN: A substance that can cause cancer.

CLEANUP: Actions taken to deal with a release or threatened release of hazardous substances that could affect public health and/or the environment. The noun "cleanup" is often used broadly to describe various response actions or phases of remedial responses such as Remedial Investigation/Feasibility Study.

COMMENT PERIOD: A time during which the public can review and comment on various documents and actions taken, either by the Department of Defense installation or the USEPA. For example, a comment period is provided when USEPA proposes to add sites to the National Priorities List.

COMMUNITY RELATIONS: USEPA's, and subsequently Naval Air Station Pensacola's, program to inform and involve the public in the Superfund process and respond to community concerns.

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT (CERCLA): A federal law passed in 1980 and modified in 1986 by the Superfund Amendments and Reauthorization Act (SARA). The act created a special tax that goes into a trust fund, commonly known as "Superfund," to investigate and clean up abandoned or uncontrolled hazardous waste sites.

Under the program the USEPA can either:

- Pay for site cleanup when parties responsible for the contamination cannot be located or are unwilling or unable to perform the work.
- Take legal action to force parties responsible for site contamination to clean up the site or pay back the federal government for the cost of the cleanup.

DEFENSE ENVIRONMENTAL RESTORATION ACCOUNT (DERA): An account established by Congress to fund Department of Defense hazardous waste site cleanups, building demolition, and hazardous waste minimization. The account was established under the Superfund Amendments and Reauthorization Act.

DRINKING WATER STANDARDS: Standards for quality of drinking water that are set by both the USEPA and the FDEP.

EXPLANATION OF DIFFERENCES: After adoption of final remedial action plan, if any remedial or enforcement action is taken, or if any settlement or consent decree is entered into, and if the settlement or decree differs significantly from the final plan, the lead agency is required to publish an explanation of any significant differences and why they were made.

FEASIBILITY STUDY: See Remedial Investigation/Feasibility Study.

GROUNDWATER: Water beneath the earth's surface that fills pores between materials such as sand, soil, or gravel. In aquifers, groundwater occurs in sufficient quantities that it can be used for drinking water, irrigation, and other purposes.

HAZARDOUS SUBSTANCES: Any material that poses a threat to public health and/or the environment. Typical hazardous substances are materials that are toxic, corrosive, ignitable, explosive, or chemically reactive.

INFORMATION REPOSITORY: A file containing information, technical reports, and reference documents regarding a Superfund site. Information repositories for Naval Air Station Pensacola are at The John C. Pace Library at the University of West Florida and the NAS Pensacola Library in Building 633 on the Naval Air Station, Pensacola, Florida.

MAXIMUM CONTAMINANT LEVEL: National standards for acceptable concentrations of contaminants in drinking water. These are legally enforceable standards set by the USEPA under the Safe Drinking Water Act.

MONITORING WELLS: Wells drilled at specific locations on or off a hazardous waste site where groundwater can be sampled at selected depths and studied to assess the groundwater flow direction and the types and amounts of contaminants present, etc.

NATIONAL PRIORITIES LIST (NPL): The USEPA's list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial response using money from the trust fund. The list is based primarily on the score a site receives on the Hazard Ranking System. USEPA is required to update the NPL at least once a year.

PARTS PER BILLION (ppb)/PARTS PER MILLION (ppm): Units commonly used to express low concentrations of contaminants. For example, 1 ounce of trichloroethylene in a million

ounces of water is 1 ppm; 1 ounce of trichloroethylene in a billion ounces of water is 1 ppb. If one drop of trichloroethylene is mixed in a competition-size swimming pool, the water will contain about 1 ppb of trichloroethylene.

PRELIMINARY REMEDIATION GOALS: Screening concentrations that are provided by the USEPA and the FDEP and are used in assessing the site for comparative purposes before remedial goals are set during the baseline risk assessment.

PROPOSED PLAN: A public participation requirement of SARA in which the lead agency summarizes for the public the preferred cleanup strategy and the rationale for the preference, reviews the alternatives presented in the detailed analysis of the remedial investigation/feasibility study, and presents any waivers to cleanup standards of Section 121(d)(4) that may be proposed. This may be prepared either as a fact sheet or as a separate document. In either case, it must actively solicit public review and comment on all alternatives under agency consideration.

RECORD OF DECISION (ROD): A public document that explains which cleanup alternative(s) will be used at NPL sites. The ROD is based on information and technical analysis generated during the remedial investigation/feasibility study and consideration of public comments and community concerns.

REMEDIAL ACTION (RA): The actual construction or implementation phase that follows the remedial design and the selected cleanup alternative at a site on the NPL.

REMEDIAL INVESTIGATION/FEASIBILITY STUDY (RI/FS): Investigation and analytical studies usually performed at the same time in an interactive process, and together referred to as the "RI/FS." They are intended to: (1) gather the data necessary to determine the type and extent of contamination at a Superfund site; (2) establish criteria for cleaning up the site; (3) identify and screen cleanup alternatives for remedial action; and (4) analyze in detail the technology and costs of the alternatives.

REMEDIAL RESPONSE: A long-term action that stops or substantially reduces a release or threatened release of hazardous substances that is serious, but does not pose an immediate threat to public health and/or the environment.

REMOVAL ACTION: An immediate action performed quickly to address a release or threatened release of hazardous substances.

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA): A federal law that established a regulatory system to track hazardous substances from the time of generation to disposal. The law requires safe and secure procedures to be used in treating, transporting, storing, and disposing of hazardous substances. RCRA is designed to prevent new, uncontrolled hazardous waste sites.

RESPONSE ACTION: As defined by Section 101(25) of CERCLA, means remove, removal, remedy, or remedial action, including enforcement activities related thereto.

RESPONSIVENESS SUMMARY: A summary of oral and written public comments received by the lead agency during a comment period on key documents, and the response to these comments prepared by the lead agency. The responsiveness summary is a key part of the ROD, highlighting community concerns for USEPA decision-makers.

SECONDARY DRINKING WATER STANDARDS: Secondary drinking water regulations are set by the USEPA and the FDEP. These guidelines are not designed to protect public health, instead they are intended to protect "public welfare" by providing guidelines regarding the taste, odor, color, and other aesthetic aspects of drinking water which do not present a health risk.

SUPERFUND: The trust fund established by CERCLA which can be drawn upon to plan and conduct cleanups of past hazardous waste disposal sites, and current releases or threats of releases of nonpetroleum products. Superfund is often divided into removal, remedial, and enforcement components.

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA): The public law enacted on October 17, 1986, to reauthorize the funding provisions, and to amend the authorities and requirements of CERCLA and associated laws. Section 120 of SARA requires that all federal facilities "be subject to and comply with, this act in the same manner and to the same extent as any non-governmental entity."

SURFACE WATER: Bodies of water that are aboveground, such as rivers, lakes, and streams.

VOLATILE ORGANIC COMPOUND: An organic (carbon-containing) compound that evaporates (volatizes) readily at room temperature.

Appendix B
Responsiveness Summary

RESPONSIVENESS SUMMARY

Overview

During the public comment period, the U.S. Navy proposed the no-action alternative for Operable Unit 14 on NAS Pensacola. This preferred remedy was selected in coordination with the USEPA and the FDEP. The NAS Pensacola RAB, a group of community volunteers, reviewed the technical details of the selected remedy. The sections below describe the background of community involvement on the project and comments received during the public comment period.

Background of Community Involvement

Throughout the site's history, the community has been kept abreast of site activities through press releases to the local newspaper and television stations that reported on site activities. Site-related documents were made available to the public in the administrative record at information repositories maintained at the NAS Pensacola Library and The John C. Pace Library of the University of West Florida.

On December 4, 1997, newspaper announcements were placed to announce the public comment period (December 8, 1997, through January 22, 1998) and included a short description of the proposed plan. The announcement appeared in the *Pensacola News Journal*. In conjunction with the newspaper announcement, copies of the proposed plan were mailed to addresses on the IRP mailing list. The opportunity for a public meeting was provided.

Summary of Comments Received During the Public Comment Period

No comments were received during the public comment period.