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BASE REALIGNMENT AND CLOSURE CLEANUP PLAN NSWC WHITE OAK MD
5/29/1997
EFA CHESAPEAKE

Control No. _____

**BRAC Cleanup Plan
Naval Surface Warfare Center - White Oak**

Prepared by

**Engineering Field Activity-Chesapeake
Naval Facilities Engineering Command
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29 May 1997

PARTNERING AGREEMENT

We, the members of the Base Realignment and Closure (BRAC) Cleanup Team for the Naval Surface Warfare Center - White Oak, are dedicated to: accomplishing environmental cleanup in an accelerated, cost effective, and quality manner; ensuring protection of public health and the environment; and facilitating the reuse and redevelopment of the complex as expeditiously as possible.

The BRAC Cleanup Team (BCT) is committed to working together in a spirit of integrity, mutual trust, responsibility, understanding, cooperation, and open communication.

Toward that end, we hereby agree to strive toward the following goals:

- Conduct a "Bottom Up" review of the existing environmental cleanup programs to identify opportunities for acceleration.
- Participate in the Community's Restoration Advisory Board (RAB) on environmental matters affecting the leasing or conveyance of property.
- Develop a BRAC Cleanup Plan (BCP) from the results of the "Bottom Up" review. The BCP will be the road map for expeditious environmental cleanup and will be updated periodically.
- Execute the BCP.
- Make prompt recommendations on the suitability of properties/parcels for lease or transfer.

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Foreword

This draft revision of the BRAC Cleanup Plan (BCP) was prepared by the Navy, with comments provided by the BRAC Cleanup Team (BCT) and the Community Co-Chair of the Restoration Advisory Board (RAB). This draft is under review by the BCT. Upon completion of the BCT review, the BCP will be revised to reflect the views of the BCT.

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List of Acronyms and Abbreviations

ACM	Asbestos-Containing Material
ALC	Adelphi Laboratory Center
AOC	Area of Concern
ARAR	Applicable or Relevant and Appropriate Requirement
AST	Aboveground Storage Tank
BCP	BRAC Cleanup Plan
BCT	BRAC Cleanup Team
BEC	BRAC Environmental Coordinator
BRAC	Base Closure and Realignment Act of 1988 and Defense Base Closure and Realignment Act of 1990, collectively
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERFA	Community Environmental Response Facilitation Act
CFC	Chlorofluorocarbon
CLEAN	Comprehensive Long-Term Environmental Action Navy
CS	Confirmation Study
DOD	Department of Defense
DQO	Data Quality Objective
DVR	Design Verification Report
EBS	Environmental Baseline Survey
ECE	Environmental Compliance Evaluation
EFACHES	Engineering Field Activity - Chesapeake
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
FAD	Friable, Accessible, and Damaged
FDA	Food and Drug Administration
FFA	Federal Facility Agreement
FOSL	Finding of Suitability to Lease
FOST	Finding of Suitability to Transfer

FS	Feasibility Study
FY	Fiscal Year
GSA	General Services Administration
HARP	Historic and Archeological Resources Protection Plan
HAZMAT	Hazardous Materials
HFC	Hydrofluorocarbon
HSWA	Hazardous and Solid Waste Amendments
IAS	Initial Assessment Study
IR	Installation Restoration
LQG	Large Quantity Generator
MDE	Maryland Department of the Environment
MOA	Memorandum of Agreement
msl	Mean Sea Level
NACIP	Navy Assessment and Control of Installation Pollutants
NAVFAC	Naval Facilities Engineering Command
NAVSEA	Naval Sea Systems
NCP	National Contingency Plan
NEPA	National Environmental Policy Act
NFA	No Further Action
NOL	Naval Ordnance Laboratory
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRMP	Natural Resources Management Plan
NSWC-White Oak	Naval Surface Warfare Center, Dahlgren Division, White Oak Laboratory
PA	Preliminary Assessment
PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
pCi/l	picoCuries per liter

POL	Petroleum, Oil and Lubricants
PWC	Public Works Center
RA	Remedial Action
RAB	Restoration Advisory Board
RAC	Remedial Action Contract
RASO	Radiological Affairs Support Office
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RI	Remedial Investigation
ROD	Record of Decision
RPM	Remedial Project Manager
RSO	Radiation Safety Officer
SARA	Superfund Amendments and Reauthorization Act
SI	Site Inspection
SPCC	Spill Prevention, Control and Counter Measures Plan
SWMU	Solid Waste Management Unit
TSCA	Toxic Substances Control Act
TSD	Treatment, Storage, and Disposal
UST	Underground Storage Tank
VOC	Volatile Organic Compounds
WSSC	Washington Suburban Sanitary Commission

EXECUTIVE SUMMARY

Introduction

This Base Closure and Realignment Act (BRAC) Cleanup Plan (hereafter referred to as BCP) contains the status, management plan, response strategy, and action items related to ongoing environmental restoration and compliance programs at the Naval Surface Warfare Center, White Oak (NSWC-White Oak). The scope of the BCP considers the following: BRAC policy; National Environmental Policy Act (NEPA); Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); Comprehensive Environmental Response Facilitation Act (CERFA); Resource Conservation and Recovery Act (RCRA); and other applicable environmental laws.

The Defense Base Closure and Realignment Act of 1990 (BRAC II) directed the Secretary of Defense to close or realign those installations recommended by the BRAC commission. The CERFA of 1992 directed federal agencies with jurisdiction over real property where federal government operations are to be terminated to identify "uncontaminated" parcels of the real property. In 1995, NSWC-White Oak was selected for closure on the BRAC IV list. The mission termination date for NSWC-White Oak was January 1997, with operational closure scheduled for July 1997.

This BCP addresses the cleanup of NSWC-White Oak properties. NSWC-White Oak is not listed on the National Priorities List (NPL), the U.S. Environmental Protection Agency (EPA) nationwide list of highest priority sites that require remedial action.

Status of Disposal and Reuse Planning Process

The NSWC-White Oak property will be turned over to the U.S. Army and the General Services Administration (GSA). The property that the U.S. Army is acquiring (48 acres) will be used as a research and development site for atmospheric profiling, as well as providing a buffer zone between the U.S. Army activities and GSA property. The GSA will coordinate the reuse of the remaining property (662 acres) by other government agencies or private entities. The GSA has not developed a full reuse plan for the property, although the Food and Drug Administration (FDA) has already been identified as a tenant. The GSA has supplied the Navy with a footprint of the approved master plan for the FDA headquarters and laboratories. The Final Environmental

Impact Statement for the FDA at NSWC-White Oak has been published. Also, the GSA has begun discussion with private entities on possible public-private partnerships which could lead to development elsewhere on the property.

Cleanup Strategy

The overall strategy for the facility is to continue the investigative and remedial process (consistent with CERCLA) on the Installation Restoration (IR) Program sites, complete the site screening process for the remaining sites, and write and implement a master work plan for investigations for the remaining sites. A Proposed Plan and Record of Decision (ROD) will be developed to outline the selected remedial alternative. Remedial design and remedial action will follow, as appropriate.

The first priority for the clean-up process are the sites that pose potential risk to human health and the environment, with additional priority given to areas identified for reuse by the GSA (including the area to be used by FDA) and the Department of the Army.

The Navy has established five priority categories of compliance and cleanup activities at NSWC-White Oak. These are:

- Those sites that pose a potential imminent risk, including IR Program Site 46.
- Those actions required to complete the transfer of property to the GSA and the Army, including the termination of environmental permits and evaluation of groundwater within the FDA construction footprint.
- Those actions required to allow the GSA to proceed with demolition activities and the construction of the FDA facility, including explosive decontamination of Building 30.
- Those actions required to close out the sites in the FDA parcel, including site screening and possible further investigation and/or remediation of IR Program sites, RCRA Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs), and Environmental Baseline Survey (EBS) AOCs. For example, specific actions include completion of Records of

Decision (RODs) for IR Program Sites 1 and 11, and survey and cleanup of IR Program Sites 10 and 14.

- Remaining actions, as included in the schedules in Chapter 4.

Summary of Current BRAC Cleanup Action Items

Consistent with the Cleanup Strategy outlined above, the following is a listing of planned action items associated with environmental restoration, compliance, and technical/management that are planned for implementation by the BRAC Cleanup Team/Project Team for 1997 and beyond (see schedules in Chapter 4):

- Finalization of the Remedial Investigations for IR Program Sites 2, 3, 4, 7, 8, 9, and 11.
- Completion of an Engineering Evaluation/Cost Analysis for soil removal at IR Program Site 4.
- Additional evaluation and remedial action, if required, at IR Program Sites 10 and 14.
- Evaluation of basewide background concentrations.
- Continued risk evaluations for both human health and ecological risk.
- Basewide groundwater sampling, with highest priority on assessment of groundwater in the FDA reuse area.
- Completion of Site Screening Process for "AOC Group 1," which includes IR Program sites, RCRA SWMUs and AOCs, and EBS AOCs (primarily sites in the FDA reuse area).
- Removal of 19 Underground Storage Tanks (USTs) and completion of the site closure process.
- Continued removal of hazardous waste and hazardous materials, including clean closure of hazardous waste storage facilities with RCRA interim permit status.
- Continued screening and possible decontamination of former explosive and ordnance areas, in accordance with the safety plan.
- Closeout of the permits issued by the Navy Radiological Affairs Support Office (RASO) for the use, storage, and disposal of radioactive materials and waste, including associated survey.
- Final remediation of all identified sites by the end of calendar year 2005.
- Continued coordination and exchange of information with the Restoration Advisory Board (RAB), the GSA, and the U.S. Army in addressing the priority of parcels identified for reuse.

Chapter 1

Introduction and Summary

The Defense Base Closure and Realignment Act of 1990 directed the Secretary of Defense to close or realign those installations recommended by the Base Realignment and Closure (BRAC) commission. The Community Environmental Response Facilitation Act (CERFA) of 1992 directed federal agencies with jurisdiction over real property slated for closure to identify "uncontaminated" parcels of the real property. In 1995, the Naval Surface Warfare Center, Dahlgren Division, White Oak Laboratory (NSWC-White Oak) was selected for closure on the BRAC IV list. The mission termination date was January 1997, and operations are scheduled to cease in July 1997. Currently, it is anticipated that the U.S. Army will take possession of 48 acres of the site. The General Services Administration (GSA) will take possession of the remaining 662 acres at NSWC-White Oak to facilitate property reuse.

On 2 July 1993, the President announced a five-part program to speed economic recovery in communities where military bases are slated for closure/realignment. The Under Secretary of Defense for Acquisition has begun implementation of the five-part program, with a strategy paper promulgated on 15 July 1993. This strategy paper is one in a series of policy memoranda that may be issued to further implement the President's program and the strategy developed by the Under Secretary of Defense for Acquisition.

Improving the procedures for base closure and realignment will encourage economic development and reinvestment by helping communities get involved with reuse early. The Navy is committed to promoting timely, community based, productive reuse of closing/realigning bases and their assets. There are three principles of base closure: early interaction and cooperation with affected communities, acceleration of base drawdown where mission requirements are not compromised and functions can be successfully transferred, and provision for public interest. Expeditiously closing bases in a manner that balances community reuse needs and military operational requirements, while providing for the needs of the community, is the ultimate goal.

As a result of the Deputy Secretary of Defense's directive to implement the President's five-part program, a BRAC Cleanup Plan (BCP) is being developed and followed for each base that is slated for closure/realignment.

Past materials handling practices at NSWC-White Oak have made it necessary to investigate certain areas of the facility. During the investigation, if chemicals of concern were found in the soil, sediment, groundwater and/or surface water in concentrations that represent an unacceptable risk to human health or the environment, then the appropriate remedial/removal action will be taken, or an appropriate notification or restriction on reuse will be implemented. Compliance with applicable laws and regulations ensures that present waste and resources management practices are conducted in a manner that protects human health and the environment.

The purpose of the BCP is to summarize the status of NSWC-White Oak's environmental restoration and associated environmental compliance programs, to present a comprehensive strategy for implementing response actions necessary to protect human health and the environment, and to facilitate property transfer. Environmental restoration programs at NSWC-White Oak are performed under the Navy Installation Restoration (IR) Program. Compliance programs include the Resource Conservation and Recovery Act (RCRA) Corrective Action Program; regulation of Underground Storage Tanks (UST) per RCRA Subpart I and the Maryland Department of the Environment (MDE); Polychlorinated Biphenyls (PCB) per the Toxic Substances Control Act (TSCA); air emissions per the Clean Air Act; discharges to surface water (National Pollutant Discharge Elimination System [NPDES] permits) per the Clean Water Act; and explosives, radiological materials, asbestos, lead-based paint, and radon per Navy policy and regulations.

The BCP is a dynamic document that is to be updated regularly to incorporate newly obtained information and reflect the completion or change in status of remedial actions. Certain assumptions and interpretations have been made in order to develop the information, schedules, and remedial actions presented in this document; therefore, it may not fully represent information, schedules, and remedial actions that have been or will be approved by NSWC-White Oak or federal and state regulatory agencies. As additional data become available, implementation programs and cost estimates may be altered accordingly. Such changes would be reflected in future updates to the BCP and can be communicated to the Restoration Advisory Board (RAB) and the community as they are made.

The following is a summary of the BCP chapters:

- Chapter 1 describes the objectives of the environmental restoration program, explains the purpose of the BCP, introduces the Project Team formed to review the program, and provides a brief history of the facility.
- Chapter 2 summarizes the status of the property disposal planning process for NSWC-White Oak and describes the relationship of the disposal process to other environmental programs at the Base.
- Chapter 3 summarizes the history and status of environmental restoration and compliance programs, community relations activities, and the environmental condition of facility property.
- Chapter 4 describes the strategy for environmental restoration, including the strategies for dealing with each management area. This chapter also describes the strategy for environmental compliance programs. Master schedules are provided for planned and anticipated activities to be performed throughout the duration of the environmental restoration program, including associated compliance activities.
- Chapter 5 describes specific technical and/or administrative issues to be resolved and presents a strategy for resolving them.

In addition to the main text, the following appendices are included in this document:

- Appendix A contains tables presenting funding requirements.
- Appendix B presents a listing of previous environmental restoration program reports by program and by site.
- Appendix C contains a list of decision documents for selected remedial actions.

- Appendix D presents a list of the decision documents for each site for which a No Further Action decision has been made.
- Appendix E contains a list of conceptual models for sites and areas.
- Appendix F contains a statement of Navy policy.

1.1 Environmental Response Objectives

The objectives of the facility closure and environmental restoration program at NSWC-White Oak are as follows:

- Protect human health and the environment.
- Eliminate safety risk to the general public from explosive material or ordnance item contamination, consistent with reuse plans, Department of Defense (DOD) policy, and Navy policy.
- Meet reuse goals established by the GSA, the U.S. Army, and the Local Reuse Authority.
- Comply with existing statutes and regulations.
- According to Navy policy, conduct IR Program activities in a manner consistent with the National Contingency Plan (NCP) and Section 120 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA). Action under CERCLA will satisfy RCRA Corrective Action requirements when EPA Region III has given authority to defer RCRA Solid Waste Management Units (SWMUs) to CERCLA.
- Continue efforts to identify potentially contaminated areas.

- Establish priorities for environmental restoration and restoration-related compliance activities, so that property disposal and reuse goals can be met.
- Initiate selected early actions to control, eliminate, or reduce risks to manageable levels.
- Identify and map the environmental condition of installation property, concurrent with Remedial Investigation/Feasibility Study (RI/FS) efforts; consider future land use when characterizing risks associated with releases of hazardous substances, pollutants, contaminants, or hazardous wastes.
- Complete RIs as soon as practicable for each source area. Prioritize order in which RIs are completed by taking into account both environmental concerns and redevelopment plans.
- Develop, screen, and select remedial actions that reduce risks in a manner consistent with statutory requirements.
- Commence remedial actions for (1) environmental restoration/ compliance and (2) property disposal and reuse priority areas as soon as practicable.
- Conduct long-term remedial actions for groundwater and 5-year reviews for wastes left onsite, as appropriate.
- Establish interim and long-term monitoring plans for remedial actions as appropriate.

1.2 BCP Purpose, Updates, and Distribution

This BCP summarizes the current status of environmental restoration and compliance programs and the comprehensive strategy for environmental restoration and restoration-related compliance activities at NSWC-White Oak. It defines the response action approach at the installation in support of facility closure. In addition, it defines the status of efforts to resolve technical issues, so that continued progress and implementation of scheduled activities can occur. The strategies and schedules contained in the BCP are designed to streamline and expedite necessary response actions, in order to facilitate the earliest possible disposal and reuse activities.

The primary purpose of the BCP is to serve as a working document for the BRAC Cleanup Team (BCT). Its secondary purpose is to disseminate information to the public and other interested parties. The BCP and its revisions will be distributed to the following groups and individuals: the Restoration Advisory Board (RAB), the BRAC Cleanup Team (BCT), the GSA, the Department of the Army, the Department of the Navy, the DOD, NSWC-White Oak personnel, and the information repository at the public library. The document will be continually maintained by the BCT, and revisions will be issued no less than twice per year.

1.3 BRAC Cleanup Team/Project Team

The BRAC Project Team for NSWC-White Oak has been established and is led by the BRAC Environmental Coordinator (BEC). Table 1-1 lists the team members and specifies the role and responsibility of each. The core of the Project Team is the BCT, which includes the BEC, representatives of the U.S. EPA Region III and the Maryland Department of the Environment (MDE), and representatives from GSA. The Navy's Remedial Project Manager (RPM) from Engineering Field Activity-Chesapeake (EFACHES) is also an integral part of the Project Team.

Other members of the Project Team include technical specialists from the U.S. EPA, MDE, NSWC-White Oak, the GSA, the Department of the Army, other government agencies, and contractors. Project Team meetings provide a means for addressing environmental cleanup matters and related reuse issues.

1.4 Brief History of the Facility

NSWC-White Oak is located east of Maryland Route 650 (New Hampshire Avenue), approximately one mile north of Interstate 495 (Washington, DC beltway). The facility encompasses approximately 710 acres and is located in Silver Spring, Maryland, in both Montgomery and Prince George's counties. Approximately 635 acres of land at NSWC-White Oak is undeveloped. Adjacent to the south end of the property is the U.S. Army's Adelphi Laboratory Center (ALC). Additional properties adjacent to NSWC-White Oak include residential, commercial, and wooded parcels.

The history of facility operations is summarized in Figure 1-1 and Table 1-2. NSWC-White Oak was originally established in 1944 as the Naval Ordnance Laboratory (NOL), with a mission to carry out research in guns and explosives. Throughout the years, the mission was expanded to include research involving torpedoes, mines, and projectiles. In September 1974, NOL combined with the Naval Weapons Laboratory, Dahlgren, Virginia, to become the Naval Surface Weapons Center, which was renamed the Naval Surface Warfare Center, Dahlgren Division, in 1988. Since that time, it has functioned as the principal Navy Research Development, Test, and Evaluation Center for surface warfare weapon systems, ordnance technology, strategic systems, and underwater weapons systems.

The major claimant for NSWC-White Oak is the Naval Sea Systems Command (NAVSEA). NSWC-White Oak houses four major tenants: NSWC-Dahlgren Division (the host command), NSWC-Indian Head Division, NSWC-Carderock Division, and Public Works Center (PWC) Washington. There are currently less than 1,200 persons in the workforce (down from 1,800 persons in 1991). There are approximately 300 buildings and facilities at NSWC-White Oak, ranging in area from 16 sq ft to greater than 130,000 sq ft. The types of operations that have historically been and are currently located at NSWC-White Oak include: storage facilities (hazardous and non-hazardous materials), pesticide control shops, truck containment dikes (diked concrete pads for truck use when filling underground storage tanks), laboratories (research, photographic, printing, x-ray, plastics, explosives), test facilities (temperature, humidity, vibration, shock, pressure, corrosion, and explosives), drop towers, wind tunnels, transformer stations, boiler houses, waste-water treatment facilities, and offices. Also located at NSWC-White Oak is a small medical clinic, a fire department, residences for military personnel, and buffer areas

required to separate Naval facilities and operations from the surrounding community. An NSWC employee organization has developed and maintains a nine-hole golf course on one buffer area.

1.4.1 Geology

There are two physiographic provinces in the vicinity of NSWC-White Oak. These are the Piedmont and the Coastal Plain provinces. The boundary between the two provinces at NSWC-White Oak is located approximately 2,000 ft west of and parallel to the Montgomery County/Prince George's County line.

The Piedmont Province consists of fractured and faulted igneous, sedimentary, and metamorphic rocks. The eastern division, which NSWC-White Oak site straddles, consists of gneiss, slate, phyllite, schist, quartzite, marble, serpentinite, granitic, and gabbroic rocks. Ages of rock range from Precambrian to Ordovician. The rocks of the Piedmont Province are exposed at elevations over 340 ft above mean sea level (msl) and are overlain by sediments and deposits of the Coastal Plain province at elevations below 340 ft msl. Saprolite ranges in thickness from zero at rock outcroppings to more than 100 ft deep.

The Coastal Plain Province consists of unconsolidated, interbedded sand, silt, gravel, and clay deposits. Coastal Plain sediment and strata range in age from the Cretaceous to the Holocene. In the fall line zone where the Coastal Plain Province and the Piedmont Province meet, Coastal Plain deposits are generally only a few tens of feet thick and in many places have been entirely eroded away. However, in the far eastern portion of the facility, geologic logs indicate that these strata can be up to 70 ft thick.

The maximum relief of the site is approximately 253 ft, with a maximum elevation of approximately 398 ft above msl occurring in the extreme northwest corner of the facility, and the lowest elevation of approximately 145 ft above msl occurring on the southeast corner of the property. The western portion of the property slopes gently to the east towards Paint Branch Creek. The eastern portion of the property slopes gently to the west towards Paint Branch Creek. The entire site is within the Paint Branch Basin, which is a subbasin of the larger Anacostia River basin. Paint Branch Creek flows to the south.

1.4.2 Hydrogeology

Like the geology of NSWC-White Oak site, the hydrogeology at the site is influenced by two physiographic provinces, the Piedmont and the Coastal Plain.

Groundwater in the Piedmont Province occurs within the crystalline rocks and/or overlying saprolite, which is residual material developed by weathering crystalline rocks. Groundwater movement in crystalline rocks is controlled by the presence, interconnection, and the orientation of structural features such as joints (fractures), cleavage planes, and faults. Studies on the Maryland Piedmont indicate that groundwater circulation occurs in the upper 300 ft of a saprolite and/or bedrock section and that the individual water-bearing fractures probably do not extend laterally more than a few hundred feet.

In addition to groundwater within crystalline rock, there are unconfined and confined groundwater conditions at NSWC-White Oak in the Coastal Plain Province. Groundwater in the Coastal Plain sediment occurs within the permeable sand, gravel, and coarse-grained silt units. The low permeable clay and fine-grained silt units restrict groundwater flow and act as aquitards. The uppermost aquifer in the Coastal Plain Province is referred to as the water table aquifer or surficial aquifer and is considered unconfined.

1.5 Neighboring Property/Tenant Units

1.5.1 Neighboring Property

The off-base land use in the vicinity of NSWC-White Oak is shown in Figure 1-2. The Base is located in a residential neighborhood surrounded mainly by residential properties. Commercial properties, including light industry, and another military research facility are also adjacent to NSWC-White Oak. To the north of the facility are commercial retail businesses, an office building, several apartment complexes, and a rock quarry. To the east is a commercial/industrial park and a single-family residential community. To the south is the Powder Mill Community Park, the U.S. Army Adelphi Laboratory Center (formerly known as Harry Diamond Laboratories), residential areas, and the Hillandale Company 12 Fire Department. To the west is New Hampshire Avenue and single-family residential development.

A visual survey was performed of adjacent properties as part of the Environmental Baseline Survey (EBS). It was concluded in the EBS report that, with the exception of the U.S. Army Adelphi Laboratory Center, there were no apparent environmental impacts either from adjacent properties on NSWC-White Oak or on adjacent properties from activities at NSWC-White Oak.

1.5.2 Tenant Units

Table 1-3 lists the significant tenant commands/units hosted by NSWC-White Oak.

Table 1-1. BCT/Project Team Members

Name, Title, Organization	Role	Phone, Fax, e-Mail
BCT Members		
Debes, Harry GSA/National Capital Region	GSA property development	(202) 708-7248 fax (202) 708-4730
Holmes, Wanda (Interim) Kim Parker -starting 6/8/97 BRAC Environmental Coordinator NSWC-White Oak	BCT member, RAB Navy co-chair; Navy coordinator for environmental issues	(202) 685-3278 fax (202) 685-0979 wholmes@efaches.navfac.navy.mil
BRAC Cleanup Team Representative Maryland Department of the Environment	MDE representative to BCT	(410) 631-3440 fax (410) 631-3472
Yap-Deffler, Yazmine BRAC Cleanup Team Representative U.S. EPA, Region III	EPA representative to BCT	(215) 566-3369 yap-deffler.yazmine@epamail.epa.gov
Other Key Participants		
Bachle, Laura/Stacy Miller MD Environmental Planning Division	MDEPC POC on environmental issues	(301) 495-1323 bachle@mncppc.state.md.us
Bellis, Kim Remedial Program Manager EFACHES	Manages Installation Restoration Program; attends BCT meetings	(202) 685-6293 fax (202) 685-0979 kbellis@efaches.navfac.navy.mil
*Caudle, Ken Base Transition Coordinator NSWC/OSD	Coordination and facilitation of aspects of base closure and transfer. Liaison with OPSD BRAC office.	(301) 394-1238 fax (301) 394-1867 Kenneth_Caudle/Sweden/ Europe.Europe@notemail.acq.osd.mil
Chalfant, Patricia Legal Counsel EFACHES	Legal Counsel	(202) 685-3234 fax (202) 433-5759 pjchalfant@efaches.navfac.navy.mil

Name, Title, Organization	Role	Phone, Fax, e-Mail
Craig, Robert Environmental Manager U.S. Army Adelphi Laboratory Center	Army environmental representative	(301) 394-4511 rcraig@arl.mil
Foley, Bob U.S. Fish and Wildlife Service	Support on ecological issues	(410) 573-4519
Herbert, Edward Department of Env. Protection Montgomery County	Montgomery County contact for environmental issues.	(301) 217-2355 fax (301) 217-3321
Hiortdahl, Steven Geologist U.S. Geological Survey	Technical assistance to EFACHES IR Program	(410) 512-4905 snhiortd@srvrmdtws.er.usgs.gov
Ioven, Dawn Toxicologist U.S. EPA, Region III	Technical assistance on toxicological issues.	(215) 566-3320
*Kuhlman, LT Kim Staff Civil Officer NSWC-White Oak	Heads office responsible for facilities, utilities management; closest equivalent to Caretaker Site Officer	(301) 394-1442 fax (301) 394-4880 kzych.pwdl-1@wmail.nswc.navy.mil
*Marion, Richard Explosive Safety Officer NSWC-White Oak	Coordination and oversight of explosive safety issues involved in base cleanup	(301) 394-1421 fax (301) 394-5803 rmarion@nswc.navy.mil
Meyer, Paul Department of Env. Protection Prince George's County	Prince George's County contact for environmental issues.	(301) 883-7602 fax (301) 883-7601
Mills, Dave Designer EFACHES	Engineer responsible for designs for remedial actions under White Oak IR Program	(202) 685-3110 fax (202) 685-3324 ddmills@efaches.navfac.navy.mil
Nishitani, Brian Legal; U.S. EPA, Region III	EPA legal oversight	(215) 566-2675
Okorn, Barbara Biological Technical Assistance Group (BTAG) U.S. EPA, Region III	Ecological risk assessment issues	(215) 566-3330

Name, Title, Organization	Role	Phone, Fax, e-Mail
Price, Richard Community Co-Chair Restoration Advisory Board	Community Co-chair, RAB. Community relations contact for issues with IR Program.	(301) 394-2286 fax (301) 394-4797 rprice@arl.mil
Richard, Steven Environmental Manager General Services Administration	GSA environmental contact; transition of compliance programs to GSA	(202) 708-5236 fax (202) 708-6618 steven.richard@gsa.gov
*Ridgway, Robert IR Program Coordinator NSWC-White Oak	NSWC coordinator for IR program	(301) 394-2307 fax (301) 394-4880 rridgwa@nswc.navy.mil
Rundell, Bruce Hydrogeologist U.S. EPA, Region III	Hydrogeological EPA oversight	(215) 566-3317
Smyth, Dave EPA/Gannett-Fleming	EPA oversight support	(410) 433-8832
Spicer, Bill	Coordinate Natural Resources management issues associated with BRAC.	(301) 227-2399 fax (301) 227-3013
Tino, John Community Co-Chair Restoration Advisory Board	Community Co-chair, RAB. Contact for community relations issues with IR Program.	(301) 439-3140
*Westermeyer, Marcie Public Affairs Office NSWC-White Oak	Community relations aspects of RAB	(301) 394-2865 fax (301) 394-4691 dzook@nswc.navy.mil
Zielinski, Denis RCRA U.S. EPA, Region III	RCRA EPA oversight	(215) 566-3431
*Zook, Deanna Public Affairs Officer NSWC-White Oak	Community relations	(301) 394-2865 fax (301) 394-4691 dzook@nswc.navy.mil

Name, Title, Organization	Role	Phone, Fax, e-Mail
Contractors		
Morekas, Sam Program Manager EA Engineering, Science, and Technology	Contractor for property assessments, site investigation, and BCP preparation.	(410) 771-4950 fax (410) 771-4204 sam@eaest.com
Nesbit, Scott Project Manager Brown & Root Environmental	Remedial design project manager	(412) 921-7134 fax (412) 921-4040
Orient, Jeff Project Manager Brown & Root Environmental	Remedial design project manager for IR Program Site 46	(412) 921-7134 fax (412) 921-4040
Rubin, Barry CTO Manager EA Engineering, Science, and Technology	Contractor for property assessments, site investigation, and BCP preparation.	(410) 527-2403 fax (410) 527-1840 blr@eaest.com
Program Manager OHM	Remedial action project contractor	(301) 586-8328

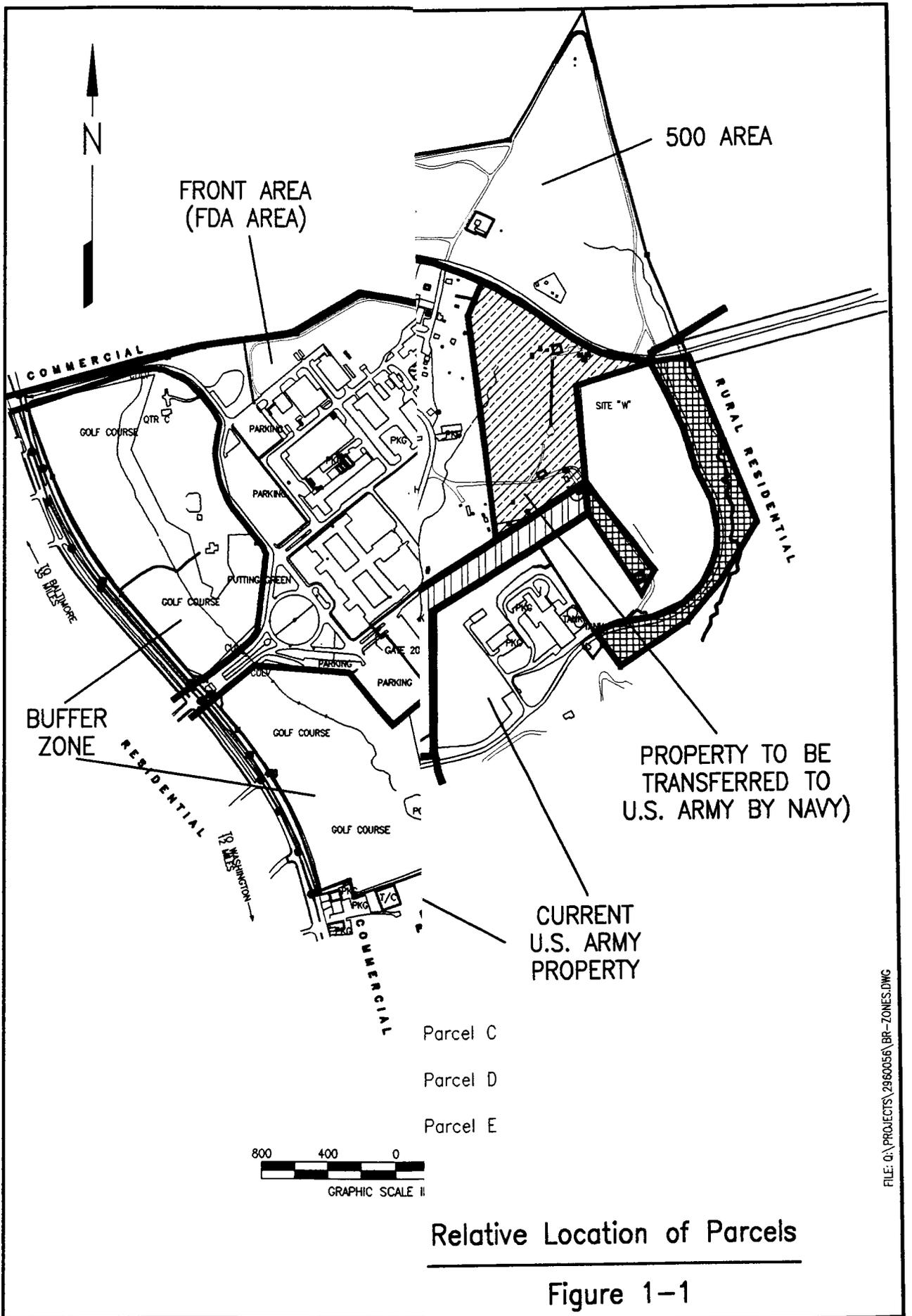
* Due to the closure of NSWC-White Oak, it is expected that these employees will no longer be associated with NSWC-White Oak, on or before 31 July 1997.

Table 1-2. History of NSWC-White Oak Operations

Period	Type of Operation	Hazardous Substance Activities	Map Reference (Figure 1-1)
Original Mission	Mine Research and Development		
1946-Mission Cease	Machine Shops and Laboratories	Electroplating, Painting, and Laboratory Research	100 Area (including FDA Area and 100 Back Area)
1946-Mission Cease	Magnetic Research Facilities	Radio and Antenna Testing	200 Area
1946-Mission Cease	Explosives Research and Testing	Explosives, Laboratory Chemicals	300 Area
1946-Mission Cease	Wind Tunnel Research	Materials testing and evaluation.	400 Area
1946-Mission Cease	Underwater Weapons Testing	Weapons testing and evaluation.	400 Area
1946-Mission Cease	Radioactive Dosimeter Testing	Evaluation of Exposure to Radioactive Materials	500 Area
Mid-1960s - Mission Cease	Energetic Material Research and Development	Synthesis and Formulation, Blending and Machining of Hazardous Materials	600 Area
1980s - Mission Cease	Hazardous Waste Storage	Hazardous Waste Storage	500/700 Areas

Table 1-3. On-Base Tenant Units

Tenant	Building(s)
Carderock Division - NSWC	1, 20, 24, 25, 27, 29-2, 30, 70, 70CL-1, 70CL-2, 71, 76, 90, 108, 130, 132, 132-2, 135, 151, 201, 203, 203-A, 206, 208, 209, 300, 313, 323, 333-1, 336, 336-1, 345CL-1, 369-4, 371, 379, 380, 380T, 380T-1, 387-1, 388, 389, 389-1, 389-2, 402, 405, 411, 424, 427, 506, 510, T05, T29
Indian Head Division - NSWC	1, 2, 4, 20, 24, 25, 27, 28, 28-1, 30, 90, 151, 301, 302, 303, 304, 305, 305-2, 305-3, 306, 308, 310-A, 310-B, 310-C, 310-D, 310CL-1, 310CL-2, 311, 312, 312-1, 312-4, 312-6, 314, 314-2, 314-3, 315, 315-1, 316, 317, 317-1, 318, 318-1, 319, 319-1, 319-2, 319-4, 321-1, 322, 323, 324, 324-1, 325, 326, 327, 328, 328-3, 328-4, 329, 331, 332, 334, 335, 335-1, 335-2, 335-3, 336, 338, 339, 340, 344, 348, 348-1, 348-2, 349, 351, 352, 353, 354, 356, 357, 358, 359, 360, 362, 363, 364, 366, 369, 369-1, 375, 376, 386, 390, 391, 392, 395, 427, 613, 613-1, 615, 619, 619-1, 619-2, 620, T26, T28, T35
Navy Tactical Support Activity	90
Public Works Center (PWC), Washington Navy Yard	20, 25, 100, 101, 101-A, 109, 110, 111, 115, 150, A, B, M



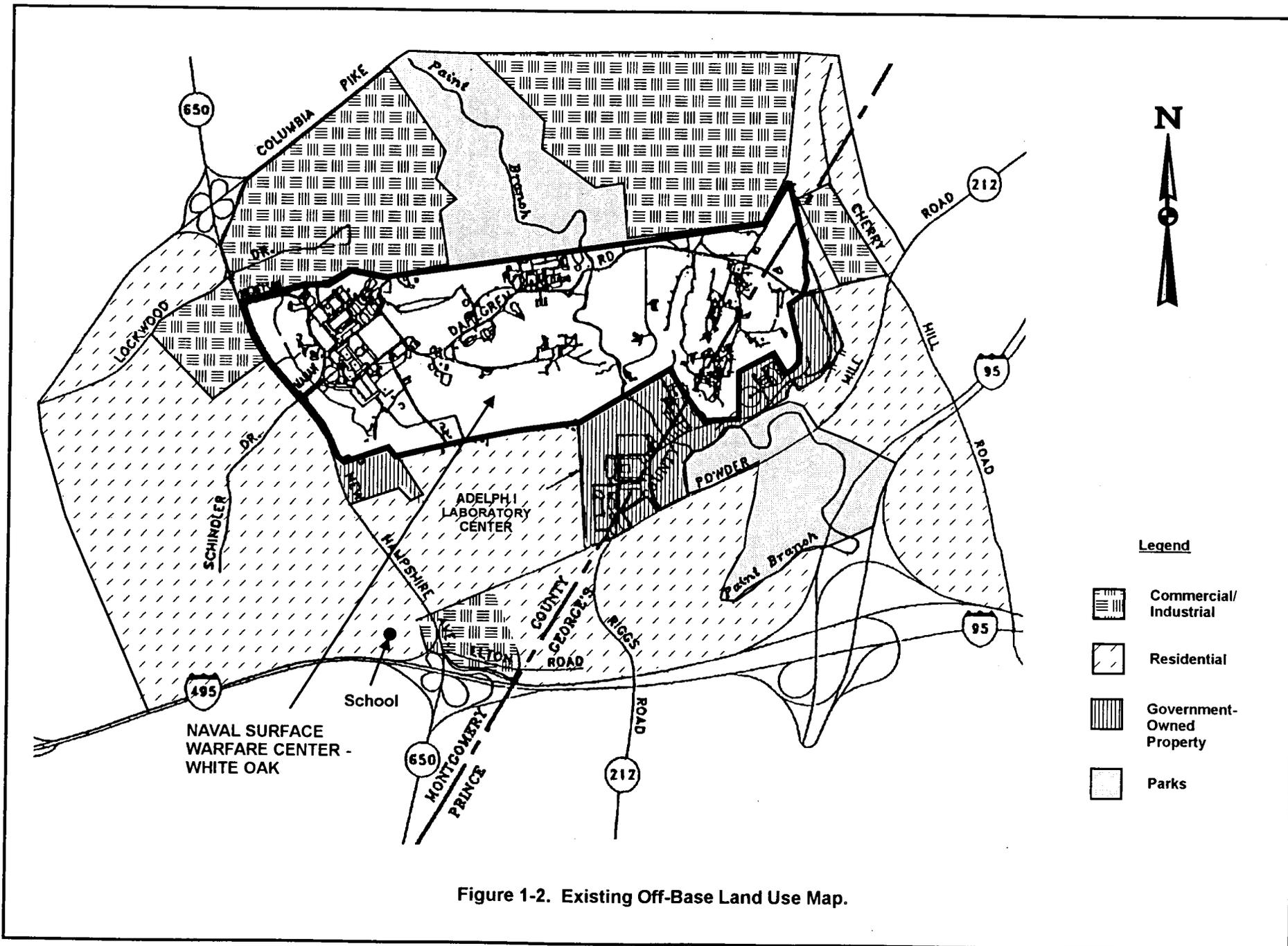


Figure 1-2. Existing Off-Base Land Use Map.

Chapter 2

Property Disposal and Reuse Plan

2.1 Status of Disposal Planning Process

It is anticipated that 48 acres in the southeastern portion of NSWC-White Oak will be transferred to the U.S. Army, and the remaining property (662 acres) will be transferred to the GSA. The reuse parcels are shown in Figure 1-1. Additional details related to the parcels can be found in Table 2-1.

The majority of the property will be transferred to the GSA, which will facilitate reuse of the property. The GSA has not fully completed a reuse plan that indicates possible reuse scenarios for the parcels of land at the facility. However, it is planned that the Food and Drug Administration (FDA) will use a parcel encompassing the "front area" of the facility. A footprint boundary has been drawn for the area that will be occupied by the FDA. Other government agencies have also expressed interest in using portions of the property. In addition, the GSA has begun discussions with private entities on possible public-private partnership, which could lead to development of portions of the property.

A boundary line has also been drawn for the area that will be transferred to the U.S. Army. The U.S. Army owns property south of and adjacent to NSWC-White Oak that is used for research and development laboratories. The property that the U.S. Army is acquiring will be used as a research and development site for atmospheric profiling, as well as providing a buffer area between the U.S. Army activities and GSA property.

The existing buildings at the facility were specifically designed to support military research and development operations. As future activities at the parcels are planned, structural improvements and/or renovations may be required.

2.2 Relationship to Environmental Programs

As noted above, NSWC-White Oak will be transferred to other Federal government agencies. Therefore, the environmental requirements for the transfer are included in the Department of the Navy Environmental Policy Memorandum 95-01: Environmental Requirements for Federal

Agency-to-Agency Property Transfer at BRAC Installations (26 May 1995). In accordance with these requirements, an Environmental Baseline Survey (EBS) was completed in July 1996. In preparation for transfer, draft Memoranda of Agreement with the transferees and draft Environmental Summary Documents were prepared in 1997 by the Navy. The EBS Report and the Environmental Summary Documents will be provided to the transferees, in order to inform them of property uses, environmental restoration and compliance documentation, future use restrictions, and property notifications. Although hazardous substances or petroleum products are present, NSWC-White Oak property will be suitable for transfer to other Federal agencies because it meets the conditions described in paragraph (f)(3) of the Department of the Navy's Environmental Policy Memorandum 95-01: "Environmental Requirements for Federal Agency-to-Agency Property Transfer at BRAC Installations." Specifically, the property can be transferred for the proposed uses, with specified use restrictions, if risk to human health and the environment are deemed acceptable according to U.S. EPA guidance, and without interference to the environmental restoration process.

In addition to the environmental restoration conditions discussed above, several compliance programs must be closed out prior to transfer:

- The permits issued by the Navy Radiological Affairs Support Office (RASO) for the use, storage, and disposal of radioactive materials and waste must be closed out.
- The Department of Defense Explosive Safety Board (DDESB) must review and approve the Memoranda of Agreement and Environmental Summary Documents to ensure that the screening and possible decontamination of former explosive and ordnance areas can be completed in accordance with the safety plan.
- Closure of the hazardous waste storage facilities must be completed in accordance with Resource Conservation and Recovery Act (RCRA) requirements.
- The hazardous material use permit for Montgomery County must be terminated.
- The National Pollutant Discharge Elimination System (NPDES) permit for surface water discharge (primarily rain water) must be terminated.

- The permit with Washington Suburban Sanitary Commission (WSSC) for industrial wastewater discharge must be terminated.
- The oil use permit issued by MDE must be transferred to the GSA.

Detailed information on compliance programs and closure requirements is included in Chapters 3 and 4 of this BCP.

2.3 Property Transfer Methods

Property transfer at NSWC-White Oak will be within the government, rather than a transfer by deed to non-government parties. The Memoranda of Agreement prepared in 1997 define the on-going responsibilities of the Navy and the transferees (the GSA and the Army) with regards to the transfer of the property. Most of these responsibilities are environmental in nature; however, some are not. A Memorandum of Agreement is not required for transfer of property between federal agencies. The parties involved in the transfer of NSWC-White Oak decided that Memoranda of Agreement would be beneficial, since the Navy will be present after the base is transferred to continue its environmental remediation. The Environmental Summary Documents are essentially reports on the environmental condition of the property, which list land use restrictions to be imposed. The Memoranda of Agreement and the Environmental Summary Documents will be forwarded to the Assistant Secretary of the Navy, Installations and Environment [ASN(I&E)], as part of the package requesting approval for property transfer. The documents will be signed by the person authorized to approve Findings of Suitability to Transfer/Findings of Suitability to Lease (FOST/FOSL).

Table 2-1. Reuse Parcel Data Summary

Areas (Figure 1-1)	Description/ Proposed Reuse	Environmental Summary (number of sites)			USTs/ASTs (total quantity to remain in area)	Proposed Recipient
		IR Program sites ^(a)	RCRA SWMUs/ AOCs ^(a)	EBS Areas of Concern		
Buffer Area	Buffer area may continue to be used as a golf course.	0	0	1	0/4	General Services Administration
Front Area (FDA Area)	Front Area will be used by FDA as offices and research facilities.	10	29	3	2/4	General Services Administration
100 Back Area	Portion of 100 Area that is not included in FDA Area. Proposed reuse is unknown.	3	5	3	2/2	General Services Administration
200 Area	Proposed reuse is unknown.	4	1	1	0/1	General Services Administration
300 Area	Proposed reuse is unknown.	7	16	5	0/15	General Services Administration
400 Area	The 400 Area may be used by the U.S. Air Force for wind tunnel research.	1	5	1	0/4	General Services Administration
500 Area	Proposed reuse is unknown.	6	4	3	0/0	General Services Administration
600 Area	Proposed reuse is unknown.	2	4	4	0/0	General Services Administration

Areas (Figure 1-1)	Description/ Proposed Reuse	Environmental Summary (number of sites)			USTs/ASTs (total quantity to remain in area)	Proposed Recipient
		IR Program sites ^(a)	RCRA SWMUs/AOCs ^(a)	EBS Areas of Concern		
U. S. Army Transfer Area - Parcels C, D, and E	Parcel C and Parcel D will be used as a buffer between the Army and neighboring GSA properties. Parcel E will be used to locate equipment for research and development in atmospheric profiling.	2	5	3	0/1	U.S. Army

(a) RCRA SWMUs/AOCs and EBS AOCs that also have IR Program site numbers are included in the IR Program site column, rather than the RCRA SWMUs/AOCs column.

Chapter 3

Installation-Wide Environmental Program Status

The status of environmental restoration projects and ongoing compliance activities at NSWC-White Oak is summarized in this chapter. The planned action for each of the activities is included in Chapter 4 of this BCP. Schedules for implementation of the plans are included in Chapter 4, and budgets for the plans are included in Appendix A.

3.1 Environmental Restoration Program Status

The Navy Installation Restoration (IR) Program sites that have been identified are included in Table 3-1. In addition, Table 3-1 provides the area location of each site for cross-reference to Figure 3-1, which displays the site locations. Figure 3-2 shows the locations of IR Program sites, Figure 3-3 shows the locations of RCRA SWMUs and AOCs, and Figure 3-4 shows the locations of EBS AOCs.

3.1.1 Installation Restoration Program

In response to RCRA in 1976 and in anticipation of CERCLA in 1980, the Navy implemented the Navy Assessment and Control of Installation Pollutants (NACIP) Program to identify and remediate sites potentially affected by past operations or releases of hazardous constituents. With the passage of SARA in 1986, Federal facilities were required to follow CERCLA for these actions. DOD renamed the NACIP Program as the Installation Restoration (IR) Program. Phases of the NACIP program were changed to ensure procedural consistency between the IR Program and CERCLA and the NCP. Formerly, the NACIP phases were as follows:

- Phase I - Initial Assessment Study
- Phase II - Confirmation Studies -staged effort
- Phase III - Technology Development (optional)
- Phase IV - Planning and Implementation of Appropriate Remedial Actions

The IR Program terminology and phases are in accordance with the NCP, as follows:

- PA/SI - Preliminary Assessment/Site Inspection

- RI/FS - Remedial Investigation/Feasibility Study
- ROD - Record of Decision
- RD/RA - Remedial Design/Remedial Action

An Initial Assessment Study (IAS) was conducted at NSWC-White Oak in October 1983 to identify potential threats to human health and the environment as a result of past hazardous waste activities. A total of 14 sites at NSWC-White Oak were identified as former disposal sites for hazardous waste and/or sites at which a hazardous waste spill occurred. It was concluded that 7 of the 14 sites posed a potential threat to human health or the environment and required further investigation.

The seven sites not included in the Confirmation Study (CS) were:

- Site 1, Parking Lot Landfill
- Site 5, Open Burning Areas
- Site 6, Sludge Composting Area
- Site 10, Radium Spill at Building 74
- Site 12, Waste-Water Disposal from "200" Area
- Site 13, Oil Disposal Area
- Site 14, Soil near Building 70

IR Program Site 10 was identified as a radium spill at Building 74 in the 1950s. The spill was cleaned up at the time, and 2 ft of concrete was added to the floor as a shield. The building was kept locked until 1984, when it was dismantled (including the floor) and disposed off base.

IR Program Site 14 was identified as a 25 square-foot area of soil northeast of Building 70 where radioactive material was disposed in the 1950s. In 1983, the sidewalk was replaced, and 2 ft of underlying soil was removed and disposed off base.

Although the seven sites discussed above were not recommended for a Confirmation Study under the IR Program, they were identified as RCRA SWMUs or AOCs during the RCRA Facility Assessment (RFA) conducted by A.T. Kearney, Inc. in 1990. These sites are included in a site screening process (see status in Table 3-1). The site screening process will include reviews of reports, site inspections, and interviews with former and current employees with knowledge of the

sites. Each site will be recommended for no further action, sampling, or other action. A Master Work Plan will be developed and implemented for the site screening process, so that sampling plans can be easily added for individual sites where sampling is deemed necessary. Following the site screening process, sites requiring additional investigation will be placed into the CERCLA process described above.

In 1996, the area south of Structure 387 (a large non-operational centrifuge area) was identified as IR Program Site 46. The centrifuge itself is lined with concrete and asphalt and contains a large center-mounted aircraft-type wing. According to former facility personnel, surface runoff from the concrete decking runs to storm water drains located within the centrifuge. Substances released within the centrifuge area would likely be discharged from the area through this pathway. The U.S. Army detected trichloroethene (TCE) in the groundwater near Site 46. The Navy is conducting additional sampling to evaluate whether the centrifuge area is a potential source.

The IR Program sites discussed in this section account for 28 of the 116 RCRA Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) identified in the RCRA Facility Assessment (RFA, 1990). By the authority of the U.S. EPA, corrective action for these 28 sites and 71 other SWMUs and AOCs has been deferred to CERCLA. Of the 71 other SWMUs and AOCs deferred to CERCLA, 20 have been assigned IR Program site numbers. These sites are included in the ongoing site screening process (see Section 3.2.1). The complete list of sites, including IR Program sites, SWMUs, and AOCs identified during the EBS, is included in Table 3-1.

In September 1985, a CS was initiated by Malcolm Pirnie for the seven NACIP sites recommended for further investigation in the IAS (Sites 2, 3, 4, 7, 8, 9, and 11). Groundwater, surface water, soil and sediment samples were collected at the sites. The purpose of the investigations was: to assess the concentrations and a real extent of chemicals of potential concern, to assess whether migration pathways were present that would allow the chemicals to reach the environment, and the level of impact to the environment or human health from site activities. A description of the types and levels of constituents detected and the media impacted (groundwater, surface water, sediment, etc.) were provided in the EBS report (EA, 26 July 1996).

The RI and FS for these seven sites was completed by Malcolm Pirnie in October 1992 and October 1993, respectively. The RI provided preliminary objectives for remediation of the sites,

which consisted of removing the remaining sources of chemicals and preventing further migration of constituents of potential concern. The FS, based on engineering analysis, provided preferred remedial alternatives for each media requiring remediation.

Because the Navy did not feel that sufficient information was available to proceed with design preparation, it directed Brown & Root Environmental (formerly Halliburton NUS) to prepare Design Verification Reports (DVRs) for remedial actions at IR Program Sites 2, 3, 4, and 9 in June 1995 and IR Program Sites 8, 9 and 11 in August 1995, respectively (Site 9 was discussed in both reports). The reports provided additional support for the environmental findings and modified the recommended remedial actions identified in previous reports. A DVR has not been completed for Site 7. Sites 8, 9, and 11 were addressed under an accelerated schedule for soil excavation, as an interim source removal action; these actions have been completed, and the Final Post-Removal Action Report (1997) is undergoing regulatory review.

The remedial design phase has been initiated for soil at Sites 2 and 3; a 30 percent design has been completed. The design process is on hold until the Navy can gather information sufficient to support a final Record of Decision (ROD). The remedial alternatives under consideration include installation of landfill caps that meet the requirements of RCRA Subtitle C, "clean closure" (removal and offsite disposal), and other physical containment methods. The potential presence of explosive waste at Sites 2 and 3 is factored into the decision-making process for these sites. Groundwater remediation at the IR Program sites will be addressed following soil remediation. In addition, further evaluation of the streams at NSWC-White Oak will be conducted.

Soil has been removed at several IR Program sites (Sites 8, 9, and 11) to reduce known sources of constituents of potential concern. These actions were performed to accomplish partial remediation, while investigations or remedial designs are ongoing. The status of these early actions is summarized in Table 3-2.

A summary of the issues identified at each site and the recommended remediation method from the DVR follows:

Site 2 Apple Orchard Landfill

Previous Investigations

The Apple Orchard Landfill was identified in the IAS report (November 1984). The site was also included in the CS Report (April 1987), the RI Report (October 1992), the FS Report (March 1993), and the DVR (June 1995).

The site, operated as an open disposal/landfill area between 1948 and 1982, consists of approximately 0.8 acres located approximately 1/4 mile north of Building 120. Wastes disposed at the site consisted of solvents, paint residue, and other miscellaneous chemicals, including approximately 500 gallons of oil containing polychlorinated biphenyls (PCB), which was buried prior to 1970. Ordnance shapes have been found in and on the disposal/landfill area.

Volatile organic compounds (VOCs) were detected in soil, groundwater and surface water; PCB were detected in soil and stream sediment; polycyclic aromatic hydrocarbons (PAHs) were detected in soil; and metals were detected in soil and groundwater at the site.

Design Verification Report

During the Design Verification Sampling and Analysis, the extent of the waste in the Apple Orchard Landfill was assessed using an electromagnetic survey and test trenches. Sediment containing PCB was detected approximately 350 ft downstream of the eastern limits of the landfill. PCB were also discovered within the adjacent stream west of the landfill and in the western face of the landfill.

The remedial design phase has been initiated for soil at Sites 2 and a 30 percent design has been completed. The design process is on hold until the Navy can gather information sufficient to support a final Record of Decision (ROD). The remedial alternatives under consideration include installation of landfill caps that meet the requirements of RCRA Subtitle C, "clean closure" (removal and offsite disposal), and other physical containment methods. The potential presence

of explosive waste at Site 2 is factored into the decision-making process for the site. Because this landfill site contains ordnance-related items, both on the surface and buried, closure activities will be conducted with caution. Ordnance-related items exposed during landfill remediation shall be considered unexploded ordnance (UXO) and handled in accordance with the requirements discussed in Section 3.2.3. The plan for Site 2 includes completion of a Record of Decision (ROD), completion of a remedial design, and completion of remedial action.

Site 3 Pistol Range Landfill

Previous Investigations

The Pistol Range Landfill was identified in the IAS report (November 1984). The site was also included in the CS Report (April 1987), the RI Report (October 1992), the FS Report (March 1993), and the DVR (June 1995).

The site, operated as a landfill from the 1940s to the mid-1970s, is located between Dahlgren Road and the north boundary of NSWC-White Oak, southwest of the old pistol range. Fill materials were noted to have been pushed into the gully formed by the small stream which flows into Paint Branch south of NSWC-White Oak property. Wastes disposed of at the site consisted of inert solid waste, hydrocarbon solvents, possible PCB-contaminated oil, sodium nitrate, and miscellaneous metallic objects. Ordnance shapes have been found in and on the disposal/landfill area.

VOCs were detected in soil, groundwater, and surface water; metals were detected in soil and groundwater at the site.

Design Verification Report

An electromagnetic survey, landfill boring, and test trenches were performed at this site as part of the Design Verification Sampling and Analysis, in order to assess the extent of waste disposal. The depth of waste at the site varies from 0 to 20 ft over 1.1 acres of area.

Capping of the landfill and installation of a groundwater treatment system are possible remedial alternatives. The area of the landfill requiring capping was estimated to be 1.1 acres. The

proposed cap would meet the requirements of RCRA, Subtitle C, and will consist of 2 ft of cover soil, a geosynthetic filter, a double geosynthetic drainage layer, a geomembrane moisture barrier, and geosynthetic filter fabric. The cap system would also contain controls for storm-water management so that erosion would be minimized. Due to the physical configuration of the site, "clean closure" (removal and offsite disposal) and other containment systems are being considered for the site. The potential presence of explosive waste at Site 3 is factored into the decision-making process for the site. Because this landfill site contains ordnance-related items, both on the surface and buried, closure activities will be conducted with caution. Ordnance-related items exposed during landfill remediation shall be considered unexploded ordnance (UXO) and handled in accordance with the requirements discussed in Section 3.2.3. The plan for Site 3 includes completion of a Record of Decision (ROD), completion of a remedial design, and completion of remedial action.

Site 4 Chemical Burial Area

Previous Investigations

The Chemical Burial Area was identified in the IAS report (November 1984). The site was also included in the CS Report (April 1987), the RI Report (October 1992), the FS Report (March 1993), and the DVR (June 1995).

The site, used as a chemical burial site from the mid-1950s through the early 1970s, encompasses approximately 1.1 acres located along the north boundary road near the northeast corner of the center. Wastes, consisting of acids, explosives, kerosene, chlorinated solvents, and numerous unidentified laboratory chemicals, were disposed at four discrete locations within the site.

VOCs were detected in soil and groundwater; semivolatile organic compounds (SVOCs) were detected in soil, and metals were detected in groundwater at the site.

Design Verification Report

An electromagnetic survey and subsurface soil sampling were used to assess the location of the burial pits at the site during the Design Verification Sampling and Analysis. Concentrations of organic constituents were identified above screening levels. Waste and impacted soil were

detected at depths up to 22 ft, although the highest concentrations of constituents of potential concern occurred between 6 and 14 ft. The electromagnetic survey indicated the location of two burial areas. The first area is located adjacent to Perimeter Road, and the second area is on the southeast corner of the site adjacent to the former telephone pole storage area. No impact to soil was found outside of the two burial areas.

The recommended method of remediation was excavation of the soil in the two former burial areas. The volume of the soil in these two areas is estimated to be 3,800 cubic yards. The removal action is scheduled to be implemented in 1998. The plan for Site 4 includes completion of a Record of Decision (ROD), completion of a remedial design, and completion of remedial action.

Site 7 Ordnance Burn Area

Previous Investigations

The Ordnance Burn Area was identified in the IAS report (November 1984). The site was also included in the CS Report (April 1987), the RI Report (October 1992), and the FS Report (March 1993). A DVR has not yet been written for Site 7.

The site, used as a disposal site for waste ordnance compounds between 1948 and 1968, is located in a gully about 20 ft west of Building 501. Wastes disposed of at the site consist of over 33,000 lbs of explosives, primarily nitroaromatic and nitroaliphatic compounds.

VOCs and explosives (TNT, RDX) were detected in groundwater; nitroaromatic compounds were detected in sediment.

Design Verification Report

A DVR has not yet been written for Site 7. A RI/FS is scheduled (Chapter 4) to begin for Site 7 during 1997 and completed in 1999. The ROD is scheduled to be completed during 1999.

Site 8 Abandoned Chemical Disposal Pit

Previous Investigations

The Abandoned Chemical Disposal Pit was identified in the IAS report (November 1984). The site was also included in the CS Report (April 1987), the RI Report (October 1992), the FS Report (March 1993), the DVR (August 1995), and the Post Removal Action Report (1997).

The site, used from 1951 until 1971 for disposal of miscellaneous waste chemicals from laboratories, is a 10 ft x 10 ft x 12 ft pit located just north of the boundary between NSWC-White Oak and the U.S. Army Adelphi Laboratory Center, at the end of the southern boundary patrol road. VOCs and metals were detected in soil and groundwater at the site.

Design Verification Report

Using an electromagnetic survey and subsurface soil sampling, the location of the burial pit was identified. Organic and inorganic constituents were identified in the sampling at depths between 1 and 6 ft. No constituents were identified in soil samples in areas where wastes were originally placed.

Removal Action

Soil excavation and removal was proposed at the site. Approximately 58 tons of waste containing lead, cadmium, and TCE and 52 tons of non-hazardous waste were removed from Site 8. The site no longer presents an unacceptable risk for current or future land use as a result of exposure to subsurface soils within the action area. A draft Post Removal Action Report has been prepared for Site 8.

Site 9 Industrial Waste Water Disposal Area 300

Previous Investigations

The 300 Area Industrial Waste Water Disposal Area was identified in the IAS report (November 1984). The site was also included in the CS Report (April 1987), the RI Report (October 1992), the FS Report (March 1993), and the DVR (August 1995).

Site 9 consists of several leaching wells and aboveground discharges used for disposal of at least 7,200 lbs of explosive-contaminated liquid waste from the early 1950s to the mid-1970s. The site is located along an intermittent stream bank just east of the "300 Area," with Buildings 310A, 311, 344, 345, and 318 contributing to waste disposal in this area.

VOCs and nitroaromatic compounds were detected in soil, sediment, and groundwater; explosives were detected in soil and sediment at the site.

Design Verification Report

Twenty leaching well and leaching field locations were identified within the area using historical drawings, a site reconnaissance, and a geophysical investigation (terrain conductivity). Subsurface soil or waste sampling was conducted at each of the locations after it was determined if leaching wells had been removed or if they remained at the facility. If constituents of potential concern were identified in a sample, additional samples were collected in the vicinity. Organic compounds were identified in samples collected from the area of Leaching Well 9, although no constituents of potential concern were identified in samples collected from the area surrounding Leaching Well 9.

Recommended measures were to remove Leaching Well 9 at Site 9A and the impacted soil surrounding it. It was also recommended that Leaching Well 1 at Site 9B, the other remaining leaching well, be removed.

Removal Action

Twenty-seven tons of non-hazardous material was removed from site 9A. Eighty-one tons of material that was deemed hazardous for lead was removed from site 9B. Site 9 no longer presents an unacceptable risk for current or future land use as a result of exposure to subsurface soils within the action area. A draft Post Removal Action Report has been prepared for Site 9.

Site 11 Industrial Waste Water Disposal Area 100

Previous Investigations

The 100 Area Industrial Waste Water Disposal Area was identified in the IAS report (November 1984). The site was also included in the CS Report (April 1987), the RI Report (October 1992), the FS Report (March 1993), and the DVR (August 1995).

Site 11 consisted of 13 leaching wells located throughout approximately 16 acres in the "100 Area." It has been estimated that over 20,000 gal of waste was disposed in the leaching wells. Disposed wastes included dissolved metals (including silver, chromium, and lead ions), acids, chlorinated/non-chlorinated solvents, alcohols, lead azide, and organic explosive compounds.

VOCs and metals were detected in soil and groundwater; oil and grease were detected in groundwater at the site.

Design Verification Report

Thirteen leaching well locations were identified within the site using historical drawings, a site reconnaissance, and a geophysical investigation (terrain conductivity). Subsurface soil or waste sampling was conducted at each of the locations after it was determined if the leaching well had been removed or remained at the facility. If initial sampling indicated the presence of constituents of potential concern, additional sampling was performed in the vicinity to evaluate the extent of constituent migration.

Constituents of potential concern were found in the leaching wells at Sites 11A (Leaching Wells 12 and 13) and 11C (Leaching Well 2). Inorganic analytes were identified in Leaching Well 2,

semivolatile organic compounds were identified in Leaching Well 13, and trace amounts of volatile organic compounds were identified in Leaching Well 12. The results of soil sampling did not identify constituents of potential concern in the soil surrounding the leaching wells. It was recommended that the leaching wells be removed.

Removal Action

One thousand three hundred and eighty-two tons of non-hazardous material was removed from Site 11A. The excavation at Site 11B yielded 110 tons of non-hazardous material at LW-4 and 88 tons of material containing lead, cadmium, and TCE at LW-5. At Site 11C, 91 tons of material considered hazardous (due to lead content) were removed. Site 11 no longer presents an unacceptable risk for current or future land use as a result of exposure to subsurface soils within the action area. A draft Post Removal Action Report has been prepared for Site 11.

3.1.2 RCRA Program SWMUs and AOCs

In accordance with the Code of Maryland Regulations, COMAR Title 26, hazardous waste generators that store hazardous waste for greater than 90 days are required to obtain a permit as a treatment, storage, and disposal facility (TSD). Additionally, under the provisions of the Hazardous and Solid Waste Amendments (HSWA) to RCRA, TSD facilities seeking final permits are required to initiate corrective actions for releases of hazardous waste or constituents from Solid Waste Management Units (SWMUs).

Following the submission of a revised RCRA Part B permit application in 1988, a RCRA Facility Assessment (RFA) was conducted by a contractor for the U.S. EPA, and a final report was issued in November 1990. The RFA identified 97 SWMUs and 19 Areas of Concern (AOCs) at NSWC-White Oak (Table 3-1, Figure 3-3). The 14 IR Program sites identified in the IAS were also identified as SWMUs or AOCs. In the RFA report, 40 SWMUs were recommended for a RCRA Facility Investigation (RFI), which would assess the presence and migration potential of constituents of potential concern. Fifteen SWMUs and AOCs were recommended for verification sampling, which would provide information on whether the SWMUs or AOCs should receive no further action or an RFI. Eight SWMUs and AOCs were recommended for integrity assessment; results of this assessment led to a recommendation for no further action or an RFI. SWMU Nos. 1 (IR Program Site 2), 2 (IR Program Site 3), 4 (IR Program Site 4), 5 (IR Program Site 8),

10 through 19 (IR Program Site 11), 23 through 28 (IR Program Site 9), and 31 (IR Program Site 7) are being investigated and, as necessary, remediated under the IR Program.

In September 1992, Malcolm Pirnie completed an RFA review for the Navy, which evaluated the applicability of the general recommendations of the RFA to the individual SWMUs. Generally, for those SWMUs which were being investigated under the IR Program, it was concluded that the planned level of effort was sufficient to address potential impacts from those SWMUs. It was also concluded that some level of sampling would probably be required for most of the SWMUs and AOCs which were recommended for an RFI or verification sampling.

The RCRA SWMUs and AOCs are included in the site screening process discussed in Section 3.1.1. The RCRA SWMUs and AOCs have been divided into three groups for evaluation purposes: "AOC Group 1," "AOC Group 2," and "AOC Group 3." Evaluation of the sites in "AOC Group 1" (sites in the FDA parcel) is scheduled to be completed by the end of 1997. Evaluation of the sites in "AOC Group 2" is scheduled to begin and be completed in 1998. Evaluation of the sites in "AOC Group 3" is scheduled to begin and be completed in 1999. Initial placement of sites into AOC Groups 2 and 3 was based on perceived relative site risk; final placement of sites into groups 2 and 3 will be done by the BCT, prior to initiation of contract action in October 1997. Site investigation and remedial actions will be decided and scheduled on a case by case basis, depending on the results of site screening. A summary of the program under which each site is being addressed is included in Table 3-1 and in which "AOC group" the site is included.

As indicated in a memorandum from the U.S. EPA dated 11 March 1996, corrective action for the non-regulated units is being deferred to the BRAC program, which EPA manages under CERCLA. Closure of RCRA-regulated units will be accomplished under MDE requirements.

In February 1997, the BRAC Cleanup Team (BCT) concurred with "no further action" recommendations for the following sites: SWMU Nos. 38, 49, 50, 55, 58, 59, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 73, 84, 89, 92, 95, and AOC Nos. A, B, H, and J.

3.1.3 Environmental Baseline Survey Areas of Concern

A basewide EBS was conducted at NSWC-White Oak, and the final report was issued in July 1996. The EBS Areas of Concern (AOCs) listed in the EBS report included all sites identified at NSWC-White Oak, including sites identified in the IAS and RFA (Table 3-1). In addition, 17 AOCs were identified for the first time in the EBS report (Figure 3-4). The EBS AOCs will be evaluated as part of the site screening process, as discussed in Section 3.1.1. The EBS AOCs have been initially placed into AOC Group 1, Group 2, or Group 3, using similar rationale to the placement of RCRA SWMUs and AOCs discussed in Section 3.1.2; final placement of sites into groups 2 and 3 will be done by the BCT, prior to initiation of contract action in October 1997. Site investigation and remedial actions will be decided and scheduled on a case by case basis, depending on the results of site screening. A summary of the program under which each site is being addressed is included in Table 3-1 and in which "AOC group" the site is included.

3.1.4 Groundwater

Groundwater sampling has occurred at NSWC-White Oak at monitoring wells installed during the Remedial Investigation at IR Program Sites 2, 3, 4, 7, 8, 9, and 11. Samples were collected at the seven sites in 1989 and 1991, and additional sampling was conducted in 1993 at Site 8. Volatile organic compounds (VOCs) and metals were detected in samples collected from the wells at Sites 2, 3, 4, 8, and 11. At Site 11, oil and grease were also identified. At Sites 7 and 9, explosives and nitroaromatic compounds, respectively, were detected in the groundwater.

Additional groundwater sampling was initiated in 1997 and is ongoing. The existing wells at NSWC-White Oak will be sampled, and additional wells will be installed. Preliminary groundwater sampling results will be available for the Front Area (FDA Area) in June 1997 (draft schedule Chapter 4). Preliminary results for the remainder of the sampling is expected to be available by August 1997 (draft schedule Chapter 4).

3.2 Compliance Program Status

Mission/operational-related compliance activities consist of ongoing routine operation and maintenance requirements. The remaining compliance activities at NSWC-White Oak are closure-related. The status of closure-related compliance activities is summarized in Table 3-3. In conjunction with closure-related compliance activities, compliance-related removal actions and early actions are shown in Table 3-4.

An Environmental Compliance Evaluation (ECE) of NSWC-White Oak was completed periodically as part of the on-going environmental compliance management program. The evaluation consisted of assessing the facility's compliance status with the Navy's ECE criteria, Base Closure Environmental Review (BCER) criteria, and the Safety and Health Guidance for Base Realignment and Closure (BRAC) document. The purpose of the evaluation was to identify existing issues of non-compliance and to recommend program management initiatives that will facilitate smooth closure activities.

3.2.1 Storage Tanks

NSWC-White Oak Environmental Office maintains a Spill Prevention, Control, and Countermeasure (SPCC) Plan, which includes the procedures to be followed in the event of a spill, training requirements, regulatory requirements, and notification requirements.

Underground Storage Tanks

A Storage Tank Systems Management Plan was developed for NSWC-White Oak in July 1995. The plan identified the UST systems and technical compliance standards, including leak detection, spill and overfill prevention, and corrosion protection. Table 3-5 is the UST inventory. Three USTs were removed in August 1996: Tank 121 at Building 100, Tank 139 at Building 100, and Tank 406 at Building 406. The Navy is in the process of removing 15 underground storage tanks (USTs) from NSWC-White Oak. Removal is scheduled for completion by 31 July 1997 (draft schedule, Chapter 4). At the request of the GSA, four USTs will remain active at NSWC-White Oak after transfer.

Aboveground Storage Tanks

There are 31 ASTs at NSWC-White Oak, as shown in Table 3-6. The tanks are primarily used to store gasoline, oil, and heating fuel, with the exception of two 13,000-gallon horizontal tanks used to store liquid nitrogen and one 13,000-gallon propane tank (inactive). Of the ASTs, 26 are active, and five are inactive. ASTs at the facility will be transferred to GSA if they are still needed.

3.2.2 Hazardous Materials/Waste Management

Regulations promulgated under Subtitle C of RCRA regulate ongoing generation, transportation, storage, treatment, and disposal of hazardous waste. Facilities generating hazardous waste are required to notify the EPA of hazardous waste generation, handle and dispose of hazardous waste properly, and document the generation, transport, treatment, and disposal of hazardous waste. NSWC-White Oak operates under an interim status for onsite storage of hazardous waste. An application for a final (Part B) permit was first submitted in 1985, with subsequent resubmissions and modifications. The most recent permit application was submitted in 1992. To date, a final permit has not been issued.

NSWC-White Oak is classified as a Large Quantity Generator (LQG) (EPA ID number - MD0170023444). Four TSD facilities with RCRA interim status are located on the property:

- Building 362 is used strictly for explosives storage. A draft work plan for decontamination of the building is undergoing Navy review.
- Building 501 is no longer used for hazardous waste storage. A decontamination work plan has been submitted to the state. It is expected that the plan will be implemented during June 1997. The Navy will then wait for sample results. "Clean closure" is expected by mid-July 1997.
- Building 508 is no longer used for hazardous waste storage. A decontamination work plan has been submitted to the state. It is expected that the plan will be implemented during June 1997. The Navy will then wait for sample results. "Clean closure" is expected by mid-July 1997.

Building 700 was used for PCB, oil, waste oil, and non-hazardous waste storage (it is no longer in use). The closure plan was implemented in April 1997. The Navy is awaiting sample results and will submit a final report to the state for approval of "clean closure".

In addition to the three TSD facilities, there are numerous "less than 90-day" satellite accumulation areas for hazardous waste (identified as SWMUs), and numerous areas where hazardous materials have been stored throughout the facility. Currently, there is an individual in charge of coordinating hazardous materials disposal during base closure. When buildings are inspected prior to official "check-out," the hazardous materials coordinator is notified if there are hazardous materials in a building. The hazardous materials are then properly disposed.

The explosives division maintains a pretreatment system in Building 318 for waste water containing explosives. The system consists of a settling tank and a series of carbon filters. The sludge from the settling tank is considered a hazardous waste. Specifically, listed wastes K-044, waste water treatment sludge from the manufacturing and processing of explosives, and K-045, spent carbon from the treatment of wastewater containing explosives, are generated. The final waste water from this operation is tested and discharged to the WSSC sanitary sewer.

3.2.3 Explosives Management

Explosives decontamination is being overseen by the Navy and the DOD. In a Memorandum of Agreement (MOA) between GSA and the Navy, it has been agreed that items related to explosives and/or explosives clean-up is the responsibility of the Navy.

The decontamination of interior features of the 74 major buildings and minor facilities formerly utilized for explosives operations is scheduled to be completed by 15 June 1997. These buildings and facilities are to be decontaminated to "Level 5x", which is suitable for any reuse activity, as stated in the NSWC-White Oak letter to the Department of Defense Explosive Safety Board (DDESB). The decontamination procedures are documented in DOD 6055.9-STD (chapter 12).

The 74 major buildings and minor structures scheduled for decontamination are:

- Building 30
- Building 301
- Building 302
- Building 303
- Building 304
- Building 305
- Building 306
- Building 306A
- Building 308
- Building 310A
- Building 310B
- Building 311
- Building 312
- Building 312-4
- Building 312-6
- Building 314
- Building 314-3
- Building 315-1
- Building 316
- Building 317
- Building 318
- Building 318-1
- Building 324
- Building 325
- Building 326
- Building 327
- Building 328
- Building 328-3
- Building 331
- Building 332
- Building 333
- Building 334
- Building 335
- Building 335-1
- Building 335-2
- Building 335-3
- Building 338
- Building 339
- Building 340
- Building 343
- Building 344
- Building 348
- Building 351
- Building 352
- Building 353
- Building 354
- Building 356
- Building 357
- Building 358
- Building 359
- Building 360
- Building 362
- Building 363
- Building 364
- Building 366
- Building 369
- Building 369-1
- Building 369-4
- Building 371
- Building 372
- Building 375
- Building 386
- Building 390
- Building 392
- Building 405
- Building 613
- Building 613-5
- Building 613-6
- Building 615
- Building 620
- Building 630
- Building T28
- Building T35
- Mag H7

As of 16 May 1997, a total of 45 buildings have been decontaminated. Explosive decontamination of building internal features is being conducted in accordance with NSWC-White Oak letter 8020 (Serial No. CW16-RAM, dated 1 May 1997), which has been submitted to the Naval Ordnance Center and DDESB for approval.

External decontamination and cleanup requires further study and inspection. As with other explosive and ordnance-related issues, work plans for exterior decontamination will be submitted

to the Naval Ordnance Center and DDESB for approval. Construction or demolition within the 300 and 600 areas is to be deferred until screening and possible decontamination of these areas has been completed. The process will allow for unrestricted reuse of these areas, in accordance with the Safety Plan submission for the Explosive and Ordnance Remediation of NSWC-White Oak, as approved by the DDESB. Based on knowledge of the historical use of the building, Building 611 is not considered contaminated and is not included in the decontamination plan.

At Sites 2 and 3, unexploded ordnance has been found in and on the landfills. The closure method of this site is to be addressed by the Navy under the IR Program. The NSWC-White Oak Safety Submission was granted interim approval by the DDESB. Reuse and safety clearance issues for Sites 2 and 3 are addressed in DOD 5160.65M (chapter 11). Actions relating to explosive clearance are scheduled to be completed by 2003.

3.2.4 Solid Waste Management

Solid waste is picked up at the facility by a contractor and disposed off site. According to current closure plans, the contractor will continue to pick up solid waste at the facility until the base closes.

3.2.5 Polychlorinated Biphenyls

The equipment (e.g., transformers) which contains PCB has been tested and identified, most recently on 11 April 1997. The majority of the PCB-contaminated (PCB concentrations ranging from 50 to 499 ppm) equipment has been removed/replaced. There are five known PCB-contaminated transformers currently on base, four pad-mounted and one pole-mounted. The transformers are not leaking; therefore, replacement is not required at this time, and they will be transferred to the GSA. PWC Washington is currently responsible for managing the PCB program, including testing and record keeping.

The PCB-contaminated transformers and their locations are as follows:

Transformer Identification Number	Location	Pad Mounted/Pole Mounted
ET-132-1	Pad 134, adjacent to Building 132	Pad Mounted
ET-312-A	Pole 3-158, pole adjacent to Building 312	Pole Mounted
ET-406-1	Pad 416, adjacent to Building 406	Pad Mounted
ET-406-2	Pad 416, adjacent to Building 406	Pad Mounted
ET-424-1	Pad 426, adjacent to Building 424	Pad Mounted

NSWC-White Oak maintains a database which tracks the PCB-containing materials on base and includes the location, oil quantity, type, and test results. NSWC-White Oak also maintains a PCB Clean-Up Policy, Memorandum of Understanding for PCB Management, and Storage for Disposal Requirements.

GSA has developed a HAZMAT Contract Specification for the management of PCB ballasts, asbestos, lead-based paint, and fluorescent lights.

3.2.6 Asbestos

PWC Washington is responsible for asbestos handling and disposal at NSWC-White Oak, including asbestos abatement projects. During scheduled building renovations, the safety office is responsible for conducting the initial asbestos inspection and collecting asbestos samples. An asbestos inventory of NSWC-White Oak was conducted in 1991 by Dynamac, Inc. Since the initial inventory, many of the buildings/building areas have been abated, and building materials have been labeled as to asbestos content. A comprehensive asbestos re-inspection and assessment was completed in November 1996. PWC Washington is currently in the process of conducting a survey of their own spaces at White Oak.

DOD policy states that friable, accessible, and damaged (FAD) asbestos-containing material (ACM) is to be maintained in a manner that is protective to human health and the environment, and consistent with federal and state regulations. Therefore, unless it is determined that ACM poses a threat to human health at the time of transfer, property containing ACM will be conveyed through the BRAC process. Suspect ACM was identified in inaccessible areas (i.e., areas not utilized by building personnel, such as boiler/mechanical rooms) and accessible areas (i.e., utilized by building personnel on a regular basis, such as restrooms and offices); however, most of the suspect ACM was not friable or damaged. Warning labels have been placed in many areas where ACM is present.

An Asbestos Management Plan was developed in October 1995 by the Navy Public Works Center, Energy/Environmental Engineering Branch for the housing units at NSWC-White Oak. The plan also included a survey of the housing units. The survey indicated the presence of asbestos in floor tiles in Quarters A and Quarters M, and asbestos in shingles and transite siding in Quarters C.

GSA has developed a HAZMAT Contract Specification for the management of asbestos, PCB ballasts, lead-based paint, and fluorescent lights.

3.2.7 Radon

Radon assessments were conducted at NSWC-White Oak from 1992-1993, in accordance with the Navy Radon Assessment and Mitigation Program. Radon levels in excess of 4 picoCuries per liter (pCi/L) were found in two unoccupied areas of Building 405. Since the radon levels were less than 20 pCi/L, mitigation was to be conducted by Naval Facilities Engineering Command within 5 years. Because the two areas of Building 405 that exhibited elevated radon levels were not continuously occupied and future plans for use of the building, following closure of NSWC-White Oak in July 1997, are not confirmed, mitigation of this building by the Navy will not be conducted. The DOD does not require performance of radon assessment and mitigation prior to transfer, unless otherwise required by State and/or Federal laws. DOD policy requires that relevant information related to radon is noted in the property transfer documents.

3.2.8 NPDES Permits

Previously, NSWC-White Oak held two NPDES permits for 16 industrial point source discharges. In 1989 NSWC-White Oak began to operate with a single NPDES permit (89-DP-2512). The permit authorizes discharges from 6 outfalls, and monitoring is required at five outfalls - 002, 003, 007, 010, and 011. Outfall 014 did not have a monitoring requirement associated with it. The water discharged is primarily rain water runoff from roads and parking areas or condensate from cooling water. The outfalls discharge to Paint Branch Creek.

It should be noted that NSWC-White Oak's existing NPDES permit has expired. A permit application was submitted for continued coverage during base closure. Per discussions with MDE's Industrial Discharge Permits Division, the facility remains covered by the expired permit until MDE issues a new permit.

3.2.9 Oil/Water Separators

Three oil/water separators were identified as SWMUs during the RFA (November 1990):

- SWMU 51 - Building 113 Oil/Water Separator
- SWMU 52 - Building 201 Oil/Water Separator (Actually a tank for collecting the overflow from the two USTs that serviced the 200 Area. The fill pipes for the two tanks were located in a manhole. When the USTs were removed, several years ago, the overflow tank was also removed.)
- SWMU 53 - Building 406 Oil/Water Separator

In addition to the SWMUs that were identified in the RFA, the following Oil/Water Separators are also located at NSWC-White Oak:

- Building 101 - This separator is a gravity separation system that separates oil coming from the boiler house in Building 101.
- Building 132 - This separator removes oil film from the surface of rain water that enters the building and picks up residual oil from spill trenches.

Building 382 - This separator is used in conjunction with a research project. Oil is separated from bilge water shipped in drums from Navy ships.

3.2.10 Waste Water Discharge to Sewer Systems

From 1945 through the mid-1980s, most of the waste water generated at NSWC-White Oak was disposed at a central treatment system (which discharged to Paint Branch) or to leaching wells and drain fields. These areas have been designated as RCRA SWMUs and/or IR Program sites. In 1983, the waste water discharge was connected to the Washington Suburban Sanitary Commission (WSSC). NSWC-White Oak was regulated by industrial waste water permit #06310, which was issued by WSSC. However, the permit has been terminated due to limited operations at NSWC-White Oak during base closure. The permit required that NSWC-White Oak self-monitor one outfall bi-annually. The WSSC monitoring point was located outside Building 410.

3.2.11 Air Programs

Air emissions are regulated by the Clean Air Act (CAA). The GSA will be preparing CAA Title V permit applications for NSWC-White Oak. The boilers at the facility are registered with MDE, and applications for fuel burning have been approved in the past. The application to the State for boiler registration included an inventory of estimated emissions emanating from the boilers.

Montgomery County is a non-attainment area for ozone; therefore, NSWC-White Oak must comply with the non-attainment standards when applicable.

3.2.12 Lead

Due to the age of the buildings at NSWC-White Oak, it is assumed that lead-based paint was used for both the interior and exterior of painted buildings. Navy policy requires that lead-based paint surveys be performed to verify such conditions in housing areas only. For non-housing buildings, if renovations are planned in a building and a suspected lead paint hazard is present, sampling for lead is conducted. The safety office maintains records of lead-based paint abatement.

A Lead Management Plan was written by the Navy Public Works Center, Energy/Environmental Engineering Branch covering base housing units at NSWC-White Oak. The plan included a lead survey, which found lead in paint in all of the housing units. The Lead Management Plan indicated the detection of lead in dust above action limits in one sample (out of 27 samples). The sample was from Quarters C. Abatement of lead-based paint was completed in housing units. In addition, lead in soil was found above action limits in the sidewalk area of Quarters M and around the foundation of Quarters B.

GSA has developed a HAZMAT Contract Specification for the management of lead-based paint, asbestos, PCB ballasts, and fluorescent lights.

3.2.13 Radioactive Materials

Equipment which uses radionuclides or X-rays for R&D was recently located in 21 buildings; in addition, there is a radioactive waste storage building area. Radioactive materials and waste from NSWC-White Oak operations and radioactive sources for use at other Naval bases, was stored in Building 108, which previously housed an incinerator. The radioactive sources stored in the building are doubly encapsulated and the waste is containerized in double-walled drums. The NSWC-White Oak Radiation Safety Officer (RSO) maintains records regarding receipt, use, storage, transport, and disposal of radioactive materials at NSWC-White Oak. The Radiological Affairs Support Office (RASO), of Naval Sea Systems (NAVSEA), performs inspections of the storage area on a routine basis, and is responsible for licensing, permitting, and enforcement issues. RASO and the RSO coordinate disposal issues to ensure that the materials are transferred to licensed recipients or disposed at licensed radioactive waste disposal facilities.

The Nuclear Regulatory Commission has approved the Navy's Radiological Affairs Support Program (RASP); therefore, Navy Radiological Materials Permits must be obtained from the Navy Radiation Safety Committee following review and approval by the Radiological Affairs Support Office (RASO), rather than the Nuclear Regulatory Committee (NRC). The NSWC-White Oak Radiation Safety program is regulated by Navy Radioactive Materials Permit #45-60921-EINP, HINP, and applicable Federal and Navy regulations. The Navy RASP has strict regulations that are applied and enforced regarding the receipt, use, storage, transport and disposal of radioactive waste and materials.

The Historical Radiological Site Assessment identified 183 areas to be evaluated at White Oak. These areas were subdivided into “non-impacted” and “impacted” areas. Fifty-one of the 183 were categorized as “non-impacted” and further surveys were not required because only small sealed sources (smoke detectors, etc.) were used in these areas. Fifty-five areas were identified as “affected” because in the past, decontamination procedures were conducted, or there was a reasonable probability that the area may be contaminated due to historical operations or suspected operations. Seventy-seven areas were identified as “unaffected” because they were adjacent to affected areas or there were only a remote possibility of radiological contamination. All 183 areas were surveyed, except for 9 areas within several buildings and 2 land areas. The remaining areas are expected to be completed by mid-June 1997. To this point, radiological surveys for all but 4 of the 132 impaired areas demonstrate, at the 95% level of confidence, that no remediation efforts are required to meet the Nuclear Regulatory Commission Guideline Values for release of these structures/land for unrestricted use under their “Residential Scenario”. Of the 4 contaminated areas, two building areas are currently being remediated by NSWC Radiation Service Personnel and two land areas (IR Site 10 and 14) will be remediated by EFACHES as scheduled. NRC REG GUIDE 1.86 defines limits for residual surface contamination in units of disintegrations per minute per 100 cm² and NRC NUREG-1500 defines limits for residual radionuclides in soil units of picoCuries per gram.

3.2.14 Potable Water

In compliance with a DOD directive to sample potable water for lead, drinking fountains were sampled between 1988 and 1990. Nineteen fountains exceeded the lead action level; sixteen were removed and replaced, and three were removed without replacement. In addition, the drinking fountains in Building 30 were replaced with electric water coolers holding bottled water. The environmental department maintains these sampling records.

3.3 Status of Natural and Cultural Resources Programs

A Natural Resources Management Plan (NRMP) was prepared for NSWC-White Oak to plan, record, and assist in the management and conservation of natural resources in an integrated manner within the framework of the mission of the facility.

The plan was prepared in September 1995 and is a ten-year planning document addressing the following programs:

- Land Management
- Forest Management
- Wildlife and Fisheries Management
- Cultural and Historical Management
- Outdoor Recreation Management

3.3.1 Wetlands

Wetland mapping was compiled by the University of Maryland College Park Coastal Research Lab as part of the National Wetlands Inventory. A National Wetlands Inventory map of NSWC-White Oak is included in the NRMP. The NRMP recommends that environmental personnel work closely with natural resources personnel when determining clean-up options at IR Program sites.

3.3.2 Sensitive Habitats

There are no known threatened or endangered species at NSWC-White Oak, although with a decreasing habitat for wildlife in the residential communities surrounding the facility, animal species are adapting to the habitats available at NSWC-White Oak. Wildlife found at the facility include frogs, toads, salamanders, a variety of songbirds, shrews, mice, voles, foxes, raccoons, skunks, deer, snakes, turtles, opossum, rabbits, squirrels, and weasels.

Although there are no known threatened or endangered species at the facility, there is a nesting program for the Eastern Bluebird, which was once a threatened species. The program consists of placing nesting boxes, and tracking data on eggs and hatching. The utilization of the boxes has averaged 70%.

In conjunction with the ecological risk assessments planned for the IR Program, a habitat evaluation will be conducted at NSWC-White Oak.

3.3.3 Endangered Species

No comprehensive survey for endangered animal species has been conducted at NSWC-White Oak, although no endangered species are known to exist at the facility.

3.3.4 Archeological Sites

A Historic and Archeological Resources Protection Plan (HARP) was completed for NSWC-White Oak in 1992. The Maryland Historical Trust has identified one archeological site at NSWC-White Oak. Six broken projectile points were discovered at the site by an amateur archeologist in 1972, although no formal investigation has ever been performed. There are also several areas at the facility that are considered to have a high potential for archeological resources. In areas adjacent to NSWC-White Oak, registered archeological sites have been found on sites located on upland rises overlooking streams, the heads of drainage areas or swales, and areas of flat or gently sloping land including hilltops, bluffs, and river terraces. Areas at NSWC-White Oak with similar characteristics would have a high potential for archeological resources.

3.3.5 Historic Structures

There are no buildings or structures at NSWC-White Oak that are currently listed on the National Register of Historic Places. However, no study of architectural resources potentially eligible for the National Register of Historic Places has been performed. The following structures were identified in the HARP as potential areas for additional survey:

- The Married Officers' Quarters
- The Administration Complex
- The Magnetic Research Complex

3.4 Environmental Condition of Property

In order to prepare a map showing the environmental condition of the facility property, NSWC-White Oak was classified into seven environmental categories, as follows:

Category 1: Areas where no release or disposal of hazardous substances or petroleum products has occurred (including no migration of these substances from adjacent areas).

Category 2: Areas where only release of petroleum products has occurred.

Category 3: Areas where release, disposal, and/or migration of hazardous substances has occurred, but at concentrations that do not require a removal or remedial action.

Category 4: Areas where release, disposal, and/or migration of hazardous substances has occurred, and remedial actions necessary to protect human health and the environment have been taken.

Category 5: Areas where release, disposal, and/or migration of hazardous substances has occurred, and removal or remedial actions are underway, but all required remedial actions have not yet been taken.

Category 6: Areas where release, disposal, and/or migration of hazardous substances has occurred, but required actions have not yet been implemented.

Category 7: Areas that are not evaluated or require additional evaluation.

Figure 3-5 summarizes the environmental condition of facility property in terms of the categories above. The map has been color-coded to correspond to the seven classifications.

3.4.1 Areas Where No Release or Disposal of Hazardous Substances or Petroleum Products Has Occurred (White)

The majority of areas at NSWC-White Oak are in this category, including the SWMUs and AOCs that the BCT has indicated that no further action is required. These areas constitute approximately 600 acres of property.

3.4.2 Areas Where Only Release or Disposal of Petroleum Products Has Occurred (Blue)

This category has been assigned to Site 13, AOC A, AOC B, EBS AOC 142, and two oil spills from the early 1990s in the buffer area. There are approximately 5 acres of property in this category.

3.4.3 Areas Where Release, Disposal, and/or Migration of Hazardous Substances Has Occurred, but at Concentrations which Require No Removal or Remedial Actions (Light Green)

No areas at NSWC-White Oak have been assigned to this category.

3.4.4 Areas Where Release, Disposal, and/or Migration of Hazardous Substances Has Occurred, and Remedial Actions Have Been Taken to Protect Human Health and the Environment (Dark Green)

No areas at NSWC-White Oak fit the criteria of this category, at this time.

3.4.5 Areas Where Release, Disposal, and/or Migration of Hazardous Substances Has Occurred, and Action Is Underway, But All Required Remedial Actions Have Not Yet Been Taken (Yellow)

No areas at NSWC-White Oak fit the criteria of this category, at this time.

3.4.6 Areas Where Release, Disposal, and/or Migration of Hazardous Substances Has Occurred, but Required Actions Have Not Yet Been Implemented (Red)

Program Sites 2, 3, 4, 7, 8, 9, 11 are in this category. There are approximately 36 acres of property in this category.

3.4.7 Areas Not Evaluated or Requiring Additional Evaluation (Gray)

The areas that are colored gray are the sites included in the site screening process: IR Program Sites 1, 5, 6, 10, 12, 13, 14, and 46, the SWMUs and AOCs identified by the RFA (except those sites that the BCT has agreed require no further action), and areas identified in the EBS as AOCs. There are approximately 80 acres of property in this category.

3.4.8 Suitability of Installation Property for Transfer by Deed

NSWC-White Oak will be transferred to other Federal government agencies; therefore, the environmental requirements for the transfer are included in the Department of the Navy Environmental Policy Memorandum 95-01: "Environmental Requirements for Federal Agency-to-Agency Property Transfer at BRAC Installations" (26 May 1995). Although hazardous substances or petroleum products are present, NSWC-White Oak property will be suitable for transfer to other Federal agencies because it meets the conditions described in paragraph (f)(3) of the Department of the Navy's Environmental Policy Memorandum 95-01. Specifically, the property can be transferred for the proposed uses, with specified use restrictions, if risk to human health and the environment are deemed acceptable according to U.S. EPA guidance, and without interference to the environmental restoration process.

In addition to the environmental restoration conditions, several compliance programs must be closed out prior to transfer. These conditions are discussed in Section 2.2 of this BCP.

3.5 Status of Community Involvement

A Draft Community Relations Plan was developed in 1991, and finalization of the plan is expected in Summer 1997. The Community Relations Coordinator for NSWC-White Oak regularly

schedules "face-to-face" meetings with community leaders, and also attends meetings of community associations in the vicinity to answer any questions that the community might have.

In addition to meetings in the community, the Navy schedules Restoration Advisory Board (RAB) meetings. The meetings are held approximately once every month to discuss issues related to base closure. Interested members of the community are welcome to attend these meetings.

Table 3-1. Environmental Baseline Survey Areas of Concern (EBS AOCs)

BCP Ref. Num.	Site or Facility Number	Name	Location	Area	Material Managed/Disposed	Date of Operation	Status (a)	Risk to Human Health and Environ. (b)	Regulatory Mech. (c)	No Further Action (d)
100 Back Area										
1	IR Program Site 1 (SWMU 3)	Parking Lot Landfill	Southeast of Building 101A	100 Back Area	Solid, liquid wastes including automobile batteries, and other vehicle maintenance shop wastes	1948-1953	SS "AOC Group 1"		CERCLA/ NCP	
2	IR Program Site 2 (SWMU 1)	Apple Orchard Landfill	About 1/4 mile north of Building 120	100 Back Area	Containerized and uncontainerized liquids, PCB	1948-1982	RD		CERCLA/ NCP	
3	IR Program Site 17 (SWMU 20)	Former Building 130 Leaching Well	Building 130	100 Back Area	Battery acid	1945-late-1970s	SS "AOC Group 2"		Deferred to CERCLA/ NCP	
4	IR Program Site 21 (SWMU 35)	Stoneyard	East of Building 115	100 Back Area	Spent glass beads, metal particulates, paint	1963-Present	SS "AOC Group 2"		Deferred to CERCLA/ NCP	
5	IR Program Site 32 (RCRA AOC-O)	Former Outfall 009 at Building 112	Behind Building 112, adjacent to Outfall 002	100 Back Area	Waste water from shops and laboratories	Unknown	SS "AOC Group 1"		Deferred to CERCLA/ NCP	

BCP Ref. Num.	Site or Facility Number	Name	Location	Area	Material Managed/Disposed	Date of Operation	Status (a)	Risk to Human Health and Environ. (b)	Regulatory Mech. (c)	No Further Action (d)
6	SWMU 36	Former Building 108 Incinerator	South side of Building 108	100 Back Area	Combustible municipal wastes	Late-1940s-1973	"AOC Group 2"		Deferred to CERCLA/NCP	
7	SWMU 47	Former Waste water Treatment Plant	East of Building 104	100 Back Area	Domestic waste water and waste photographic chemicals, solvents, pesticides, and explosive-contaminated waste water	1946-1982	SS "AOC Group 3"		Deferred to CERCLA/NCP	
8	SWMU 50	Building 112 Grease Interceptor	Northwest corner of Building 112	100 Back Area	Oily waste water, possibly containing heavy metal constituents	Waste water from machining of explosives	SS		Deferred to CERCLA/NCP	X
9	SWMU 51	Building 113 Oil/Water Separator	Northeast side of Building 113	100 Back Area	Oily waste water, possibly containing heavy metal constituents	Unknown-Present			Deferred to CERCLA/NCP	X
10	SWMU 54	Former Waste Oil Recycling Operations Site	West edge of IR Site 2	100 Back Area	Oils.	Early-1970s-1983	"AOC Group 2"		Deferred to CERCLA/NCP	

BCP Ref. Num.	Site or Facility Number	Name	Location	Area	Material Managed/Disposed	Date of Operation	Status (a)	Risk to Human Health and Environ. (b)	Regulatory Mech. (c)	No Further Action (d)
11	SWMU 61	Former Area 141 Waste Oil Underground Storage Tank Site	Northwest corner of IR Site 2	100 Back Area	Waste oil, possibly containing heavy metals	Late-1960s-1988			Deferred to CERCLA/NCP	X
12	RCRA AOC-D	Former Building 70 Radioactive Waste Collection Area	North side of Building 70	100 Back Area	Low-level radioactive wastes	1950s-1960s			Deferred to CERCLA/NCP	X (rad permit closeout)
13	RCRA AOC-F	Building 108 Radioactive Waste Storage Area	North-central portion of Building 108	100 Back Area	Low-level radioactive waste	1985-Present			Deferred to CERCLA/NCP	X (rad permit closeout)
14	EBS AOC 108	Potential leaching of metal bricks to ground surface	Building 108 Outside (west wall)	100 Back Area	Unknown	Unknown	SS		EBS/CERCLA/NCP	
15	EBS AOC 142	Staining and stressed vegetation	Building 142 Outside	100 Back Area	Unknown	Unknown	SS		EBS/CERCLA/NCP	

BCP Ref. Num.	Site or Facility Number	Name	Location	Area	Material Managed/Disposed	Date of Operation	Status (a)	Risk to Human Health and Environ. (b)	Regulatory Mech. (c)	No Further Action (d)
200 Area										
16	IR Program Site 12 (SWMU 21)	Waste water Disposal from "200 Area"	North of Building 201.	200 Area	Battery acid	1945-late-1970s	SS "AOC Group 2"		CERCLA/ NCP	
17	IR Program Site 18 (SWMU 52)	Building 201 Oil/Water Separator	Southwest corner of Building 201	200 Area	Waste oil	1973-Present			Deferred to CERCLA/ NCP	
18	IR Program Site 19 (SWMU 22)	Former Building 204 Leaching Well	Building 204	200 Area	Battery acid	1945-late-1970s	SS		Deferred to CERCLA/ NCP	
19	RCRA AOC-N	Former Outfall 006 at Building 201	50 feet south of Building 201	200 Area	Corrosives	Unknown	SS "AOC Group 2"		Deferred to CERCLA/ NCP	
300 Area										
20	IR Program Site 15 (SWMU 8)	Former Building 310A Waste Disposal Area	Building 310A	300 Area	Laboratory chemicals.	Early-1950s-1978	SS		Deferred to CERCLA/ NCP	
21	IR Program Site 24	Former Building 308	Building 308	300 Area	Waste water from the washdown of	1947-1980	SS "AOC"		Deferred to CERCLA/	

BCP Ref. Num.	Site or Facility Number	Name	Location	Area	Material Managed/Disposed	Date of Operation	Status (a)	Risk to Human Health and Environ. (b)	Regulatory Mech. (c)	No Further Action (d)
	(SWMU 29)	Wash Down Disposal System			explosives testing equipment		Group 2"		NCP	
22	IR Program Site 22 (SWMU 40)	Former Building 305 Waste water Collection System	Located at Building 305	300 Area	Waste water contaminated with explosives	1946-1974	SS "AOC Group 2"		Deferred to CERCLA/ NCP	
23	IR Program Site 23 (SWMU 41)	Former Building 311 Oxidation Ditch	Behind Building 311	300 Area	Waste water contaminated with explosives	1973-1976	SS "AOC Group 2"		Deferred to CERCLA/ NCP	
24	SWMU 33	Former Building 305 Demilitarization Site	Inside Building 305	300 Area	Waste explosives	1946-1975	"AOC Group 2"		Deferred to CERCLA/ NCP	
25	SWMU 37	Building 310A Liquid Waste Collection Areas	Building 310A	300 Area	Waste chemicals including acetone, hexane, methanol, and methylene chloride	1978-Present	"AOC Group 2"		RCRA	
26	SWMU 42	Building 318 Wash Down Collection System	In Building 318	300 Area	Waste water contaminated with explosives	1954-Present	SS		RCRA	

BCP Ref. Num.	Site or Facility Number	Name	Location	Area	Material Managed/Disposed	Date of Operation	Status (a)	Risk to Human Health and Environ. (b)	Regulatory Mech. (c)	No Further Action (d)
27	SWMU 43 (IR Site 41)	Former Building 318 Pilot Treatment Plant Site	Truck trailer adjacent to Building 318	300 Area	Waste water contaminated with explosives	1979-1982			RCRA	
28	SWMU 44 (IR Site 42)	Building 318-3 Carbon Adsorption Treatment System	In Building 318-3	300 Area	Waste water from machining of explosives	1982-Present			RCRA	
29	SWMU 56	Building 327 Waste water Underground Storage Tank (UST)	North side of Building 327	300 Area	Waste water, possibly containing explosives	1983-Present	SS		RCRA	
30	SWMU 57	Former Building 328 Degreasing Tank Site/Waste Solvent Storage Area	North of Building 328	300 Area	Trichloroethylene	Early-1950s-1982			RCRA	
31	SWMU 75	Building 315 Waste Photographic Chemical	Southeastern portion of Building 315	300 Area	Photographic chemicals	Unknown-Active	"AOC Group 2"		Deferred to CERCLA/NCP	

BCP Ref. Num.	Site or Facility Number	Name	Location	Area	Material Managed/Disposed	Date of Operation	Status (a)	Risk to Human Health and Environ. (b)	Regulatory Mech. (c)	No Further Action (d)
		Storage Area								
32	SWMU 78	Area 362 Explosive Waste Storage Area	Off Browne Road in the east-central section of the facility	300 Area	Unspecified waste ordnance	Unknown-Active			RCRA	
33	SWMU 80	Misc. Building Waste Ordnance Collection Areas	Buildings 305, 307, 308, 310A, 311, 312, 315, 318, 324, 328, 336, 339, 343, 613, and 620	300 Area	Waste explosives	Unknown-Present			Deferred to CERCLA/ NCP	X (explosive decon program)
34	SWMU 94	Building T-35 Waste Explosives Packing Operations	East end of Building T-35	300 Area	Ordnance waste	1965-Present			Deferred to CERCLA/ NCP	X (explosive decon program)
35	RCRA AOC-G	Former Building 321 Radioactive Drum Storage Area	Southeastern portion of Building 321	300 Area	Radioactive waste	Unknown-Late-1970s			Deferred to CERCLA/ NCP	X (rad permit closeout)
36	RCRA AOC-I	Former Building 343 Radioactive Waste water	West of Building 343	300 Area	Radioactive waste water	Early-1970s-1989	SS		Deferred to CERCLA/ NCP	X (rad permit closeout)

BCP Ref. Num.	Site or Facility Number	Name	Location	Area	Material Managed/Disposed	Date of Operation	Status (a)	Risk to Human Health and Environ. (b)	Regulatory Mech. (c)	No Further Action (d)
		Holding Tank								
37	RCRA AOC-P	Former Outfall 012 at Building 312	Between Buildings 312A and 312B	300 Area	Waste waters containing explosive compounds	Unknown	SS "AOC Group 2"		Deferred to CERCLA/ NCP	
38	RCRA AOC-Q	Former Outfall 014 at Building 328	Adjacent to Sanitary Sewer	300 Area	Waste waters containing explosive compounds	Unknown	SS "AOC Group 2"		Deferred to CERCLA/ NCP	
39	RCRA AOC-R	Former Outfall 017 at Building 318	Adjacent to Building 318	300 Area	Waste waters containing explosive compounds	Unknown	SS "AOC Group 2"		Deferred to CERCLA/ NCP	
40	RCRA AOC-S	Former Outfall 018 at Building 310A	20 feet north of Building 310A	300 Area	Solvents, corrosives, explosive wastes	Unknown	SS "AOC Group 2"		Deferred to CERCLA/ NCP	
41	EBS AOC 303	303 field Explosives test area	West of Building 303	300 Area	Explosives	Unknown	SS		EBS/ CERCLA/ NCP	
42	EBS AOC 315	Excavation to south of building - unknown	Building 315 Outside (to south)	300 Area	Unknown	Unknown	SS		EBS/ CERCLA/ NCP	

BCP Ref. Num.	Site or Facility Number	Name	Location	Area	Material Managed/Disposed	Date of Operation	Status (a)	Risk to Human Health and Environ. (b)	Regulatory Mech. (c)	No Further Action (d)
		origin								
43	EBS AOC 334	Paint and battery on ground outside building	Building 334 Outside	300 Area	Batteries	Unknown	SS		EBS/ CERCLA/ NCP	
44	EBS AOC 340	Boxes on asphalt north of building - potentially contain explosive-containing waste	Building 340 Outside (to north)	300 Area	Explosive residue	Unknown	SS		EBS/ CERCLA/ NCP	
400 Area										
45	IR Program Site 16 (SWMU 9)	Former Building 409 Paint Branch Waste Disposal Site	Embankment of Paint Branch Creek east of Building 409	400 Area	Waste from diatomaceous earth filters.	Unknown-Mid-1970s	SS		Deferred to CERCLA/ NCP	
46	SWMU 53	Building 406 Oil/Water Separator	Along south wall in Building 406	400 Area	Oily waste water, possibly containing metals	1981-Present	"AOC Group 2"		Deferred to CERCLA/ NCP	
47	SWMU 60	Building 406 Waste Oil	North portion of	400	Oil, possibly containing heavy	1981-	"AOC Group		Deferred to Oil	

BCP Ref. Num.	Site or Facility Number	Name	Location	Area	Material Managed/Disposed	Date of Operation	Status (a)	Risk to Human Health and Environ. (b)	Regulatory Mech. (c)	No Further Action (d)
		Storage Units (2)	Building 406	Area	metals	Present	2"		Program	
48	SWMU 76	Building 430 Waste Oil Storage Area	Outside southeast corner of Building 430	400 Area	Waste oil, possibly containing heavy metals	1972-Present	SS "AOC Group 2"		Deferred to CERCLA/NCP	
49	SWMU 77	Miscellaneous Building Waste Oil Storage Collection Areas	Buildings 403 and 404	400 Area	Waste oil possibly containing heavy metals	Unknown-Present			Deferred to CERCLA/NCP	X
50	SWMU 86	Building 409 Solid Waste Storage Unit	East side of Building 409	400 Area	Spent diatomaceous earth	Mid-1970s-Present	SS "AOC Group 2"		RCRA	
500 Area										
51	IR Program Site 3 (SWMU 2)	Pistol Range Landfill	Between Dahlgren Road and the north boundary of NSWC-White Oak, southwest of the old Pistol Range.	500 Area	Solid wastes, solvents	Late-1940s-Mid-1970s	RD		CERCLA/NCP	

BCP Ref. Num.	Site or Facility Number	Name	Location	Area	Material Managed/Disposed	Date of Operation	Status (a)	Risk to Human Health and Environ. (b)	Regulatory Mech. (c)	No Further Action (d)
52	IR Program Site 4 (SWMU 4)	Chemical Burial Site	Along the north boundary road near the northeast corner of NSWC-White Oak.	500 Area	Various chemicals	1955-early-1970s	RI/FS		CERLCA/NCP	
53	IR Program Site 5 (SWMU 32)	Open Burning Areas	Between Dahlgren Road and the north boundary of NSWC-White Oak, south of the old Pistol Range.	500 Area	Paper, cardboard, tires	Late-1940s-1970	SS "AOC Group 2"		CERCLA/NCP	
54	IR Program Site 6 (SWMU 6)	Sludge Composting Area	Extreme northeast corner of NSWC-White Oak.	500 Area	Sludge	1946-1982	SS "AOC Group 2"		CERLCA/NCP	
55	IR Program Site 7 (SWMU 31)	Ordnance Burn Area	Gully about 20 feet west of Building 501.	500 Area	Waste ordnance	1948-1979	RI/FS		CERLCA/NCP	
56	IR Program Site 13 (SWMU 7)	Oil Disposal Area	Near the northeastern corner of NSWC-White Oak, between Dahlgren Road.	500 Area	Sludge from oil storage tanks.	1970-1978	SS "AOC Group 2"		CERCLA/NCP	

BCP Ref. Num.	Site or Facility Number	Name	Location	Area	Material Managed/Disposed	Date of Operation	Status (a)	Risk to Human Health and Environ. (b)	Regulatory Mech. (c)	No Further Action (d)
			and the northern boundary patrol road.							
57	SWMU 81	Building 501 Hazardous Waste Storage Facility	Building 501	500 Area	Various hazardous wastes	1976-Present			RCRA	
58	SWMU 82	Building 508 Hazardous Waste Storage Facility	Building 508	500 Area	Various hazardous wastes	1982-Present			RCRA	
59	SWMU 85	Building 501 Asbestos Storage Area	Northeast of Building 501	500 Area	Asbestos	1989-Present	"AOC Group 3"		Deferred to CERCLA/ NCP	
60	RCRA AOC-K	Pistol Range Transformer Storage Area	Location of SWMU 4	500 Area	Transformers	1975-Present	SS		Deferred to CERCLA/ NCP	
61	EBS AOC 500A	Containers of chemicals	Area North of IR Program Site 13	500 Area	Laboratory Chemicals	Unknown	SS		EBS/ CERCLA/ NCP	
62	EBS AOC 500B	Former Pistol Range	Western portion of 500 Area	500 Area	Munitions	Unknown	SS		EBS/ CERCLA/	

BCP Ref. Num.	Site or Facility Number	Name	Location	Area	Material Managed/Disposed	Date of Operation	Status (a)	Risk to Human Health and Environ. (b)	Regulatory Mech. (c)	No Further Action (d)
									NCP	
600 Area										
63	IR Program Site 25 (SWMU 45)	Former Building 613 Sump	West side of Building 613	600 Area	Solvents	1965-1989	SS		RCRA	
64	SWMU 30 (IR Site 39)	Former Building 620 Wash Down Disposal System	At or near Building 620	600 Area	Waste water containing explosives	1973-1988	SS		RCRA	
65	SWMU 87	Building 611 Solid Waste Storage Area	West of Building 611	600 Area	Miscellaneous solid waste	Unknown-Present	SS "AOC Group 3"		RCRA	
66	SWMU 93	Building 619 Explosive Sludge Removal Unit	Northeast corner of Building 619	600 Area	Sludge and waste water, potentially contaminated with explosives	Unknown-Present	SS "AOC Group 3"		Deferred to CERCLA/ NCP	
67	RCRA AOC-M	Former Outfall 004 at Building 611	In front of Building 611	600 Area	Waste waters containing explosive compounds	Unknown	SS "AOC Group 2"		Deferred to CERCLA/ NCP	

BCP Ref. Num.	Site or Facility Number	Name	Location	Area	Material Managed/Disposed	Date of Operation	Status (a)	Risk to Human Health and Environ. (b)	Regulatory Mech. (c)	No Further Action (d)
68	EBS AOC 304-3	Staining, cracking, and gritty substance on floor	Building 304-3 Inside	600 Area	Unknown	Unknown	SS		EBS/ CERCLA/ NCP	
69	EBS AOC 600	Explosive material treatment area ("4th of July pit")	North-central portion of 600 Area	600 Area	Explosives	4 July 1992	SS		RCRA	
70	EBS AOC 630	Small piles of soil with green coloration	Facility 630 Outside	600 Area	Unknown	Unknown	SS		EBS/ CERCLA/ NCP	
U.S. Army Transfer Area										
71	SWMU 34	Former Building 377 Demil. Site	In front of Building 377	Army Area	Waste explosives	1958-Mid-1970s	SS "AOC Group 3"		Deferred to CERCLA/ NCP	
72	SWMU 79	Building 506 Explosive Waste Storage Area	East of Building 506	Army Area	Ordnance dunnage	1979-Early-1989			RCRA	
73	SWMU 83	Building 700 Waste	Building 700	Army	PCB-contaminated wastes, lithium	1984-			RCRA	

BCP Ref. Num.	Site or Facility Number	Name	Location	Area	Material Managed/Disposed	Date of Operation	Status (a)	Risk to Human Health and Environ. (b)	Regulatory Mech. (c)	No Further Action (d)
		Storage Facility		Area	batteries, waste oil	Present				
74	Facility 387	Abandoned Centrifuge	Outside	Army Area	Batteries, solvents	Unknown	SS		EBS/ CERCLA/ NCP	
75	EBS AOC 700	Former Trash Pit	Building 700 Southern portion of U.S. Army Transfer Area	Army Area	Various Wastes	Unknown	SS		EBS/ CERCLA/ NCP	
Front Area (FDA Area)										
76	IR Program Site 10 (RCRA AOC-E)	Radium Spill at Building 74	At former Building 74, approximately 35 ft north of Building 70	FDA Area	Low-level radioactive waste (Radium-226)	1950s-Late 1950s	SS		CERLCA/ NCP	
77	IR Program Site 11 (SWMUs 10-19)	Industrial Waste water Disposal from "100 Area"	In the "100 Area" of NSWC-White Oak.	FDA Area	Various liquid wastes.	1940s-1982	IRA		CERLCA/ NCP	
78	IR Program Site 14 (AOC-C)	Soil Near Building 70	Previously located next to the sidewalk, a few feet northeast of Building 70	FDA Area	Radioactive material (Radium-226)	Start-up-1950s Closure-1983	SS		CERLCA/ NCP	

BCP Ref. Num.	Site or Facility Number	Name	Location	Area	Material Managed/Disposed	Date of Operation	Status (a)	Risk to Human Health and Environ. (b)	Regulatory Mech. (c)	No Further Action (d)
			(soil removed).							
79	IR Program Site 29 (SWMU 74)	Building 76 Plastics Laboratory Waste Storage Area	Northwestern portion of Building 76	FDA Area	Epoxies and resin	1982-Present	"AOC Group 1"		Deferred to CERCLA/NCP	
80	IR Program Site 31 (SWMU 72)	Former Building 25 Outdoor Drum Storage Site	East side of Taylor Road near Building 25	FDA Area	Drummed wastes, including solvents and lubricating oils	Late-1970s-1981	SS "AOC group" 1		Deferred to CERCLA/NCP	
81	SWMU 38	Former Building 25 Electronics Fabrication Shop Etching Rinse Tank Site	Second floor of Building 25	FDA Area	Waste acids	1965-Mid-1980s			Deferred to CERCLA/NCP	X
82	SWMU 39 (IR Site 33)	Former Building 25 Plating Shop Equalization Tank	East side of Building 25	FDA Area	Waste water from the plating shop	Late-1940s	"AOC group" 1		Deferred to CERCLA/NCP	
83	SWMU 49	Building 100 Waste Oil Collection	Building 100	FDA Area	Waste oil possibly containing heavy	1946-Present			Deferred to CERCLA/	X

BCP Ref. Num.	Site or Facility Number	Name	Location	Area	Material Managed/Disposed	Date of Operation	Status (a)	Risk to Human Health and Environ. (b)	Regulatory Mech. (c)	No Further Action (d)
		Unit			metals				NCP	
84	SWMU 55	Former Electrical Shop Transformer Oil Filter System Site	Northwestern portion of Building 20	FDA Area	Transformer oil, possibly containing PCBs	Late-1940s-1988			Deferred to CERCLA/NCP	X
85	SWMU 58	Former/Active Building 25 Public Works Machine Shop Waste Oil Holding Tanks	Northwest of Building 25	FDA Area	Cutting oils	1947-Present	SS		Deferred to CERCLA/NCP	X
86	SWMU 59	Building 100 Waste Oil Storage System	Northwestern portion of Building 100	FDA Area	Waste oil, possibly containing heavy metals	1946-1990	SS		RCRA	X
87	SWMU 62	Former Building 3 Designated Waste Storage Areas	Throughout Building 3	FDA Area	Solid waste possibly containing metals and metal salts	Late-1940s-Unknown			Deferred to CERCLA/NCP	X
88	SWMU 63	Building 25 Paint Waste	Northeast Corner	FDA	Waste paint, lacquer thinner, acetone,	Late-1940s-			Deferred to CERCLA/	X

BCP Ref. Num.	Site or Facility Number	Name	Location	Area	Material Managed/Disposed	Date of Operation	Status (a)	Risk to Human Health and Environ. (b)	Regulatory Mech. (c)	No Further Action (d)
		Storage Area	of Building 3	Area	xylene, phenols, and dry-cleaning solvent	Present			NCP	
89	SWMU 64	Former Building 25 Paint Waste Storage Area	West side of Building 25	FDA Area	Waste paint, lacquer thinner, acetone, xylene, phenols, and dry-cleaning solvent	Late-1940s-1983	SS		Deferred to CERCLA/NCP	X
90	SWMU 65	Building 25 Temporary Waste PCB Storage Area	Basement of the south side of Building 25	FDA Area	Rags and absorbent materials containing oils potentially contaminated with PCBs	1981-Present			Deferred to CERCLA/NCP	X
91	SWMU 66	Building 25 Central Waste PCB Storage Area	Northwestern portion of Building 25	FDA Area	Transformers and oils potentially containing PCBs	Unknown-Present			Deferred to CERCLA/NCP	X
92	SWMU 67	Building 25 Engineering Department Machine Shop Waste Storage Area	Northwestern portion of the basement of Building 25	FDA Area	Fiberglass, metal scraps, waste oil, and solvents from machine shop operations	Late-1940s-Present			Deferred to CERCLA/NCP	X
93	SWMU 68	Machine Shop Waste Solvent Storage Area	Building 25	FDA Area	Solvents	Late-1940s-Present			Deferred to CERCLA/NCP	X

BCP Ref. Num.	Site or Facility Number	Name	Location	Area	Material Managed/Disposed	Date of Operation	Status (a)	Risk to Human Health and Environ. (b)	Regulatory Mech. (c)	No Further Action (d)
94	SWMU 69	Electrical Shop Waste Solvent Storage Area	Building 25	FDA Area	Solvents	Late-1940s-Present			Deferred to CERCLA/NCP	X
95	SWMU 70	Pipe Shop Waste Solvent Storage Area	Building 25	FDA Area	Solvents	Late-1940s-Present			Deferred to CERCLA/NCP	X
96	SWMU 71	Refrigeration Shop Waste Solvent Storage Area	Building 25	FDA Area	Solvents	Late-1940s-Present			Deferred to CERCLA/NCP	X
97	SWMU 73	Building 100 Vehicle Maintenance Shop Waste	Northwestern portion of Building 100	FDA Area	Solvents	1946-Active			Deferred to CERCLA/NCP	X
98	SWMU 84	Building 25 Asbestos Storage Area	Northeast section of Building 25	FDA Area	Asbestos	1989-Present			Deferred to CERCLA/NCP	X
99	IR Program Site 28 (SWMU 88)	Building T-14 Scrap Yard	Adjacent to Building T-14	FDA Area	Scrap metal and transformers	Late-1940s-1975	SS "AOC group" 1		Deferred to CERCLA/NCP	

BCP Ref. Num.	Site or Facility Number	Name	Location	Area	Material Managed/Disposed	Date of Operation	Status (a)	Risk to Human Health and Environ. (b)	Regulatory Mech. (c)	No Further Action (d)
100	SWMU 89	Former Inert Loading Shop Settling Tank	Basement of Building 25	FDA Area	Concrete and waste water slurry	1940s-Late-1960s			Deferred to CERCLA/NCP	X
101	SWMU 90	Photographic Laboratory Storage Area (Building 3)	Basement of Building 3	FDA Area	Photographic wastes	1940s-Present			Deferred to CERCLA/NCP	
102	SWMU 91	Print Shop Storage Area (Building 1)	Basement of Building 1	FDA Area	Photographic wastes	1940s-Present			Deferred to CERCLA/NCP	
103	SWMU 92	Former Building 25 Plating Shop Waste Collection Site	Building 25, Room 128	FAD Area	Sludge from plating operations	Late-1940s-1982			Deferred to CERCLA/NCP	X
104	SWMU 95	Former Metallic Materials Laboratory Trash Area	Building 24	FDA Area	Rags containing solvents	Early-1950s-Late-1960s			Deferred to CERCLA/NCP	X
105	SWMU 96	Waste Oil Transport Truck/Former	Mobile - no fixed location	---	Sludge containing ordnance residues	1950s-Present			Deferred to CERCLA/NCP	X

BCP Ref. Num.	Site or Facility Number	Name	Location	Area	Material Managed/Disposed	Date of Operation	Status (a)	Risk to Human Health and Environ. (b)	Regulatory Mech. (c)	No Further Action (d)
		Honey Wagon								
106	SWMU 97	Waste Transport Pickup Truck	Mobile - No fixed location	---	Drummed hazardous wastes	1970-Present			Deferred to CERCLA/ NCP	X
107	RCRA AOC-A	1976 Boiler Plant Fuel Spill Site	Building 101	FDA Area	No. 6 fuel oil	Spill on September 17, 1976			Deferred to CERCLA/ NCP	X
108	RCRA AOC-B	1980 Boiler Plant Spill Site	Building 101	FDA Area	No. 6 fuel oil	Spill on February 20, 1980			Deferred to CERCLA/ NCP	X
109	RCRA AOC-H	Building 25 Paint Shop Stripping Unit	North-central section of Building 25	FDA Area	Paint wastes and solvents	Late-1940s-Present			Deferred to CERCLA/ NCP	X
110	RCRA AOC-J	Building 73 Storage Yard	Northwest of Building 73	FDA Area	Unused lubricants, solvents, paints, hydraulic fluids, and oils	1949-1978			Deferred to CERCLA/ NCP	X
111	EBS AOC 100 (IR Site 36)	Indoor Underground Pistol Range	North of Building 25	FDA Area	Munitions	Unknown	SS		EBS/ CERCLA/ NCP	
112	EBS AOC	Stressed vegetation	Building 150	FDA	Unknown	Unknown	SS		EBS/ CERCLA/	

BCP Ref. Num.	Site or Facility Number	Name	Location	Area	Material Managed/Disposed	Date of Operation	Status (a)	Risk to Human Health and Environ. (b)	Regulatory Mech. (c)	No Further Action (d)
	150	area with storage of solid waste	Outside (to west)	Area					NCP	
113	EBS AOC 151	Uncovered storage of materials containing asbestos	Building 151 Outside	FDA Area	Asbestos	Unknown	SS		EBS/ CERCLA/ NCP	
Various Locations										
114	IR Program Site 9 (SWMUs 23-28)	Industrial Waste water Disposal from "300 Area"	Along an intermittent stream bank just east of the "300 Area."	300 Area/ Army Area	Waste water containing explosives	Mid-1950s- Mid-1980s	IRA		CERCLA/ NCP	
115	IR Program Site 8 (SWMU 5)	Abandoned Chemical Disposal Pit	Just north of the boundary between NSWC-White Oak and U.S. Army Adelphi Laboratory Center, at the end of the southern boundary of Patrol Road.	200 Area/ Army Area	Laboratory chemicals including mercury	1951-1971	IRA		CERCLA/ NCP	
116	IR Program Site 26	Sanitary	Throughout the	Various	Waste from photographic	1945-	SS		Deferred to CERCLA/	

BCP Ref. Num.	Site or Facility Number	Name	Location	Area	Material Managed/Disposed	Date of Operation	Status (a)	Risk to Human Health and Environ. (b)	Regulatory Mech. (c)	No Further Action (d)
	(SWMU 46)	Sewer System	facility		developer and fixer, small quantities of radioactive waste, and explosive wastes	Present			NCP	
117	IR Program Site 27 (SWMU 48)	Storm Drain System	Throughout the facility	Various	Waste water containing cyanide, chromic and hydrofluoric acids, sodium hydroxide, washdown from explosives handling facilities.	1945-Present	SS		Deferred to CERCLA/ NCP	
118	RCRA AOC-L	Facility Product USTs	Various locations	Various	Various materials	1950s-Present	SS		Deferred to CERCLA/ NCP	X (tank program)
119	N/A	Streams throughout NSWC-White Oak	NA	Various	NPDES Discharge	Unknown	SS		EBS/ CERCLA/ NCP	
120	IR Program Site 46	Investigation	300 Area	Army Area/ Off-site	TCE detected on Army property	c. 1980s	SS		CERCLA/ NCP	
(a)	Notes pertaining to status: SS - Site Screening RI FS - Remedial Investigation Feasibility Study RD - Remedial Design IRA - Interim Remedial Action									
(b)	Information not available at this time.									
(c)	When a site is labeled "CERCLA/NCP" it is understood to mean consistent with CERCLA/NCP under the IR Program.									
(d)	No further action is recommended.									

Table 3-2. Early Actions Status

IR Program Site No.	Location	Action	Purpose	Status
8	200 Area/U.S. Army Transfer Area	Soil Removal	Reduce potential contaminant source	70 cubic yards of soil were removed in 1996
9	300 Area	Soil Removal	Reduce potential contaminant source	305 cubic yards of soil were removed in 1996
11	Front Area (FDA Area)	Soil Removal	Reduce potential contaminant source	325 cubic yards of soil were removed in 1996

Table 3-3. Closure-Related Compliance Projects

Project	Status	Regulatory Program
Hazardous Materials/Waste Disposal and Closure of Hazardous Waste Storage Areas	Disposal of wastes throughout the facility is ongoing. Closure of Hazardous Waste storage facilities is anticipated to be completed in Summer 1997.	RCRA
Explosive Decontamination/Demolition	Decontamination and/or demolition of structures formerly containing explosives will be performed in 1997 - 1998.	RCRA
Radioactive Materials and Waste Disposal and Closeout of Permit	Building surveys are to be completed in 1997, and permit closeout is expected in July 1997.	RASO

Table 3-4. Compliance Early Actions Status

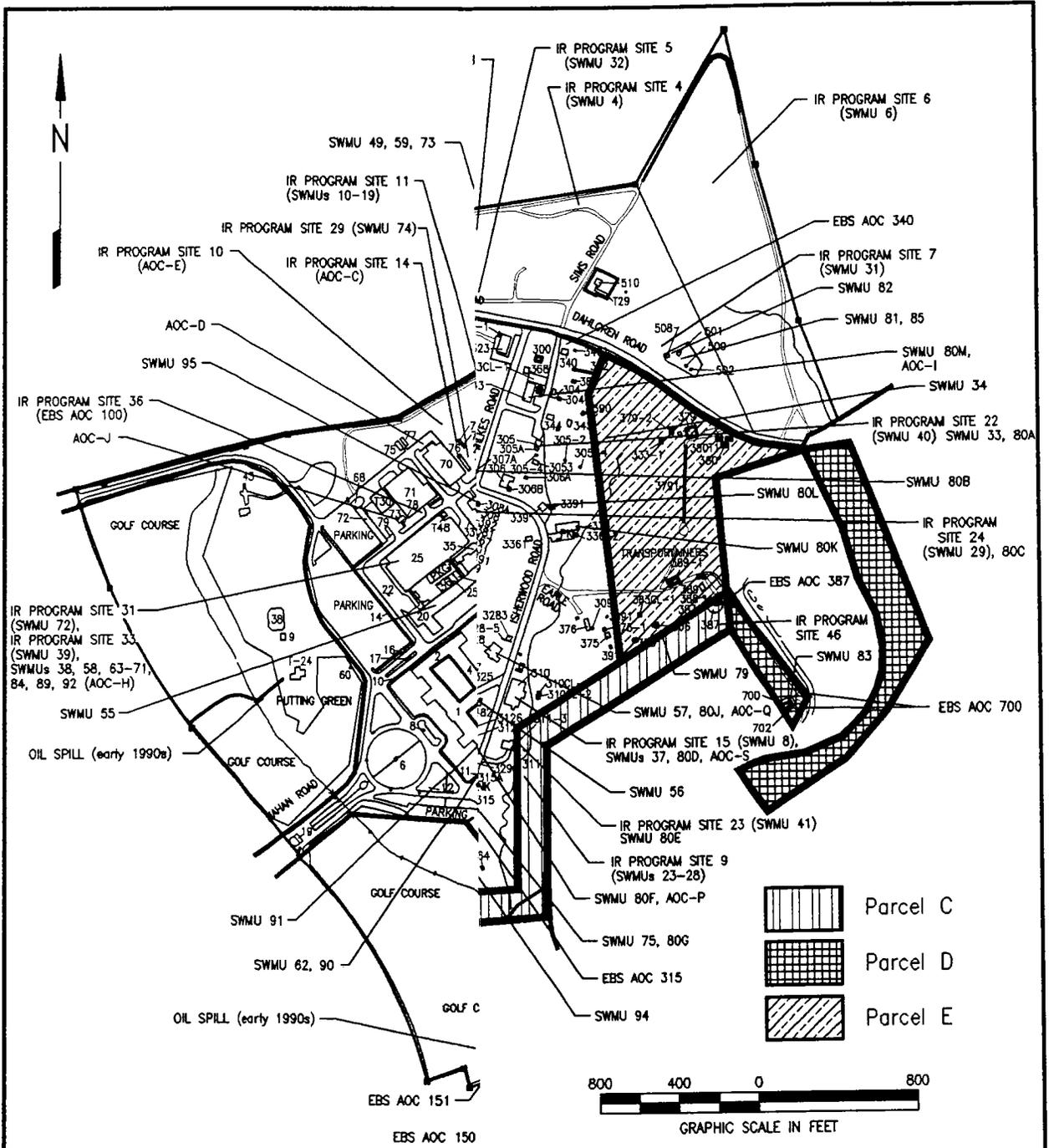
Site No.	UST No.	Action	Purpose	Status
Building 100	121, 139	Removal of 1,000-gal UST and 10,000-gal UST	Regulatory Compliance	Removed in August 1996
Building 406	406	Removal of 550-gal UST	Regulatory Compliance	Removed in August 1996

Table 3-5 Underground Storage Tank Inventory

Tank ID #	Site Parcel	Location	Year Installed	Capacity (gal)/tank material	Material Stored	Status
96	100 area	Bldg. 101	1979	40,000 Steel	#2 Fuel Oil	Active*†
97	100 area	Bldg. 101	1979	40,000 Steel	#2 Fuel Oil	Active*†
98	100 area	Bldg 101	1979	40,000 Steel	#2 Fuel Oil	Removed in 1997
99	100 area	Bldg 101	1979	40,000 Steel	#2 Fuel Oil	Removed in 1997
121	100 area	Bldg 100	1982	1,000 steel	Diesel	Removed in 1996
124	100 area	Bldg 117	1949	1,500 Steel	Not in service	Closed in place
126	100 area	Bldg 101	1993	40,000 FRP	#2 fuel Oil	Active
127	100 area	Bldg 101	1993	40,000 FRP	#2 fuel Oil	Active
136	100 area	Bldgs 130 & 132	1994	10,000 FRP	#2 Fuel Oil	Active
137	100 area	Bldgs 130 & 132	1994	10,000 FRP	#2 Fuel Oil	Active
139	100 area	Bldg 100	1982	10,000 Steel	Gasoline	Removed in 1996
217-1	200 area	Bldg 217	1993	550 FRP	#2 fuel oil	Removed in 1997
305-5	300 area	Bldg 305A	1993	1,000 FRP	#2 Fuel Oil	Removed in 1997
312-7	300 area	Bldg 305A	1993	6,000 FRP	#2 Fuel Oil	Active†
323-2	300 area	Bldg 323	1991	6,000 FRP	#2 Fuel Oil	Active†
335-4	300 area	Bldg 335A	1993	550 FRP	#2 Fuel Oil	Active†
336-3	300 area	Bldg 336	1993	2,500 FRP	#2 fuel Oil	Removed in 1997
363-1	300 area	Bldg 363	1993	550 FRP	#2 Fuel Oil	Removed in 1997
368-2	300 area	Bldg 368	1991	10,000 FRP	#2 Fuel Oil	Removed in 1997
406	400 area	Bldg 406	1974	550 steel	Blowdown oil/water mixture	Removed in 1996
611-2	600 area	Bldg 611	1993	550 FRP	#2 Fuel Oil	Removed in 1997
613-7	600 area	Bldg 613	1991	2,500 FRP	#2 Fuel Oil	Removed in 1997
620-3	600 area	Bldg 620	1994	1,000 FRP	#2 Fuel Oil	Removed in 1997
<p>* These USTs do not meet the regulatory standards for leak detection that will be implemented in December 1998. † Scheduled to be removed in Summer 1997.</p>						

Table 3-6 Aboveground Storage Tank Inventory

Tank ID #	Location	Size (gal)/Contents	Status
T-5	Bldg T-5	275 gals/ #2 Fuel Oil	Active
T19	Bldg 19	275 gals/ #2 Fuel Oil	Inactive
TK24	Bldg T24	275 gals/ #2 Fuel Oil	Inactive
40	Bldg 40	550 gals/ #2 Fuel Oil	Active
----	Bldg 101	275 gals/ Diesel Fuel	Active
----	Bldg 101	275 gals/ Diesel Fuel	Active
201-4	Bldg 201	3,000 gals/ #2 Fuel Oil	Active
T306	Bldg 306	275 gals/ #2 Fuel Oil	Active
T306A	Bldg 306	275 gals/ #2 Fuel Oil	Active
T307	Bldg 307	275 gals/ #2 Fuel Oil	Active
T308	Bldg 308	275 gals/ #2 Fuel Oil	Active
T309	Bldg 376	275 gals/ #2 Fuel Oil	Active
T310-1	Bldg 310A	245 gals/ #2 Fuel Oil	Active
T310-2	Bldg 310A	275 gals/ #2 Fuel Oil	Active
313	Bldg 313	275 gals/ #2 Fuel Oil	Active
315	Bldg 315	550 gals/ #2 Fuel Oil	Active
T317	Bldg 317	275 gals/ #2 Fuel Oil	Active
T319	Bldg 319A	275 gals/ #2 Fuel Oil	Active
324-1	Bldg 324A	275 gals/ #2 Fuel Oil	Active
324-2	Bldg 324A	275 gals/ #2 Fuel Oil	Active
T328	Bldg 328	500 gals/ #2 Fuel Oil	Active
T339	Bldg 339	275 gals/ #2 Fuel Oil	Active
402	Bldg 402	13,000 gals/ liquid Nitrogen	Inactive
406A	Bldg 406	275 gals/ Waste Oil	Active
413	Bldg 413	13,000 gals/ Propane	Inactive
432	Bldg 402	13,000 gals/ Liquid Nitrogen	Active
700	Bldg 700	4,000 gals/ Never utilized	Inactive
QTRS-A	QTRS-A	275 gals/ #2 Fuel Oil	Active
QTRS-B	QTRS-B	275 gals/ #2 Fuel Oil	Active
QTRS-C	QTRS-C	275 gals/ #2 Fuel Oil	Active
QTRS-M	QTRS-M	275 gals/ #2 Fuel Oil	Active

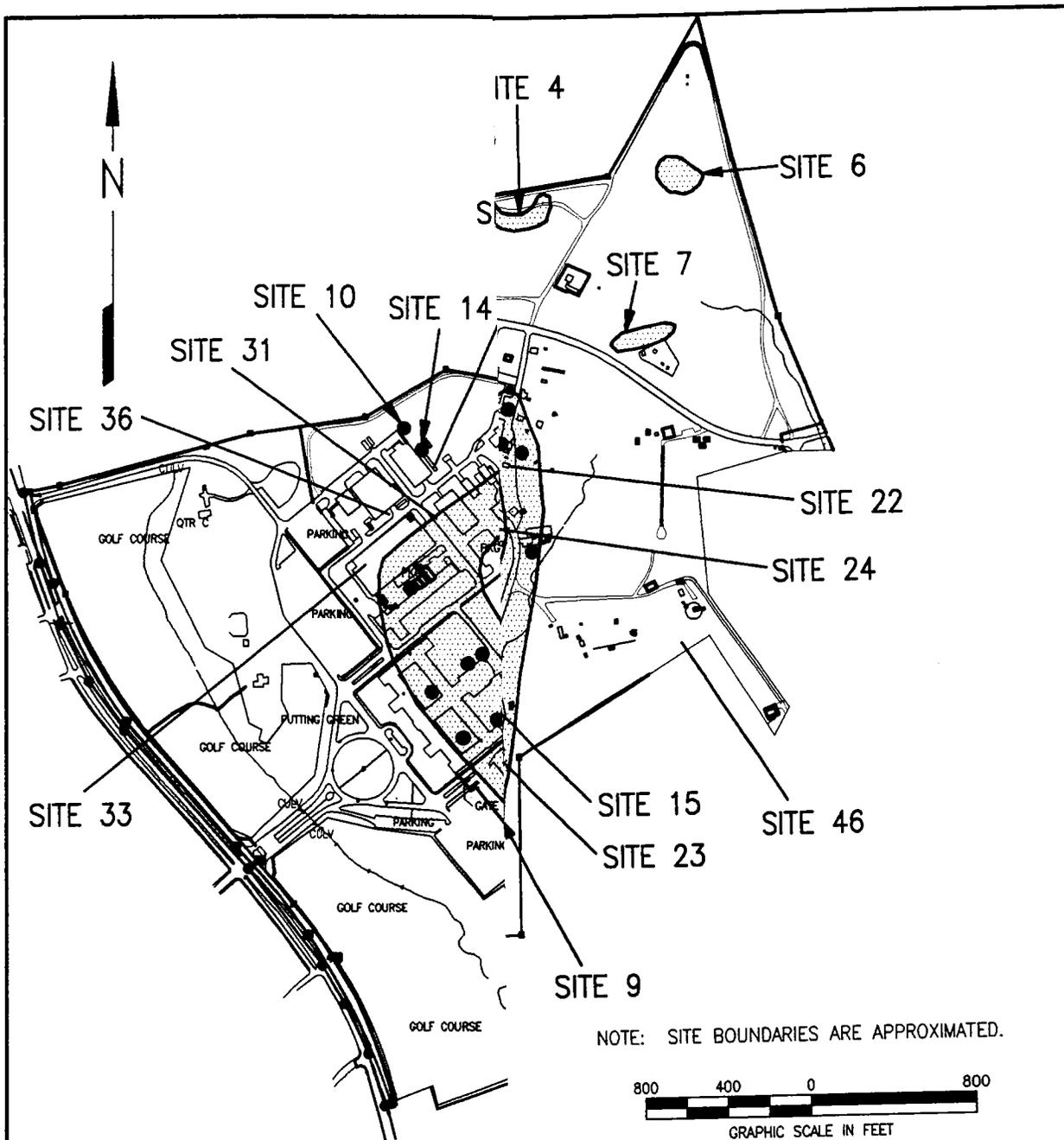


IR PROGRAM SITE NO.	NAME	IR	NAME
1	PARKING LOT LANDFILL	BUILDING 25 OUTDOOR DRUM STORAGE SITE	
2	APPLE ORCHARD LANDFILL	FORMER OUTFALL 009 AT BUILDING 112	
3	PISTOL RANGE LANDFILL	FORMER BUILDING 25 PLATING SHOP EQUALIZATION TANK	
4	CHEMICAL BURIAL SITE	INDOOR UNDERGROUND PISTOL RANGE	
5	OPEN BURNING AREAS	FORMER BUILDING 620 WASHDOWN DISPOSAL SYSTEM	
6	SLUDGE COMPOSTING AREA	FORMER BUILDING 318 PILOT TREATMENT PLANT	
7	ORDNANCE BURN AREA	BUILDING 318-3 CARBON ADSORPTION TREATMENT SYSTEM	
8	ABANDONED CHEMICAL DISPOSAL PIT	INVESTIGATION SOUTH OF FACILITY 387	
9	INDUSTRIAL WASTE WATER DISPOSAL FROM "300" AREA		

Environmental Sites

Figure 3-1

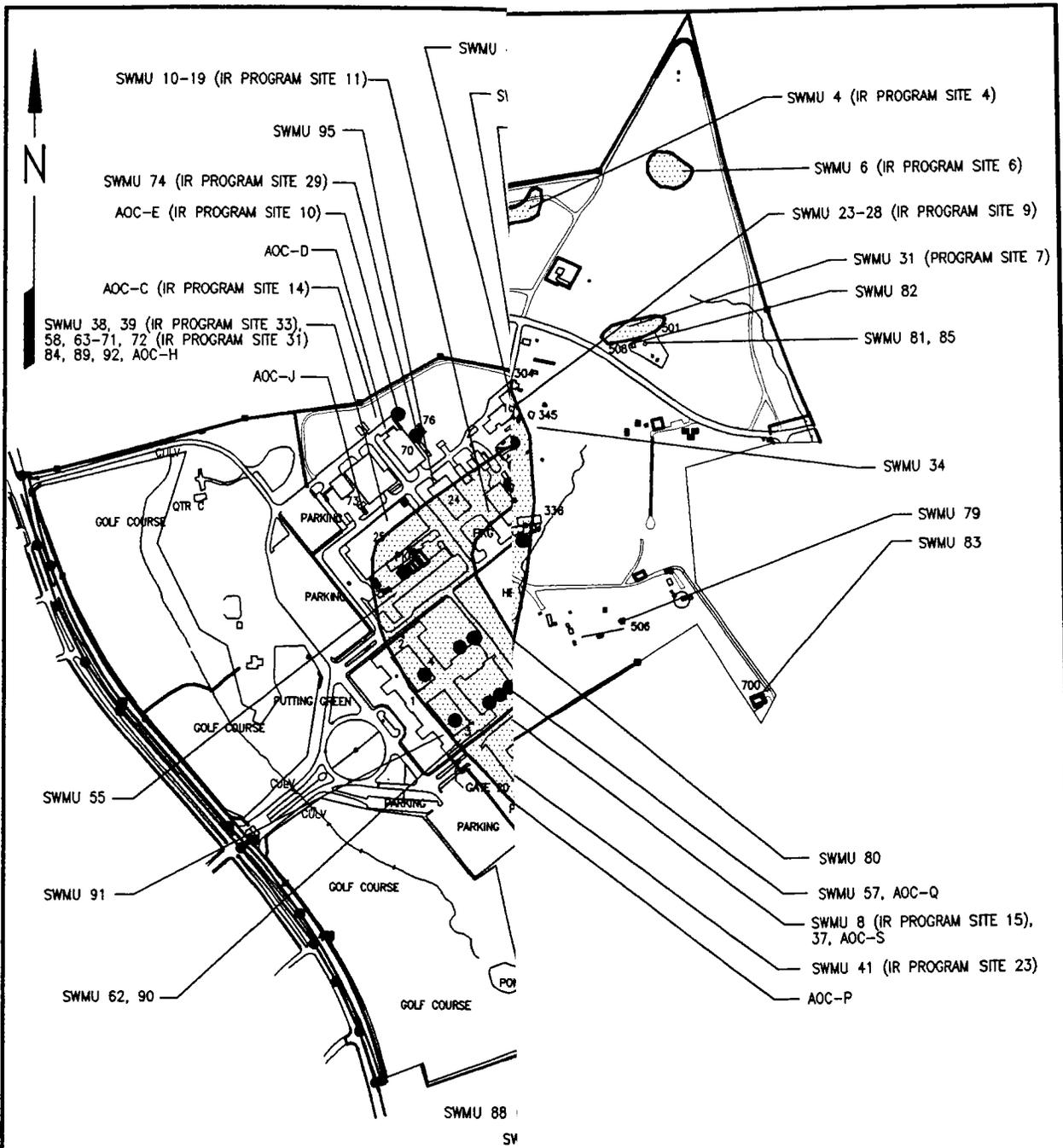
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IR PROGRAM SITE NO.	NAME	IR S	NAME
1	PARKING LOT LANDFILL		BUILDING 25 OUTDOOR DRUM STORAGE SITE
2	APPLE ORCHARD LANDFILL		FORMER OUTFALL 009 AT BUILDING 112
3	PISTOL RANGE LANDFILL		FORMER BUILDING 25 PLATING SHOP EQUALIZATION TANK
4	CHEMICAL BURIAL SITE		INDOOR UNDERGROUND PISTOL RANGE
5	OPEN BURNING AREAS		FORMER BUILDING 620 WASHDOWN DISPOSAL SYSTEM
6	SLUDGE COMPOSTING AREA		FORMER BUILDING 318 PILOT TREATMENT PLANT
7	ORDNANCE BURN AREA		BUILDING 318-3 CARBON ADSORPTION TREATMENT SYSTEM
8	ABANDONED CHEMICAL DISPOSAL PIT		INVESTIGATION SOUTH OF FACILITY 387
9	INDUSTRIAL WASTE WATER DISPOSAL FROM "300" AREA		

Installation Restoration Program Site Locations

Figure 3-2

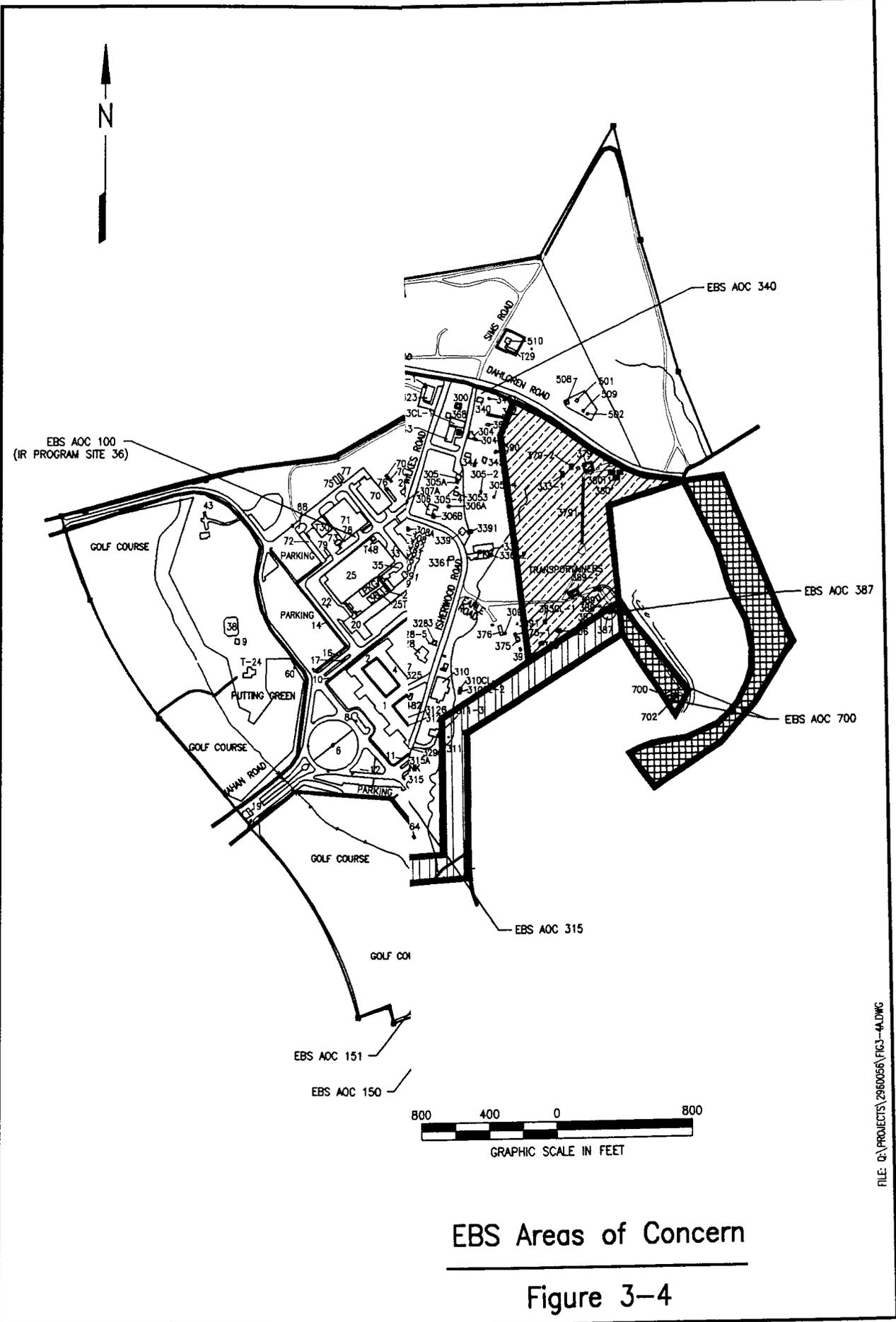


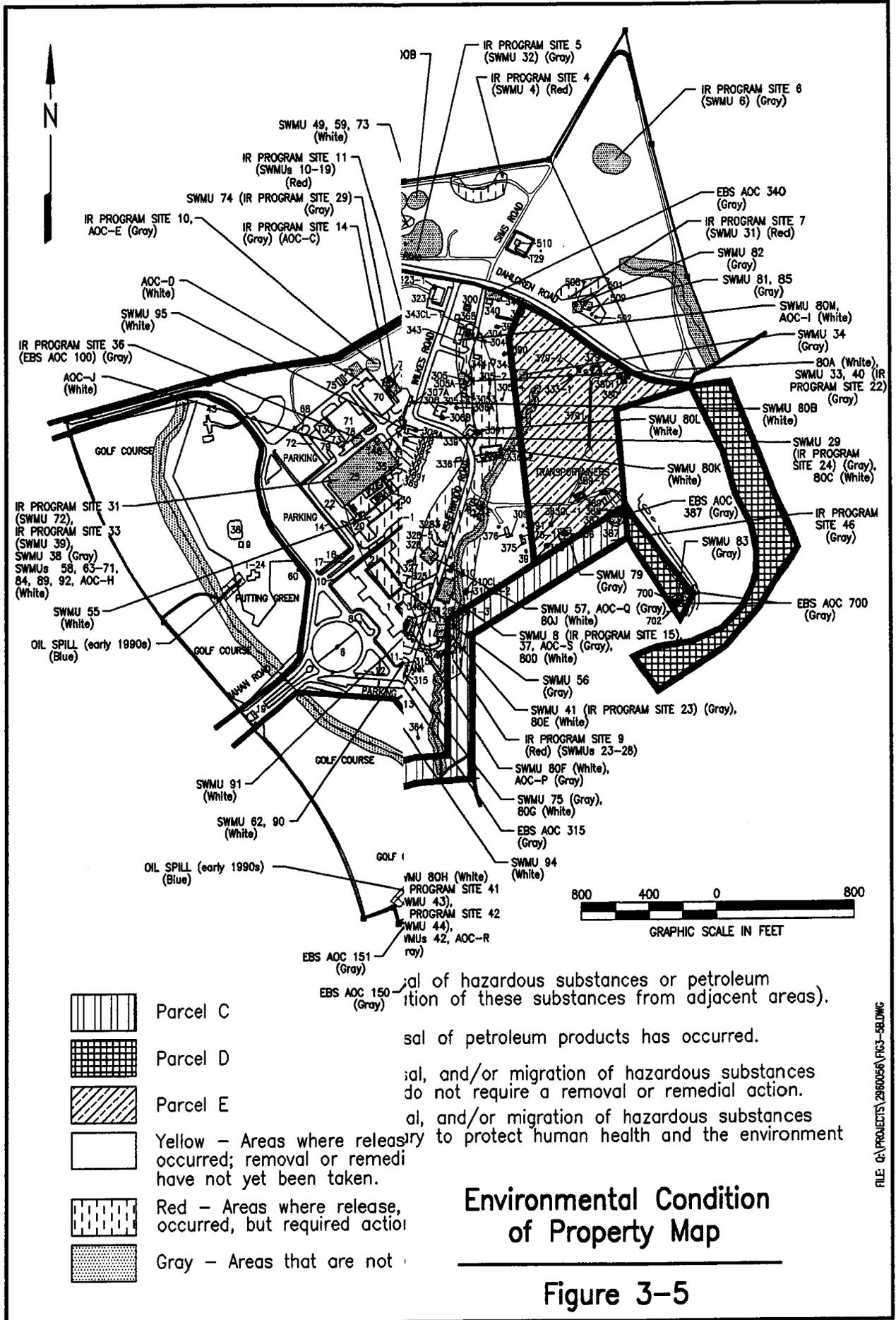
NOT PICTURED:	
SWMU 46 (IR PROGRAM SITE 26)	SANITARY SEWER SYSTEM
SWMU 48 (IR PROGRAM SITE 27)	STORM DRAIN SYSTEM
SWMU 96	WASTE OIL TRANSPORT TRUCK/ FORMER HONEY WAGON
SWMU 97	WASTE TRANSPORT PICKUP TRUCK
AOC-L	FACILITY PRODUCT USTs

Location of RCRA SWMUs/AOCs

Figure 3-3

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Environmental Condition of Property Map

Figure 3-5

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Chapter 4

Installation-Wide Strategy for Environmental Restoration

This chapter describes and summarizes the environmental restoration and compliance strategies for NSWC-White Oak. Included in this chapter are the goals for restoration activities at NSWC-White Oak, the priorities used to execute required actions, a decision process to be used for these actions, and summaries of actions required. Budget requirements to complete these actions are included in Appendix A.

Table 4-1 is a summary of general and major actions required to complete remediation actions at NSWC-White Oak. Table 4-2 is a list of all IR Program sites, RCRA Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs), and Environmental Baseline Survey (EBS) AOCs at NSWC-White Oak, with concerns expressed by regulators, the plan of action to meet those concerns, and funding requirements by fiscal year. It also refers to the action site grouping discussed in Chapter 3. In order to facilitate final remediation of the sites, they have been grouped together for investigation and remediation, as appropriate. Section 4.4 includes descriptions of site history, status, regulatory issues, remediation alternatives, plans of action, and funding profiles for each site grouping. Following each group is a chart showing the specific schedule for each action required. One action item for the Navy and the BCT is to complete these schedules for actions required by August of 1997 for the next budget submission (see Appendix A).

There are up to three numbers/letters associated with each site. In Table 4-2, the sites are listed by SWMU number and if no SWMU number exists, then by AOC number/letter. The IR Site number is also given in parentheses for each SWMU/AOC listed. In all other tables in Chapter 4, the Action Site Grouping is used, with preference given to the IR Site number.

Table 4-1. Action Summary Table

Action	Responsibility	Date due	Funding Required
Update BCP	BCT	To be set by BCT	No
Review budget requirements	BCT	August 1997	No
Complete project schedules	Navy/BCT	August 1997	No
Close operational permits	NSWC-White Oak	31 July 1997	Yes--NSWC-White Oak Funds
Complete screening and decon of former explosive and ordnance areas	NSWC- White Oak	Initial screening-1997; landfill completion by 2003	No
Desktop survey of EBS AOCs	BCT	August 1997	No
Environmental Summary Document	Navy	Completed	No
Determine investigative requirement for storm/sanitary sewers	BCT	30 June 1997	No
Update Administrative Record	Navy	30 September 1997	No
Clear FDA footprint for construction	Navy/GSA/BCT	31 July 1997	Yes --FY97 BRAC
Update Community Relations Plan	Navy	30 June 1997	Yes--FY97 BRAC
Basewide Groundwater/ Background Study	Navy/BCT	Mid-August 1997	Yes--FY97 BRAC
Master Work Plan	Navy/BCT	30 June 1997 (Draft)	Yes--FY97 BRAC
UST Removal	Navy	23 June 1997	Yes--FY97 BRAC
Site 46 Treatment	Navy/BCT	30 July 1997	Yes--FY97 BRAC
Complete original IR Sites RODs	Navy/BCT	21 December 1999	Yes--FY97/98 BRAC
RCRA Closures	Navy/MDE	31 July 1997	Yes--NSWC-White Oak Funds
Final remediation in place for all sites	Navy/BCT	Calendar Year 2005 (AOC 3 Sites)	Yes--various years BRAC

**Table 4-2. SWMU/Site Action Summary
Revised June 26, 1997**

Identification	Description	BCT Concern	Plan	Status	Planned Action by Year
SWMU 1 (IR Site 2)	Apple Orchard Landfill	Remedial design started without issuing revised proposed plan and ROD; and more community involvement Groundwater contamination not addressed in 35% remedial design report Cap design did not reflect recommended & agreed upon design (RCRA Subtitle C)	Will complete RI in FY98 Existing monitoring wells have been sampled Water levels collected Changed to Subtitle C.	Have sampled existing groundwater	FY97 - RI FY98 - ROD, FY98 - Complete design FY98/99 - construct cap*
SWMU 2 (IR Site 3)	Pistol Range Landfill	Remedial design started without issuing revised proposed plan and ROD Groundwater contamination not addressed in 35% remedial design report Cap design did not reflect recommended & agreed upon cap design (Subtitle C).	Will complete RI in FY98 Existing monitoring wells have been sampled Water levels collected	Have sampled existing groundwater	FY97 - RI FY98 - ROD FY98 - complete design FY98/99 - construct cap*
SWMU 3 (IR Site 1)	Parking Lot Landfill	Groundwater contamination not addressed; needs further investigation Draft sampling and analysis plan need to be finalized and work plan implemented.	GW sampling in FY97. Will be finalized in June 97	Site 1	FY97 - SS FY00 - Design FY00 - Construct Cap*

- Remedial Action technology selected was used for funding purposes.
The technology was not selected by BCT

Identification	Description	BCT Concern	Plan	Status	Planned Action by Year
SWMU 4 (IR Site 4)	Chemical Burial Site	Remedial design started without issuing revised proposed plan and ROD and adequate community involvement. Groundwater contamination not addressed in 35% remedial design report	Removal action, will prepare decision document. Will complete RI in FY98. Existing monitoring wells have been sampled Water levels collected	Have sampled existing groundwater	FY97 - RI FY00 - Design FY01 - low temperature thermal desorption*
SWMU 5 (IR Site 8)	Chemical Disposal Pit	Groundwater contamination not addressed	Will complete RI in FY98.	Existing GW monitoring well has been sampled	FY97 - RI FY99 - Design FY00 - Air Stripping in activated carbon Adsorption*
SWMU 6 (IR Site 6) AOC 1	Sewage Sludge Composting Area	Sampling and analysis plan needs to be finalized. Site should also be sampled for TCE and explosives	Will complete Sampling Analysis Strategy Plan (SASP) in June 97.	Finalizing SASP	FY97 - SS FY00 - RI/FS FY01 - Design FY02 - low temperature thermal desorption*
SWMU 7 (IR Site 13) AOC 1	Oil Sludge Disposal Area	Sampling and analysis plan needs to be finalized. Needs further investigation	Will complete Sampling Analysis Strategy Plan (SASP) in June 97.	Finalizing SASP	FY97 - SS FY00 - RI/FS FY01 - Design FY02 - Bioremediation*
SWMU 8 (IR Site 15) AOC 2	Building 310 A Waste Disposal Area	Uncharacterized Needs information on waste drainage from building and in pipes in hillside above creek	Will conduct site screening in FY98 to gather data. Needs BCT review and recommendation	Needs to develop SSP	FY98 - SS FY00 - RI FY01 - Design FY02 - low temperature thermal desorption*

- Remedial Action technology selected was used for funding purposes.
The technology was not selected by BCT

Identification	Description	BCT Concern	Plan	Status	Planned Action by Year
SWMU 9 (IR Site 16)	Building 409 Paint Branch Waste Disposal Site	Uncharacterized	Will conduct site screening in FY98 to gather data. Needs BCT review and recommendation	Needs to develop SSP	FY98 - SS FY98 - RI FY00 - Design FY01 - low temperature thermal desorption*
SWMU 10-19 (IR Site 11)	Industrial Waste Water Disposal Area 100	Groundwater needs further characterization.	Will complete RI in FY98.	Existing GW monitoring well has been sampled	FY97 - RI FY98 - Design FY99 - Air stripping*
FDA Foot Print	FDA footprint Area	No concern	New monitoring well and well points has been install. Groundwater has been sampled	Preliminary sampling results are distributed as it becomes available.	FY97 - groundwater sampling
SWMU 20 (IR Site 17)	Former Bldg 130 South Leaching Well	Needs further investigation	RI is planned for FY00	Need to develop plan for RI	FY00 - RI FY01 - Design FY02 - excavate and dispose*
SWMU 21 (IR Site 12) AOC 1	Former Bldg 204 South Leaching Well	Needs further investigation Sampling and analysis plan needs to be finalized.	Will complete Sampling Analysis Strategy Plan (SASP) in June 97.	Finalizing SASP	FY97 - SS FY00 - RI FY01 - RD FY02 - Well Extraction*
SWMU 22 (IR Site 19) AOC 1	Former Bldg 204 South Leaching Well	Needs further investigation Sampling and analysis plan needs to be finalized.	Will complete Sampling Analysis Strategy Plan (SASP) in June 97.	Finalizing SASP	FY97 - SS FY00 - RI FY01 - RD FY02 - Well Extraction*

- Remedial Action technology selected was used for funding purposes.
The technology was not selected by BCT

Identification	Description	BCT Concern	Plan	Status	Planned Action by Year
SWMU 23-28 (IR Site 9)	300 Area Industrial Disposal System	Contingency plan for leaching wells that may be encountered during construction needed. Leaching/well field needs further investigation of possible Strontium-90 contamination, and groundwater samples should be analyzed for radionuclides	Will complete RI in FY97/98 RI/FS	Existing GW monitoring well has been sampled	FY97 - RI FY00 - RD FY01 - Air Stripping, activated carbon adsorption*
SWMU 29 (IR Site 24)	Building 308 Washdown System	Uncharacterized	Site screening in FY98 Pending research of DECON explosive	Needs BCT review.	FY 1997 - SS FY 1998 - RI/FS FY 1998 - RD FY 1999 - RA, low temperature thermal desorption*
SWMU 30 (IR Site 39)	Building 620 Washdown Disposal System	Need more historical information from Navy prior to decision on whether to address under RCRA or CERCLA	Need to discuss need for action w/ BCT.	Site 39	FY 1998 - RI/FS FY 1998 - RD FY 1999 - RA, excavation and disposal*
SWMU 31 (IR Site 7)	Ordnance Burn Area	No remedial action taken to mitigate groundwater & soil contamination	Will complete RI in FY98 RI/FS Removal action planned for FY98.	Existing GW monitoring well has been sampled	FY 1997 - RI/FS FY 1998 - Removal Action FY 2000 - RD FY 2001 - low temperature thermal desorption*
SWMU 32 (IR Site 5) AOC 1	Open Burning Area	Groundwater contamination not addressed; needs further investigation Sampling and Analysis plan needs to be finalized and should address need for groundwater samples	Will complete Sampling Analysis Strategy Plan (SASP) in June 97.	Finalizing SASP	FY 1997 - SS FY 2000 - RI/FS FY 2001 - RD FY 2002 - RA, soil vapor extraction*
SWMU 33 AOC 3	Building 305 Demilitarization Site	Uncharacterized	Site screening in FY00	Need BCT review and recommendation	FY 2000 - SS FY 2001 - RI FY 2003 - RD FY 2004 - RA*

- Remedial Action technology selected was used for funding purposes.
The technology was not selected by BCT

Identification	Description	BCT Concern	Plan	Status	Planned Action by Year
SWMU 34 AOC 2	Building 377 Demilitarization Site	Uncharacterized	Site screening in FY98	Need to develop SSP	FY 1998 - SS FY 2000 - RI No further action planned
SWMU 35 (IR Site 21) AOC 2	Stoneyard	Uncharacterized	Site screening in FY98	Need to develop SSP	FY 1998- SS FY 2000 - RI FY 2001 - RD FY 2002 - Low temperature thermal desorption*
SWMU 36 AOC 2	Building 108 Incinerator	Uncharacterized	Site screening in FY98	Need to develop SSP	FY 1998 - SS FY 2000 - RI No further action
SWMU 37	Building 310A Liquid Waste collection Areas	RCRA closure of regulated unit	Address in State RCRA work plan - anticipate no further action required	No further Action	No funds required
SWMU 38	Building 25 Electronics Fabrication Shop Etching Rinse Tank Site	none	no further action	No documented evidence of release to the environment.	no funding required
SWMU 39 (IR Site 33) AOC 1	Building 25 Plating Shop Equalization Tank	Need SS Tank cleanout recommended; further action to be determined later if necessary	Will complete Sampling Analysis Strategy Plan (SASP) in June 97. Interim (removal action scheduled to allow FDA construction)	Finalizing SASP	FY 1997 - SS FY 1998 - removal action FY 1999 - RI/FS
SWMU 40 (IR Site 22) AOC 2	Building 305 Wastewater Collection System	Uncharacterized	Site screening in FY98	Need to develop SSP	FY 1998 - SS FY 2000- RI/FS FY 2001 - RD FY 2002 - Low temperature thermal desorption*
SWMU 41 (IR Site 23) AOC 2	Building 311 Oxidation ditch	Uncharacterized Need Navy to coordinate with Army for access for investigation	Site screening in FY98	Need to develop SSP	FY 1998 - SS FY 2000- RI/FS FY 2001 - RD FY 2002 - Low temperature thermal desorption*

- Remedial Action technology selected was used for funding purposes.
The technology was not selected by BCT

Identification	Description	BCT Concern	Plan	Status	Planned Action by Year
SWMU 42 (IR Site 24) AOC 2	Building 318 Washdown Collection System	RCRA closure Unit still active Known practices may have cause contamination	Site screening in FY98	Need to develop SSP	FY 1998 - SS FY 1998 - RI/FS FY 1998 - RD FY 1999/00 - Low temperature thermal desorption*
SWMU 43 (IR Site 41)	Building 318 Pilot Treatment Plant Site	RCRA closure	SWMU closed Pilot system was housed in a trailer.	No documented evidence of a release to the environment	FY 1998 - RI/FS FY 1998 - RD FY 1999- RA*
SWMU 44 (IR Site 42)	Building 318-3 Carbon Adsorption Treatment System	RCRA closure	Will be covered w/ Site 24 Need to address drain lines.	State RCRA site	FY 1998 - RI/FS FY 1998 - RD FY 1999- RA*
SWMU 45 (IR Site 25)	Building 613 Sump	RCRA closure	Will sample in FY 98 for contamination	State RCRA site	FY 1998 - RI/FS
SWMU 46 (IR Site 26)	Sanitary Sewer System	Need SS BCT review and recommendation needed	Need to discuss for inclusion in AOC 1 as part of FDA Parcel.	Site 26	FY 1999 - RI/FS FY 2001 - RD FY 2002 - RA*
SWMU 47	Former Wastewater Treatment Plant Site	Need SS	Site screening in FY99	BCT review and provide recommend- ation needed	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavate and disposal*
SWMU 48 (IR Site 27)	Storm Drain System	No concern for entire system but concerns for individual sites, SWMUs and AOCs that have flowed into the storm drains.	Investigate as appropriat as individual Sites, SWMUs, and AOCs are addressed.	Reviewing affected Sites, SWMUs and AOCs	no funds required

- Remedial Action technology selected was used for funding purposes.
The technology was not selected by BCT

Identification	Description	BCT Concern	Plan	Status	Planned Action by Year
SWMU 49	Building 100 Waste Oil Collection Unit	No BCT concern.	no further action required	No documented evidence of a release to the environment	no funds required
SWMU 50	Building 112 Oil/Water Separator	Need verification of activity No VSI was conducted during RFA.	need to discuss if further action is required	Location of unit unknown.	no funds required
SWMU 51	Building 113 Oil/Water Separator	No BCT concern	need to discuss if further action is required	Active, still in operation	no funds required
SWMU 52 (IR Site 18) AOC 2	Building 201 Oil/Water Separator	Uncharacterized	Site screening in FY 98	Need to develop SSP	FY 1998 - SS FY 2000 - RI/FS FY 2001 - RD FY 2002 - RA, excavate tank and soil*
SWMU 53	Building 406 Oil/Water Separator	No BCT concern	Unit located is still active and is located within the building.	Active, still in operation	no funds required
SWMU 54	Former Waste Oil Recycling Operations Site	Uncharacterized	Will incorporate in IR Site 2	Part of IR Site 2	IR Site 2
SWMU 55	Former Electric Shop Transformer Oil filter System Site	Staining on concrete floor inside of the building	no further action required GSA was notified in Environmental Summary Document	No documented evidence of a release to the environment	no funds required
SWMU 56	Building 327 Wastewater Underground Storage Tank	RCRA closure	Will test tank in FY97, sampling later if required	Tank is active	NSWC White Oak operations funds - FY 1997

- Remedial Action technology selected was used for funding purposes.
The technology was not selected by BCT

Identification	Description	BCT Concern	Plan	Status	Planned Action by Year
SWMU 57	Former Building 328 Degreasing Tank Site/Waste Solvent Storage Area	Contamination possible from any overflow of spills that may have occurred. RCRA closure	Discuss incorporating into Site 9	State RCRA site	Include as part of Site 9
SWMU 58	Building 25 Public Works Machine Shop Waste Oil Holding Tanks	none	GSA was notified in Environmental Summary Document	Recent VSI did not show stains on concrete pad outside.	no funds needed
SWMU 59	Building 100 Waste Oil Storage System	none	no further action required	none	no funds needed
SWMU 60	Building 406 Waste Oil Storage System	No BCT concern	The unit is still active	Still active	no funds required
SWMU 61	Former Area 141 Waste Oil Underground Storage Tank Site	No BCT concern	no further action required	Closed out under State Oil Program	no funds required
SWMU 62	Former Building 3 Designated Waste Storage Areas	No BCT concern	no further action required	No documented evidence of a release to the environment	no funds required
SWMU 63	Building 25 Paint Waste Storage Area	No BCT concern	no further action required	No documented evidence of a release to the environment	no funds required

- Remedial Action technology selected was used for funding purposes.
The technology was not selected by BCT

Identification	Description	BCT Concern	Plan	Status	Planned Action by Year
SWMU 64	Former Building 25 Paint Waste Storage Area	No BCT concern	no further action required	No documented evidence of a release to the environment	no funds required
SWMU 65	Building 25 Temporary Waste PCB Storage Area	No BCT concern	no further action required	No documented evidence of a release to the environment	no funds required
SWMU 66	Building 25 Central Waste PCB Storage Area	No BCT concern	no further action required	No documented evidence of a release to the environment	no funds required
SWMU 67	Building 25 Machine Shop Waste Storage Area	No BCT concern	no further action required	No documented evidence of a release to the environment	no funds required
SWMU 68	Machine Shop Waste Solvent Storage Area	No BCT concern	no further action required	No documented evidence of a release to the environment	no funds required
SWMU 69	Electrical Shop Waste Solvent Storage Area	No BCT concern	no further action required	No documented evidence of a release to the environment	no funds required
SWMU 70	Pipe Shop Waste Solvent Storage Area	No BCT concern	no further action required	No documented evidence of a release to the environment	no funds required

- Remedial Action technology selected was used for funding purposes. The technology was not selected by BCT

Identification	Description	BCT Concern	Plan	Status	Planned Action by Year
SWMU 71	Refrigeration Shop Waste Solvent Storage Area	No BCT concern	no further action required	No documented evidence of a release to the environment	no funds required
SWMU 72 (IR Site 31) AOC 1	Former Building 25 Outdoor Drum Storage Area	Finalizing Sampling and Analysis Plan	In current plan for site screening for FY97. Plan will be finalized in June 97	Finalizing SASP	FY 1997 - SS FY 1998 - RI FY 2000 - RD FY 2000 - RA, remove and dispose of contaminated soil*
SWMU 73	Building 100 Vehicle Maintenance Shop Waste Solvent Storage Area	No BCT concern	no further action required	No documented evidence of a release to the environment	no funds required
SWMU 74 (IR Site 29) AOC 1	Building 76 Plastics Laboratory Waste Storage Area	Finalizing Sampling and Analysis Plan	In current plan for site screening for FY97. Plan will be finalized in June 97	Finalizing SASP	FY 1997 - SS FY 1998 - RI/FS FY 1999 - RD FY 1999 - RA, dig and haul with sidewall protection*
SWMU 75 AOC 2	Building 315 Waste Photographic Chemical Storage Area	Uncharacterized; has access problem Needs further investigation of possible floor drains and location of waste storage	SS planned for FY98 BCT to perform VSI	BCT to review.	FY 1998 - SS FY 2000 - RI no further work expected
SWMU 76	Building 430 Waste Oil Storage Area	No BCT concern	Still Active, will be used by Air Force	Still in use	no funds required
SWMU 77	Miscellaneous Building Waste Oil Collection Areas	Uncharacterized Need to verify	No further action needed if still active	none	no funds required

- Remedial Action technology selected was used for funding purposes.
The technology was not selected by BCT

Identification	Description	BCT Concern	Plan	Status	Planned Action by Year
SWMU 78	Area 362 Explosive Waste Storage Area	RCRA closure needed	Closure planned for June/July 97	RCRA Closure	Will use NSWC-WO FY 97 operating funds
SWMU 79	Building 506 Explosive Waste Storage Area	RCRA Closure	No longer exists, not used for storage, no action planned	RCRA Closure, no documented releases	No funds required
SWMU 80	Miscellaneous Buildings Waste Ordnance Collection Areas	Uncharacterized	Will conduct in-house survey to determine requirements	none	No funds required
SWMU 81	Building 501 Hazardous Waste Storage Facility	RCRA closure conducted	Decon completed on June 11, 1997, Closure implemented, need confirmation data	RCRA Closure, Awaiting confirmation results	Will use NSWC-WO FY 97 operating funds
SWMU 82	Building 508 Hazardous Waste Storage Facility	RCRA closure conducted	Decon completed on June 11, 1997 Closure implemented, need confirmation data	RCRA Closure, Awaiting confirmation results	Will use NSWC-WO FY 97 operating funds
SWMU 83	Building 700 Hazardous Waste Storage Facility	RCRA closure conducted	Decon on April 28-30, 1997, re-wash and re-sample June 10, 1997. Closure implemented, need confirmation data	RCRA Closure, Awaiting confirmation results	Will use NSWC-WO FY 97 operating funds
SWMU 84	Building 25 Asbestos Storage Area	No BCT concern	no further action required	No documented evidence of a release to the environment	no funds required

- Remedial Action technology selected was used for funding purposes.
The technology was not selected by BCT

Identification	Description	BCT Concern	Plan	Status	Planned Action by Year
SWMU 85	Building 501 Asbestos Storage Area	No BCT concern	no further action required	No documented evidence of a release to the environment	no funds required
SWMU 86	Building 409 Solid Waste Storage Unit	Pure water from WSSC was sent to the tank. This water was further purified in tank. No CERCLA concern. No hazardous waste used nor store in tank. No BCT concern	Water was drained from tank.	No documented evidence of a release to the environment	no funds required
SWMU 87 AOC 2	Building 611 Solid Waste Storage Unit	Uncharacterized	SS planned for FY00 Under BCT review	Need to develop SSP	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal*
SWMU 88 (IR Site 28) AOC 1	Building T-14 Scrap yard	Verification sampling Sampling and Analysis needs to be finalized	Will complete Sampling Analysis Strategy Plan (SASP) in June 97.	Finalizing SASP	FY 1997 - SS FY 1998 - RI/FS FY 2000 - RD FY 2001 - Low temperature thermal desorption*
SWMU 89	Former Inert Loading Shop Settling Tank	No BCT concern	no further action required	none	No funds required
SWMU 90	Photographic Laboratory Storage Area	No BCT concern if leaching wells have been removed under the Site 11 Removal Action	No further action if wells removed.	BCT need to approve Removal Action Report	No funds required
SWMU 91	Print Shop Storage Area	No BCT concern if leaching wells have been removed under the Site 11 Removal Action	No further action if wells removed.	BCT need to approve Removal Action Report	No funds required

- Remedial Action technology selected was used for funding purposes. 12
The technology was not selected by BCT

Identification	Description	BCT Concern	Plan	Status	Planned Action by Year
SWMU 92	Former Building 25 Plating Shop Waste Collection Site	No BCT concern	no further action required	No documented evidence of a release to the environment	No funds required
SWMU 93 AOC 3	Building 619 Explosive Sludge Removal Unit	Uncharacterized	SS planned for FY00	Need BCT review and recommendation	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal*
SWMU 94	Building T-35 Waste Explosives Packing Operations	Uncharacterized	Need to review decon plan	In decon plan	No funding required
SWMU 95	Former Metallic Materials Laboratory Trash Area	No BCT concern	no further action required	No documented evidence of a release to the environment	No funds required
SWMU 96	Waste Oil Transport Truck/Former Honey Wagon	No BCT concern	no further action required	No documented evidence of a release to the environment	No funds required
SWMU 97	Waste Transport Pickup Truck	No BCT concern	no further action required	No documented evidence of a release to the environment	No funds required
AOC A	1976 Boiler Plant Fuel Spill Site	No BCT concern	no further action	Action was taken during time of spill	No funds required

- Remedial Action technology selected was used for funding purposes. The technology was not selected by BCT

Identification	Description	BCT Concern	Plan	Status	Planned Action by Year
AOC B	1980 Boiler Plant Spill Site	No BCT concern	no further action required	No documented evidence of a release to the environment	No funds required
AOC C (IR Site 14)	Radioactive Waste Disposal Site	Needs plan for remediation	RI planned for FY98	Rad sites not under permit	FY 1998 - RI/FS FY 1999 - RD FY 1999/00 - RA*
AOC D	Former building 70 Radioactive Waste Collection Area	No BCT concern	Under RASO permit	Rad sites under RASO Permit	Will use NSWC-WO operating funds to close
AOC E (IR Site 10)	Former Building 74 Radioactive Drum Storage Area	Needs plan for remediation	RI planned for FY98	Rad sites not under permit	FY 1998 - RI/FS FY 1999 - RD FY 1999 - RA*
AOC F	Building 108 Radioactive Waste Storage Area	No BCT concern	Affected area cleaned as part of RASO Permit closure	Rad sites under RASO Permit	Will use NSWC-WO operating funds to close
AOC G	Former Building 321 Radioactive Drum Storage Area	No BCT concern	Part of RASO Permit closure	Rad sites under RASO Permit	Will use NSWC-WO operating funds to close
AOC H	Building 25 Paint Shop Stripping Unit	No BCT concern	No further action	Unit does not pose a risk. Drain will be investigated under SWMU 39.	No funds required

- Remedial Action technology selected was used for funding purposes. 14
The technology was not selected by BCT

Identification	Description	BCT Concern	Plan	Status	Planned Action by Year
AOC I	Former Building 343 Radioactive Wastewater Holding Tank	RASO surveyed area did not find any contamination. Holding tank was removed. OHM will sample septic tank and drain field as a part of RASO permit closure.	Cleaning as part of RASO Permit closure	Rad sites under RASO Permit	Will use NSWC-WO operating funds to close
AOC J	Building 73 Storage Yard	No BCT concern	No further action	none	No funds required
AOC K	Pistol Range Transformer Storage Area	Uncharacterized	Will be addressed as part of IR Site 4	Site 4	See Site 4
AOC L	Facility Product USTs	No BCT concern	No further action	USTs closed out	FY 1997 - UST removal
AOC M AOC 2	Former Outfall 004 at Building 611	Uncharacterized	SS planned for FY98	BCT needs to develop SSP	FY 1998 - SS FY 2000 - RI no further work expected
AOC N AOC 2	Former Outfall 006 at Building 201	Uncharacterized	SS planned for FY98	BCT needs to develop SSP	FY 1998 - SS FY 2000 - RI no further work expected
AOC O (IR Site 32) AOC 1	Former Outfall 009 at Building 112	Verification Sampling Sampling and Analysis Plan needs to be finalized	SASP will be finalized in June 1997.	Finalizing SASP	FY 1997 - SS FY 1998 - RI/FS FY 1999 - RD FY 1999 - RA, removal and disposal*
AOC P AOC 2	Former Outfall 012 at Building 312	Uncharacterized	SS planned for FY98	BCT needs to develop SSP	FY 1998 - SS FY 2000 - RI no further work expected
AOC Q AOC 2	Former Outfall 014 at Building 328	Uncharacterized Needs BCT review and recommendation	SS planned for FY98	BCT needs to develop SSP	FY 1998 - SS FY 2000 - RI no further work expected
AOC R AOC 2	Former Outfall 017F at Building 318	Uncharacterized Needs BCT review and recommendation	SS planned for FY98	BCT needs to develop SSP	FY 1998 - SS FY 2000 - RI no further work expected
AOC S AOC 2	Former Outfall 018 at Building 310A	Uncharacterized	SS planned for FY98	BCT needs to develop SSP	FY 1998 - SS FY 2000 - RI no further work expected

- Remedial Action technology selected was used for funding purposes. 15
The technology was not selected by BCT

Identification	Description	BCT Concern	Plan	Status	Planned Action by Year
IR Site 46	Groundwater at Adelphi Lab	Needs further investigation	SI planned for FY97 Removal action to treat surface discharge planned for FY97	Site 46	FY 1997 - SI FY 1997/98/99 - Removal Action, activated carbon FY 1998 - RI/FS FY 2000 - RD FY 2000 - RA, advanced air stripping and extraction*
Building 615	Hazardous Machining/Blending Area	Needs further investigation Should be added as a SWMU and included in site screening investigations	Desktop survey in FY98, will then determine need for further action	other possible sites, BCT awaiting information	no funds planned
Building 630	P8 Area	Should be added as a SWMU and included in site screening investigations; need more information on historical use	Desktop survey in FY98, will then determine need for further action	other possible sites, BCT awaiting information	no funds planned
Building 355	Magazine Explosion Area	Needs further investigation	Desktop survey in FY98, will then determine need for further action	other possible sites, BCT awaiting information	no funds planned
EBS AOC 100 AOC 1	Indoor Underground Pistol Range	Needs further investigation Base personnel VSI - Site has been cleaned.	SASP will be finalized in June 1997.	Finalizing SASP	FY 1997 - SS no further action expected
EBS AOC 108	Metal Bricks at Building 108	Needs further investigation	SS planned for FY00	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal*
EBS AOC 142	Facility 142 Containment Area	Needs further investigation	SS planned for FY00	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal*

- Remedial Action technology selected was used for funding purposes. 16
The technology was not selected by BCT

Identification	Description	BCT Concern	Plan	Status	Planned Action by Year
EBS AOC 150	Stressed Vegetation Area	Needs further investigation	SS planned for FY00	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal*
EBS AOC 151	Uncovered Storage Area	Needs further investigation	SS planned for FY00	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal*
EBS AOC 303	Explosives Test Area	Needs further investigation	SS planned for FY00	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal*
EBS AOC 304-3	Staining, Substance on Floor	Needs further investigation	SS planned for FY00	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal*
EBS AOC 315	Excavation of Unknown Origin	Needs further investigation	SS planned for FY00	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal*
EBS AOC 334	Outdoor Paint & Battery Storage	Needs further investigation	SS planned for FY00	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal*
EBS AOC 340	Outdoor Storage of Potentially Explosive Waste	Needs further investigation	SS planned for FY00	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal*

- Remedial Action technology selected was used for funding purposes.
The technology was not selected by BCT

Identification	Description	BCT Concern	Plan	Status	Planned Action by Year
EBS AOC 387	Staining and Battery Parts in Pit	Needs further investigation	SS planned for FY00	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal*
EBS AOC 500A	Containers of Chemicals	Needs further investigation	SS planned for FY00	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal*
EBS AOC 500B	Former Pistol Range	Needs further investigation	SS planned for FY00	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal*
EBS AOC 600	Explosive Material Treatment Area	Needs further investigation Should be addressed in Phase 2 EBS	SS planned for FY00 May transfer to State RCRA	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal*
EBS AOC 630	Small Piles of Soil With Green Discoloration	Needs further investigation	SS planned for FY00	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal*
EBS AOC 700	Former Trash Pit	Needs further investigation	SS planned for FY00	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal*

- Remedial Action technology selected was used for funding purposes.
The technology was not selected by BCT

Identification	Description	BCT Concern	Plan	Status	Planned Action by Year
EBS AOC All	Stream throughout White Oak	Needs further investigation	Will be addressed during investigation of others individual Sites, SWMU, AOCs that are near streams.	Will be addressed during investigation of Sites, SWMU, AOCs	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal*

- Remedial Action technology selected was used for funding purposes. The technology was not selected by BCT

Table 4-2. SWMU/Site Action Summary

Identification	Description	Regulator Concern	Plan	Action Site Grouping	Funding by Year
SWMU 1 (IR Site 2)	Apple Orchard Landfill	Remedial design started without issuing revised proposed plan and ROD; and more community involvement Groundwater contamination not addressed in 35% remedial design report Cap design did not reflect recommended & agreed upon design (RCRA Subtitle C)	On hold - finish in FY98 On hold - address in final PP and ROD Changed to Subtitle C.	Site 2	FY97 - RI FY98 - ROD, FY98 - Complete design FY98/99 - construct cap
SWMU 2 (IR Site 3)	Pistol Range Landfill	Remedial design started without issuing revised proposed plan and ROD Groundwater contamination not addressed in 35% remedial design report Cap design did not reflect recommended & agreed upon cap design (Subtitle C).	On hold - finish in FY98 On hold - address in final PP and ROD Need to discuss w/ BCT.	Site 3	FY97 - RI FY98 - ROD FY98 - complete design FY98/99 - construct cap
SWMU 3 (IR Site 1)	Parking Lot Landfill	Groundwater contamination not addressed; needs further investigation Draft sampling and analysis plan need to be finalized and work plan implemented.	GW sampling in FY97. Will be finalized in June 97	Site 1	FY97 - SS FY00 - Design FY00 - Construct Cap

Identification	Description	Regulator Concern	Plan	Action Site Grouping	Funding by Year
SWMU 4 (IR Site 4)	Chemical Burial Site	Remedial design started without issuing revised proposed plan and ROD and adequate community involvement. Groundwater contamination not addressed in 35% remedial design report Cap design did not reflect recommended & agreed upon cap (Subtitle C).	Change to removal action, will prepare decision document. Will be addressed in RI - FY97 Will reexamine with EE/CA and RI/FS.	Site 4	FY97 - RI FY00 - Design FY01 - low temperature thermal desorption
SWMU 5 (IR Site 8)	Chemical Disposal Pit	Groundwater contamination not addressed	Address in FY97.	Site 8	FY97 - RI FY99 - Design FY00 - Air Stripping in activated carbon Adsorption
SWMU 6 (IR Site 6)	Sewage Sludge Composting Area	Sampling and analysis plan needs to be finalized. Site should also be sampled for TCE and explosives	Will complete work plan in June 97, will include TCE and explosives.	Site 6	FY97 - SS FY00 - RI/FS FY01 - Design FY02 - low temperature thermal desorption
SWMU 7 (IR Site 13)	Oil Sludge Disposal Area	Sampling and analysis plan needs to be finalized. Needs further investigation	Will complete work plan in June 97	AOC 1	FY97 - SS FY00 - RI/FS FY01 - Design FY02 - Bioremediation
SWMU 8 (IR Site 15)	Building 310 A Waste Disposal Area	Uncharacterized Needs BCT review and recommendation Needs information on waste drainage from building and in pipes in hillside above creek	Will conduct site screening in FY98 to gather data.	AOC 2	FY98 - SS FY00 - RI FY01 - Design FY02 - low temperature thermal desorption

Identification	Description	Regulator Concern	Plan	Action Site Grouping	Funding by Year
SWMU 9 (IR Site 16)	Building 409 Paint Branch Waste Disposal Site	Uncharacterized Needs BCT review and recommendation	Will conduct site screening in FY98 to gather data.	AOC 2	FY98 - SS FY98 - RI FY00 - Design FY01 - low temperature thermal desorption
SWMUs 20-22 (IR Site 12)	200 Area Industrial Wastewater Disposal System	Needs further investigation Sampling and analysis plan needs to be finalized; questions about leaching well and pit not included in Plan need to be addressed	Will conduct site screening in FY97 to gather data.	AOC 1	FY97 - SS FY00 - RI FY01 - RD FY02 - Well Extraction
SWMU 23-28 (IR Site 9)	300 Area Industrial Disposal System	Groundwater contamination not addressed Contingency plan for leaching wells that may be encountered during construction needed. Leaching/well field needs further investigation of possible Strontium-90 contamination, and groundwater samples should be analyzed for radionuclides	Being addressed in FY97/98 RI/FS Will address in RI. Will be addressed in RI.	Site 9	FY97 - RI FY00 - RD FY01 - Air Stripping, activated carbon adsorption
SWMU 29 (IR Site 24)	Building 318 Washdown System	Uncharacterized Needs BCT review and recommendation	Site screening in FY98	AOC 2	FY 1997 - SS FY 1998 - RI/FS FY 1998 - RD FY 1999 - RA, low temperature thermal desorption
SWMU 30 (IR Site 39)	Building 620 Washdown Disposal System	Need more historical information from Navy prior to decision on whether to address under RCRA or CERCLA	Need to discuss need for action w/ BCT.	Site 39	FY 1998 - RI/FS FY 1998 - RD FY 1999 - RA, excavation and disposal

Identification	Description	Regulator Concern	Plan	Action Site Grouping	Funding by Year
SWMU 31 (IR Site 7)	Ordnance Burn Area	No remedial action taken to mitigate groundwater & soil contamination	Being addressed in FY97/98 RI. Removal action planned for FY98.	Site 7	FY 1997 - RI/FS FY 1998 - Removal Action FY 2000 - RD FY 2001 - RA, low temperature thermal desorption
SWMU 32 (IR Site 5)	Open Burning Area	Groundwater contamination not addressed; needs further investigation Sampling and Analysis plan needs to be finalized and should address need for groundwater samples	Will complete work plan in June 97	AOC 1	FY 1997 - SS FY 2000 - RI/FS FY 2001 - RD FY 2002 - RA, soil vapor extraction
SWMU 33	Building 305 Demilitarization Site	Uncharacterized Need BCT review and recommendation	Site screening in FY98	AOC 2	FY 1998 - SS FY 2000 - RI No further action planned
SWMU 34	Building 377 Demilitarization Site	Uncharacterized Need BCT review and recommendation; need Navy to provide location of SWMU	Site screening in FY00	AOC 3	FY 2000 - SS FY 2001 - RI FY 2003 - RD FY 2004 - RA
SWMU 35 (IR Site 21)	Stoneyard	Uncharacterized Need BCT review and recommendation	Site screening in FY98	AOC 2	FY 1998- SS FY 2000 - RI FY 2001 - RD FY 2002 - RA, Low temperature thermal desorption
SWMU 36	Building 108 Incinerator	Uncharacterized Need BCT review and recommendation; needs cleaning and sampling to terminate RASO permit	Site screening in FY98 Will be part of RASO permit closing in FY97	AOC 2	FY 1998 - SS FY 2000 - RI No further action
SWMU 37	Building 310A Liquid Waste collection Areas	Need RCRA closure of regulated unit	Address in State RCRA work plan - anticipate no further action required	State RCRA site	No funds required

Identification	Description	Regulator Concern	Plan	Action Site Grouping	Funding by Year
SWMU 38	Building 25 Electronics Fabrication Shop Etching Rinse Tank Site	none	no further action	none	no funding required
SWMU 39 (IR Site 33)	Building 25 Plating Shop Equalization Tank	Need SS Tank cleanout recommended; further action to be determined later if necessary	Site screening in FY97. Interim (removal action scheduled to allow FDA construction	AOC 1	FY 1997 - SS FY 1998 - removal action FY 1999 - RI/FS
SWMU 40 (IR Site 22)	Building 305 Wastewater Collection System	Uncharacterized Need BCT review and recommendation	Site screening in FY98	AOC 2	FY 1998 - SS FY 2000- RI/FS FY 2001 - RD FY 2002 - RA, Low temperature thermal desorption
SWMU 41 (IR Site 23)	Building 311 Oxidation ditch	Uncharacterized Need BCT review and recommendation; need Navy to coordinate with Army for access for investigation	Site screening in FY98	AOC 2	FY 1998 - SS FY 2000- RI/FS FY 2001 - RD FY 2002 - RA, Low temperature thermal desorption
SWMU 42 (IR Site 24)	Building 318 Washdown Collection System	RCRA closure needed	Site screening in FY98 Relook at need for closure	State RCRA site AOC 2	FY 1998 - SS FY 1998 - RI/FS FY 1998 - RD FY 1999/00 - RA, Low temperature thermal desorption
SWMU 43 (IR Site 41)	Building 318 Pilot Treatment Plant Site	RCRA closure needed	Will be covered w/ Site 24	State RCRA site	FY 1998 - RI/FS FY 1998 - RD FY 1999- RA
SWMU 44 (IR Site 42)	Building 318-3 Carbon Adsorption Treatment System	RCRA closure needed	Will be covered w/ Site 24 Need to address drain lines.	State RCRA site	FY 1998 - RI/FS FY 1998 - RD FY 1999- RA

Identification	Description	Regulator Concern	Plan	Action Site Grouping	Funding by Year
SWMU 45 (IR Site 25)	Building 613 Sump	RCRA closure needed	Will sample in FY 98 for contamination	State RCRA site	FY 1998 - RI/FS
SWMU 46 (IR Site 26)	Sanitary Sewer System	Need SS BCT review and recommendation needed	Need to discuss for inclusion in AOC 1 as part of FDA Parcel.	Site 26	FY 1999 - RI/FS FY 2001 - RD FY 2002 - RA
SWMU 47	Former Wastewater Treatment Plant Site	Need SS BCT review and recommendation needed	Site screening in FY99	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavate and disposal
SWMU 48 (IR Site 27)	Storm Drain System	Need SS BCT review and recommendation needed	Will conduct RI in FY99	Site 27	FY 1999 - SS FY 2000 - RI/FS Assume no treatment required
SWMU 49	Building 100 Waste Oil Collection Unit	none	no further action required	none	no funds required
SWMU 50	Building 112 Oil/Water Separator	Need SS	need to discuss if further action is required	none	no funds required
SWMU 51	Building 113 Oil/Water Separator	Need SS	need to discuss if further action is required	none	no funds required
SWMU 52 (IR Site 18)	Building 201 Oil/Water Separator	Uncharacterized BCT review and recommendation needed	Site screening in FY 98	AOC 2	FY 1998 - SS FY 2000 - RI/FS FY 2001 - RD FY 2002 - RA, excavate tank and soil
SWMU 53	Building 406 Oil/Water Separator	Uncharacterized BCT review and recommendation needed	Site screening in FY 98	AOC 2	FY 1998 - SS FY 2000 - RI/FS No further work expected

Identification	Description	Regulator Concern	Plan	Action Site Grouping	Funding by Year
SWMU 54	Former Waste Oil Recycling Operations Site	Uncharacterized BCT review and recommendation needed	Site screening in FY 98	AOC 2	FY 1998 - SS FY 2000 - RI/FS No further work expected
SWMU 55	Former Electric Shop Transformer Oil filter System Site	none	no further action required	none	no funds required
SWMU 56	Building 327 Wastewater Underground Storage Tank	Need SS RCRA closure needed	Will test tank in FY97, sampling later if required	State RCRA site	NSWC White Oak operations funds - FY 1997
SWMU 57	Former Building 328 Degreasing Tank Site/Waste Solvent Storage Area	Need SS RCRA closure needed	Discuss incorporating into Site 9	State RCRA site	Include as part of Site 9
SWMU 58	Building 25 Public Works Machine Shop Waste Oil Holding Tanks	none	no further action required	none	no funds needed
SWMU 59	Building 100 Waste Oil Storage System	none	no further action required	none	no funds needed
SWMU 60	Building 406 Waste Oil Storage System	Uncharacterized BCT review and recommendation needed	Site screening in FY 98	AOC 2	FY 1998 - SS FY 2000 - RI/FS No further work expected

Identification	Description	Regulator Concern	Plan	Action Site Grouping	Funding by Year
SWMU 61	Former Area 141 Waste Oil Underground Storage Tank Site	Need SS	Discuss need for further action	none	No funds planned
SWMU 62	Former Building 3 Designated Waste Storage Areas	none	no further action required	none	no funds required
SWMU 63	Building 25 Paint Waste Storage Area	none	no further action required	none	no funds required
SWMU 64	Former Building 25 Paint Waste Storage Area	none	no further action required	none	no funds required
SWMU 65	Building 25 Temporary Waste PCB Storage Area	none	no further action required	none	no funds required
SWMU 66	Building 25 Central Waste PCB Storage Area	none	no further action required	none	no funds required
SWMU 67	Building 25 Machine Shop Waste Storage Area	none	no further action required	none	no funds required
SWMU 68	Machine Shop Waste Solvent Storage Area	none	no further action required	none	no funds required

Identification	Description	Regulator Concern	Plan	Action Site Grouping	Funding by Year
SWMU 69	Electrical Shop Waste Solvent Storage Area	none	no further action required	none	no funds required
SWMU 70	Pipe Shop Waste Solvent Storage Area	none	no further action required	none	no funds required
SWMU 71	Refrigeration Shop Waste Solvent Storage Area	none	no further action required	none	no funds required
SWMU 72 (IR Site 31)	Former Building 25 Outdoor Drum Storage Area	Verification sampling not included in sampling & analysis plan as agreed upon by BCT Sampling and Analysis Plan need to be finalized and MDE comments address, particularly with regard to sampling	In current plan for site screening for FY97. Plan will be finalized in June 97	AOC 1	FY 1997 - SS FY 1998 - RI FY 2000 - RD FY 2000 - RA, remove and dispose of contaminated soil
SWMU 73	Building 100 Vehicle Maintenance Shop Waste Solvent Storage Area	none	no further action required	none	no funds required
SWMU 74 (IR Site 29)	Building 76 Plastics Laboratory Waste Storage Area	Verification sampling not included in sampling & analysis plan as agreed upon by BCT	In current plan for site screening for FY97.	AOC 1	FY 1997 - SS FY 1998 - RI/FS FY 1999 - RD FY 1999 - RA, dig and haul with sidewall protection

Identification	Description	Regulator Concern	Plan	Action Site Grouping	Funding by Year
SWMU 75	Building 315 Waste Photographic Chemical Storage Area	Uncharacterized; has access problem Needs further investigation of possible floor drains and location of waste storage	SS planned for FY98	AOC 2	FY 1998 - SS FY 2000 - RI no further work expected
SWMU 76	Building 430 Waste Oil Storage Area	Uncharacterized Needs BCT review and recommendation	SS planned for FY98	AOC 2	FY 1998 - SS FY 2000 - RI no further work expected
SWMU 77	Miscellaneous Building Waste Oil Collection Areas	Uncharacterized Needs BCT review and recommendation	No further action needed if no longer in use	none	no funds required
SWMU 78	Area 362 Explosive Waste Storage Area	RCRA closure needed	Closure planned for June/July 97	RCRA Closure	Will use NSWC-WO FY 97 operating funds
SWMU 79	Building 506 Explosive Waste Storage Area	RCRA closure needed	No longer exists, not used for storage, no action planned	RCRA Closure	No funds required
SWMU 80	Miscellaneous Buildings Waste Ordnance Collection Areas	Uncharacterized Needs BCT review and recommendation	Will conduct in-house survey to determine requirements	none	No funds required
SWMU 81	Building 501 Hazardous Waste Storage Facility	RCRA closure needed	implement closure in June 97	RCRA Closure	Will use NSWC-WO FY 97 operating funds

Identification	Description	Regulator Concern	Plan	Action Site Grouping	Funding by Year
SWMU 82	Building 508 Hazardous Waste Storage Facility	RCRA closure needed	implement closure in June 97	RCRA Closure	Will use NSWC-WO FY 97 operating funds
SWMU 83	Building 700 Hazardous Waste Storage Facility	RCRA closure needed	Closure implemented, need confirmation data	RCRA Closure	Will use NSWC-WO FY 97 operating funds
SWMU 84	Building 25 Asbestos Storage Area	none	no further action required	none	no funds required
SWMU 85	Building 501 Asbestos Storage Area	Uncharacterized Needs BCT review and recommendation	SS planned for FY00	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal
SWMU 86	Building 409 Solid Waste Storage Unit	Uncharacterized Requested information from Navy to determine whether to address site under CERCLA or RCRA	SS planned for FY98	AOC 2	FY 1998 - SS FY 2000 - RI no further work expected
SWMU 87	Building 611 Solid Waste Storage Unit	Uncharacterized Requested information from Navy to determine whether to address site under CERCLA or RCRA	SS planned for FY00 Need to discuss need for RCRA Closure	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal
SWMU 88 (IR Site 28)	Building T-14 Scrap yard	Verification sampling Sampling and Analysis needs to be finalized and MDE comments addressed, particularly with regard to request for groundwater sampling	SS planned for FY97	AOC 1	FY 1997 - SS FY 1998 - RI/FS FY 2000 - RD FY 2001 - RA, low temperature thermal desorption

Identification	Description	Regulator Concern	Plan	Action Site Grouping	Funding by Year
SWMU 89	Former Inert Loading Shop Settling Tank	none	no further action required	none	No funds required
SWMU 90	Photographic Laboratory Storage Area	SS	Need to discuss need for further action	none	No funds required
SWMU 91	Print Shop Storage Area	SS	Need to discuss need for further action	none	No funds required
SWMU 92	Former Building 25 Plating Shop Waste Collection Site	none	no further action	none	No funds required
SWMU 93	Building 619 Explosive Sludge Removal Unit	Uncharacterized Need BCT review and recommendation	SS planned for FY00	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal
SWMU 94	Building T-35 Waste Explosives Packing Operations	Uncharacterized Need BCT review and recommendation	Need to discuss need for further action	none	No funding required
SWMU 95	Former Metallic Materials Laboratory Trash Area	none	No further action	none	No funds required
SWMU 96	Waste Oil Transport Truck/Former Honey Wagon	none	Need to confirm no further action	none	No funds required

Identification	Description	Regulator Concern	Plan	Action Site Grouping	Funding by Year
SWMU 97	Waste Transport Pickup Truck	none	Need to confirm no further action	none	No funds required
AOC A	1976 Boiler Plant Fuel Spill Site	none	no further action	none	No funds required
AOC B	1980 Boiler Plant Spill Site	none	no further action	none	No funds required
AOC C (IR Site 14)	Former Building 70 Radioactive Waste Collection Area	Needs plan for remediation	RI planned for FY98	Rad sites not under permit	FY 1998 - RI/FS FY 1999 - RD FY 1999/00 - RA
AOC D	Former building 70 Radioactive Waste Collection Area	SS Needs BCT review and recommendation	Check to see if part of RASO permit	Rad sites under RASO Permit	Will use NSWC-WO operating funds to close
AOC E (IR Site 10)	Former Building 74 Radioactive Drum Storage Area	Needs plan for remediation	RI planned for FY98	Rad sites not under permit	FY 1998 - RI/FS FY 1999 - RD FY 1999 - RA
AOC F	Building 108 Radioactive Waste Storage Area	Needs BCT review and recommendation	Cleaning as part of RASO Permit closure	Rad sites under RASO Permit	Will use NSWC-WO operating funds to close
AOC G	Former Building 321 Radioactive Drum Storage Area	Uncharacterized Needs BCT review and recommendation	Part of RASO Permit closure	Rad sites under RASO Permit	Will use NSWC-WO operating funds to close

Identification	Description	Regulator Concern	Plan	Action Site Grouping	Funding by Year
AOC H	Building 25 Paint Shop Stripping Unit	Need SS	Need to discuss need for further action	none	No funds required
AOC I	Former Building 343 Radioactive Wastewater Holding Tank	Uncharacterized Needs BCT review and recommendation; needs determination of whether area needs to be cleaned or sampled to terminate RASO permit	Cleaning as part of RASO Permit closure	Rad sites under RASO Permit	Will use NSWC-WO operating funds to close
AOC J	Building 73 Storage Yard	SS	Need to discuss need for further action	none	No funds required
AOC K	Pistol Range Transformer Storage Area	Uncharacterized Needs BCT review and recommendation	Will be addressed as part of IR Site 4	Site 4	See Site 4
AOC L	Facility Product USTs	Uncharacterized Needs BCT review and recommendation	Unneeded USTs being removed now	USTs	FY 1997 - UST removal
AOC M	Former Outfall 004 at Building 611	Uncharacterized Needs BCT review and recommendation	SS planned for FY98	AOC 2	FY 1998 - SS FY 2000 - RI no further work expected
AOC N	Former Outfall 006 at Building 201	Uncharacterized Needs BCT review and recommendation	SS planned for FY98	AOC 2	FY 1998 - SS FY 2000 - RI no further work expected
AOC O (IR Site 32)	Former Outfall 009 at Building 112	Verification Sampling Sampling and Analysis Plan needs to be finalized; MDE comments need to be addressed	SS Planned for FY97	AOC 1	FY 1997 - SS FY 1998 - RI/FS FY 1999 - RD FY 1999 - RA, removal and disposal
AOC P	Former Outfall 012 at Building 312	Uncharacterized Needs BCT review and recommendation	SS planned for FY98	AOC 2	FY 1998 - SS FY 2000 - RI no further work expected

Identification	Description	Regulator Concern	Plan	Action Site Grouping	Funding by Year
AOC Q	Former Outfall 014 at Building 328	Uncharacterized Needs BCT review and recommendation	SS planned for FY98	AOC 2	FY 1998 - SS FY 2000 - RI no further work expected
AOC R	Former Outfall 017F at Building 318	Uncharacterized Needs BCT review and recommendation	SS planned for FY98	AOC 2	FY 1998 - SS FY 2000 - RI no further work expected
AOC S	Former Outfall 018 at Building 310A	Uncharacterized Needs BCT review and recommendation	SS planned for FY98	AOC 2	FY 1998 - SS FY 2000 - RI no further work expected
IR Site 46	Groundwater at Adelphi Lab	Needs further investigation Navy needs to submit work plan to MDE for review	SI planned for FY97 Removal action to treat surface discharge planned for FY97	Site 46	FY 1997 - SI FY 1997/98/99 - Removal Action, activated carbon FY 1998 - RI/FS FY 2000 - RD FY 2000 - RA, advanced air stripping and extraction
Building 615	Hazardous Machining/Blending Area	Needs further investigation Should be added as a SWMU and included in site screening investigations	Desktop survey in FY97, will then determine need for further action	other possible sites	no funds planned
Building 630	P8 Area	Should be added as a SWMU and included in site screening investigations; need more information on historical use	Desktop survey in FY97, will then determine need for further action	other possible sites	no funds planned
Building 355	Magazine Explosion Area	Needs further investigation	Desktop survey in FY97, will then determine need for further action	other possible sites	no funds planned
EBS AOC 100	Metal Bricks at 108	Needs further investigation Should be addressed in Phase 2 EBS	SS Planned for FY97	AOC 1	FY 1997 - SS no further action expected

Identification	Description	Regulator Concern	Plan	Action Site Grouping	Funding by Year
EBS AOC 108	Facility 142 Containment Area	Needs further investigation Should be addressed in Phase 2 EBS	SS planned for FY00	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal
EBS AOC 142	Facility 142 Containment Area	Needs further investigation Should be addressed in Phase 2 EBS	SS planned for FY00	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal
EBS AOC 150	Stressed Vegetation Area	Needs further investigation Should be addressed in Phase 2 EBS	SS planned for FY00	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal
EBS AOC 151	Uncovered Storage Area	Needs further investigation Should be addressed in Phase 2 EBS	SS planned for FY00	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal
EBS AOC 303	Explosives Test Area	Needs further investigation Should be addressed in Phase 2 EBS	SS planned for FY00	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal
EBS AOC 304-3	Staining, Substance on Floor	Needs further investigation Should be addressed in Phase 2 EBS	SS planned for FY00	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal

Identification	Description	Regulator Concern	Plan	Action Site Grouping	Funding by Year
EBS AOC 315	Excavation of Unknown Origin	Needs further investigation Should be addressed in Phase 2 EBS	SS planned for FY00	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal
EBS AOC 334	Outdoor Paint & Battery Storage	Needs further investigation Should be addressed in Phase 2 EBS	SS planned for FY00	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal
EBS AOC 340	Outdoor Storage of Potentially Explosive Waste	Needs further investigation Should be addressed in Phase 2 EBS	SS planned for FY00	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal
EBS AOC 387	Staining and Battery Parts in Pit	Needs further investigation Should be addressed in Phase 2 EBS	SS planned for FY00	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal
EBS AOC 500A	Containers of Chemicals	Needs further investigation Should be addressed in Phase 2 EBS	SS planned for FY00	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal
EBS AOC 500B	Former Pistol Range	Needs further investigation Should be addressed in Phase 2 EBS	SS planned for FY00	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal

Identification	Description	Regulator Concern	Plan	Action Site Grouping	Funding by Year
EBS AOC 600	Explosive Material Treatment Area	Needs further investigation Should be addressed in Phase 2 EBS	SS planned for FY00 May transfer to State RCRA	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal
EBS AOC 630	Small Piles of Soil With Green Discoloration	Needs further investigation Should be addressed in Phase 2 EBS	SS planned for FY00	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal
EBS AOC 700	Former Trash Pit	Needs further investigation Should be addressed in Phase 2 EBS	SS planned for FY00	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal
EBS AOC IR 2	Stream by IR 2	Needs further investigation Should be addressed in Phase 2 EBS	SS planned for FY00	AOC 3	FY 2000 - SS FY 2001 - RI/FS FY 2003 - RD FY 2004 - RA, excavation and disposal

4.1 NSWC-White Oak Remediation Goals

The goals of this program are to (in no particular order):

- Remediate all sites to protect human health and the environment and to meet future reuse.
- Provide expedited studies and cleanups to meet development requirements of the GSA.
- Provide all actions required to close NSWC-White Oak and transfer the property to GSA and the Army.
- To provide expedited study and cleanup for any identified imminent threats to human health and the environment.

4.2 NSWC-White Oak Specific Priorities

These are White Oak specific funding/action priorities used to allocate resources (manpower and project funding) and to prepare project schedules as provided in Section 4.4 of this Plan. They will be updated as new information becomes available and as actions are completed (such as the transfers to the Army and GSA). It is not the Navy's nor the BCT's intent to fund only higher priority actions. It is our intent to keep all investigation and remediation efforts proceeding in a timely fashion to final site close out.

1. Imminent threat sites
 - a. Site 46 removal action and testing
 - b. Site 8 groundwater sampling to determine threat
 - c. Sites 4, 7, 33, and 36 removal actions

2. Actions required to permit transfer of property to GSA.
 - a. closures of environmental permits (hazardous waste, radioisotope use, explosive use)
 - b. removal of underground storage tanks (USTs)
 - c. groundwater testing in FDA Parcel
 - d. Environmental Summary Documents

3. Actions required to allow GSA to begin demolition/construction of FDA campus. Will add other actions as development plans for GSA and Army transfer property become identified.
 - a. possible treatment of groundwater at site 11
4. Actions required to complete all required remediation of sites in the FDA campus parcel, not including those in the construction footprint. (see 3)
 - a. site screening of AOC Group 1 sites - sites in FDA Parcel
 - b. study and cleanup of IR Sites 10 and 14
 - c. study and remediation of IR Site 1
5. All other actions to complete all remediation required to protect human health and the environment.
 - a. all remaining studies and cleanups

4.3 Decision-Making Process

It is the intent of the Navy that this plan become the consensus plan of action of the BCT, not the Navy. Decisions on final remediation requirements and actions required to make those determinations will be made by the BCT, with review by the RAB. As such, the BCT as a whole needs to review and modify as appropriate the requirements described herein, the schedules associated with each, and the funding requirements. The biannual budget submission by the Navy, as described in Appendix A, is the best process to use to insure all requirements and resource needs are identified. As such, this plan should be modified at least twice per year to reflect the budget submissions.

Most of the work described in this chapter is for the investigation and remediation of sites where there has been or may have been a release of hazardous constituents to the environment. The process being used to determine what remediation is required for each site is that defined by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Contingency Plan (NCP). There are three major steps in the process. They are: the Site Inspection (SI); the Remedial Investigation/Feasibility Study (RI/FS); and the Remedial

Design/Remedial Action (RD/RA). Figure 4-1 shows the steps of the CERCLA process, and Table 4-3 includes CERCLA criteria for evaluating remedial alternatives.

The purpose of the Site Inspection (SI) is to collect enough sample data to assess whether a release has occurred which may pose a threat to human health and the environment. It is a screening tool to determine if further investigation is required. At the NSWC-White Oak, the Navy will be using a slightly expanded version of the SI, called a Site Screening Process (SS).

The purpose of the Remedial Investigation (RI) is to collect enough data to perform a risk assessment for humans and the environment in order to set remediation goals. In order to do so, the data must be adequate to define the area of contamination, its speed and direction of movement, if any, and all potential humans, animals, biota, etc., that could be exposed. The Feasibility Study (FS) evaluates different remediation strategies that meet the goals set by the RI. The preferred remediation alternative is described in a Proposed Plan (PP), which is made available for public comment. After consideration of all comments, the Navy and regulators finalize the remediation decision in a formal Record of Decision (ROD).

The ROD decision is executed, if required, through the Remedial Design (RD) and Remedial Action (RA). The Navy classifies any operation of treatment systems after a ROD, such as treatment of groundwater, as Long Term Operations (LTO). Following completion of treatment requirements as required by the ROD, the Navy may be required to conduct Long Term Monitoring (LTM) to ensure that the remediation effort continues to meet the goals included in the ROD.

Investigations conducted for NSWC-White Oak will be primarily conducted by a Navy CLEAN (Comprehensive Long-Term Environmental Action, Navy) contractor. As the first step in conducting any investigation, the Navy will prepare a basic scope of work and cost estimate for contractor work. The Navy and the contractor will negotiate and agree on a cost for the scope requirements and award the contract. Under the CLEAN contract, these scopes are general in nature and include broad outlines of contract requirements.

In order to define the efforts of investigations to the satisfaction of the Navy and the BCT, as a first step the contractor will prepare a Work Plan discussing objectives of the investigation,

sampling requirements to meet these objectives, quality assurance/quality control measures to ensure useable data, and a Health and Safety Plan for contractor personnel to be used on site. This plan will be submitted to the Navy and BCT for review and approval prior to the start of field work. In order to expedite the preparation of Work Plans, the Navy is preparing a Master Work Plan that contains general information applicable to most investigations that will not need to be repeated in action-specific plans.

Remediation efforts may or may not require the preparation of contract specifications or designs. The design of remediation efforts can be either very detailed plans or general plans tied to performance requirements. It is the intent of the Navy, when using the CLEAN contractor to prepare designs, to have each design reviewed throughout preparation by the construction contractor.

Construction and operation of remediation efforts will be primarily accomplished through the use of Navy Remedial Action Contracts (RACs). Prior to the start of actions (except emergency actions), the contractor shall prepare a Work Plan for review and acceptance by the Navy and the BCT. The Work Plan will outline methods to be used for construction, a construction schedule, quality assurance/control measures, and a Health and Safety Plan to be used by contractor personnel.

Throughout this process, plans and progress will be presented to the Restoration Advisory Board (RAB) for information and comment. It is the intent of the Navy and the BCT to ensure full public participation in the decision-making process for remediation of NSWC-White Oak sites.

4.4 NSWC-White Oak Remediation Plan

Apple Orchard Landfill

Site 2 (SWMU 3)

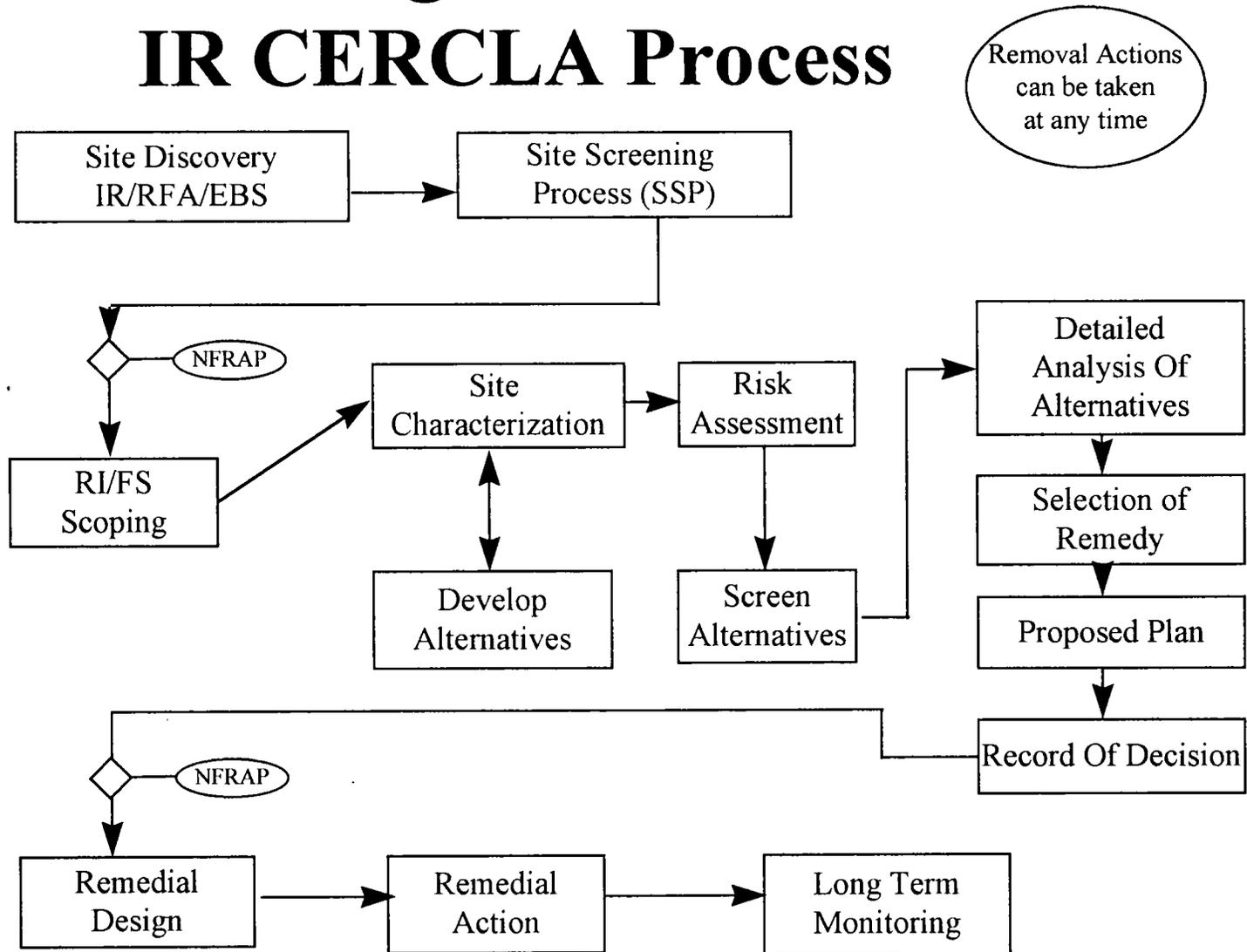
Site Descriptions: The Apple Orchard Landfill was identified in the IAS report (November 1984). The site was also included in the CS Report (April 1987), the RI Report (October 1992), the FS Report (March 1993), and the DVR (June 1995).

Figure 4-1 IR CERCLA Process

PA/SI

RI/FS

RD/RA



NFRAP - No Further Response Action Required (site completed)

Table 4-3 Cleanup Goals

As required by the national Contingency Plan (NCP) (40 CFR 300), the following criteria will be used at NSWC-White Oak to evaluate and compare cleanup alternatives.

Threshold Criteria (must be met by any alternative chosen unless specifically waived as per 40 CFR 300.430(f)(1)(ii))

1. Protectiveness of human health and the environment
 - Hazard index of less than one for non-carcinogens
 - Lifetime cancer risk of less than 10^{-6} for known or suspected carcinogens
2. Compliance with applicable or relevant and appropriate requirements (ARAR's)
 - Laws and regulations

Primary Balancing Criteria (form basis of comparison)

1. Long-term effectiveness and performance of alternative
2. Reduction of toxicity, mobility, or volume through treatment
3. Short-term effectiveness including:
 - Community impacts during construction
 - Impact on workers and the effectiveness and reliability of protection measures
 - Environmental impacts during construction
 - Time until protection is achieved
4. Implementability including
 - Technical feasibility
 - Administrative feasibility
 - Availability of services, materials, equipment and specialists
5. Cost of alternative

Modifying Criteria (considered in remedy selection)

1. State acceptance of alternative
2. Community acceptance of alternative

Investigations and Removal Action History

The site, operated as an open disposal/landfill area between 1948 and 1982, consists of approximately 0.8 acres located approximately 1/4 mile north of Building 120. Wastes disposed at the site consisted of solvents, paint residue, and other miscellaneous chemicals, including approximately 500 gallons of oil containing polychlorinated biphenyls (PCB), which was buried prior to 1970. Unexploded ordnance has been found in and on the disposal/landfill area.

Volatile organic compounds (VOCs) were detected in soil, groundwater and surface water; PCBs were detected in soil and stream sediment; polycyclic aromatic hydrocarbons (PAHs) were detected in soil; and metals were detected in soil and groundwater at the site.

Design Verification Report

During the Design Verification Sampling and Analysis, the extent of the waste in the Apple Orchard Landfill was assessed using an electromagnetic survey and test trenches. Sediment containing PCB was detected approximately 350 ft downstream of the eastern limits of the landfill. PCBs were also detected within the adjacent stream west of the landfill and in the western face of the landfill.

The remedial design phase has been initiated for soil at Sites 2, and a 30 percent design has been completed. The design process is on hold until the Navy can gather information sufficient to support a final Record of Decision (ROD). The remedial alternatives under consideration include installation of landfill caps that meet the requirements of RCRA Subtitle C, "clean closure" (removal and offsite disposal), and other physical containment methods. The potential presence of explosive waste at Site 2 is factored into the decision-making process for the site. Because this landfill site contains ordnance-related items, both on the surface and buried, closure activities will be conducted with caution. Ordnance-related items exposed during landfill remediation shall be considered unexploded ordnance (UXO) and handled in accordance with the requirements discussed in Section 3.2.3. The plan for Site 2 includes completion of a Record of Decision (ROD), completion of a remedial design, and completion of remedial action.

Current Status

A Remedial Investigation/Feasibility Study will be conducted to address the groundwater and any surface water and sediments near the site.

Regulatory Issues

The landfill needs to be capped under RCRA Subtitle C. The groundwater needs to be addressed. There are ecological concerns of the stream nearby the site.

Remediation Alternatives

Depending on the results of the RI, the alternatives that may be selected include soil washing for the soils adjacent to the landfill and capping of the waste, natural attenuation, or air stripping to remediate groundwater.

POAM

The current plan is to conduct a RI in this fiscal year, with the design and remedial action to start in FY98 and LTO starting in FY00. The site closeout is scheduled in FY03.

Funding

FY97 RI/FS	\$ 100,000
FY98 RD	\$ 10,000
FY98 RA	\$2,213,000
FY00 LTO	\$ 8,000

Pistol Range Landfill

Site 3 (SWMU 2)

Site Descriptions: The site, operated as a landfill from the 1940s to the mid-1970s, is located between Dahlgren Road and the north boundary of NSWC-White Oak, southwest of the old pistol range. Fill materials were noted to have been pushed into the gully formed by the small stream that flows into Paint Branch south of NSWC-White Oak property. Wastes disposed of at the site consisted of inert solid waste, hydrocarbon solvents, possible PCB-contaminated oil, sodium nitrate, and miscellaneous metallic objects. Unexploded ordnance has been found in and on the disposal/landfill area.

VOCs were detected in soil, groundwater, and surface water; metals were detected in soil and groundwater at the site.

Investigations and Removal Action History

The Pistol Range Landfill was identified in the IAS report (November 1984). The site was also included in the CS Report (April 1987), the RI Report (October 1992), the FS Report (March 1993), and the DVR (June 1995).

Design Verification Report

An electromagnetic survey, landfill boring, and test trenches were performed at this site as part of the Design Verification Sampling and Analysis, in order to assess the extent of waste disposal. The depth of waste at the site varies from 0 to 20 ft over 1.1 acres of area.

Capping of the landfill and installation of a groundwater treatment system are possible remedial alternatives. The area of the landfill requiring capping was estimated to be 1.1 acres. The proposed cap would meet the requirements of RCRA, Subtitle C, and will consist of 2 ft of cover soil, a geosynthetic filter, a double geosynthetic drainage layer, a geomembrane moisture barrier, and geosynthetic filter fabric. The cap system would also contain controls for storm-water management so that erosion would be minimized. Due to the physical configuration of the site,

“clean closure” (removal and offsite disposal) and other containment systems are being considered for the site. The potential presence of explosive waste at Site 3 is factored into the decision-making process for the site. Because this landfill site contains ordnance-related items, both on the surface and buried, closure activities will be conducted with caution. Ordnance-related items exposed during landfill remediation shall be considered unexploded ordnance (UXO) and handled in accordance with the requirements discussed in Section 3.2.3. The plan for Site 3 includes completion of a Record of Decision (ROD), completion of a remedial design, and completion of remedial action.

Current Status

A Remedial Investigation/Feasibility Study will be conducted to address the groundwater and any surface water and sediments near the site.

Regulatory Issues

The landfill needs to be capped under RCRA Subtitle C. The groundwater needs to be addressed.

Remediation Alternatives

Depending on the results of the RI, the alternatives that may be selected include capping of the waste (depending on technical feasibility of the stabilization of the slopes) and natural attenuation or air stripping (to remediate groundwater).

POAM

The current plan is to conduct a RI in this fiscal year, with the design to start in FY98, and remedial action to start in FY99 and LTM starting in FY00. The site closeout is scheduled in FY05.

Funding

FY97 RI/FS	\$ 100,000
FY98 RD	\$ 66,000
FY99 RA	\$ 558,000
FY00 LTM	\$ 6,000

Chemical Burial Area

Site 4 (SWMU 4)

Site Description: The site, used as a chemical burial site from the mid-1950s through the early 1970s, encompasses approximately 1.1 acres located along the north boundary road near the northeast corner of the center. Wastes, consisting of acids, explosives, kerosene, chlorinated solvents, and numerous unidentified laboratory chemicals, were disposed at four discrete locations within the site.

VOCs were detected in soil and groundwater; semivolatile organic compounds (SVOCs) were detected in soil; and metals were detected in groundwater at the site.

Investigations and Removal Action History

The Chemical Burial Area was identified in the IAS report (November 1984). The site was also included in the CS Report (April 1987), the RI Report (October 1992), the FS Report (March 1993), and the DVR (June 1995).

Design Verification Report

An electromagnetic survey and subsurface soil sampling were used to assess the location of the burial pits at the site during the Design Verification Sampling and Analysis. Concentrations of organic constituents were identified above screening levels. Waste and impacted soil were detected at depths up to 22 ft, although the highest concentrations of constituents of potential concern occurred between 6 and 14 ft. The electromagnetic survey indicated the location of two burial areas. The first area is located adjacent to Perimeter Road, and the second area is on the southeast corner of the site adjacent to the former telephone pole storage area. No impact to soil was found outside of the two burial areas.

The recommended method of remediation was excavation of the soil in the two former burial areas. The volume of the soil in these two areas is estimated to be 3,800 cubic yards. The

removal action is scheduled to be implemented in 1998. The plan for Site 4 includes completion of a Record of Decision (ROD), completion of a remedial design, and completion of remedial action.

Current Status

A Remedial Investigation/Feasibility Study will be conducted to address the groundwater and any surface water and sediments near the site.

Regulatory Issues

The waste needs to be removed or remediated and the groundwater needs to be investigated.

Remediation Alternatives

Depending on the results of the RI, the alternatives that may be selected include excavation and removal of the waste and natural attenuation or air stripping to remediate groundwater.

POAM

The current plan is to conduct a RI in this fiscal year, with the design to start in FY00, and remedial action to start in FY01 and LTO starting in FY01. The site closeout is scheduled in FY11.

Funding

FY97	RI/FS	\$ 100,000
FY00	RD	\$ 30,000
FY01	RA	\$ 270,000
FY02	LTO	\$ 841,000

Ordnance Burn Area

Site 7 (SWMU 31)

Site Descriptions: The site, used as a disposal site for waste ordnance compounds between 1948 and 1968, is located in a gully about 20 ft west of Building 501. Wastes disposed of at the site consist of over 33,000 lbs of explosives, primarily nitroaromatic and nitroaliphatic compounds.

VOCs and explosives (TNT, RDX) were detected in groundwater; nitroaromatic compounds were detected in sediment.

Investigations and Removal Action History

The Ordnance Burn Area was identified in the IAS report (November 1984). The site was also included in the CS Report (April 1987), the RI Report (October 1992), and the FS Report (March 1993). A DVR has not been written for Site 7.

Design Verification Report

A DVR has not been written for Site 7. A RI/FS is scheduled to begin for Site 7 during 1997 and completed in 1999. The ROD is scheduled to be completed during 1999.

Current Status

A Remedial Investigation/Feasibility Study will be conducted to address the groundwater and any surface water and sediments near the site.

Regulatory Issues

Groundwater needs to be characterized.

Remediation Alternatives

Depending in the results of the RI, the alternatives that may be selected include low temperature thermal desorption, some excavation and hauling, and sidewall protection with monitoring of groundwater.

POAM

The current plan is to conduct a RI in FY98, with the design to start in FY00, and remedial action to start in FY01, LTO starting in FY03 and LTM starting in FY05. The site closeout is scheduled in FY11.

Funding

FY98	RI/FS	\$ 63,000
FY00	RD	\$ 20,000
FY01	RA	\$ 200,000
FY03	LTO	\$ 162,000
FY05	LTM	\$ 461,000

FDA Chemical Site

Site 8 (SWMU 4)

Site Descriptions

The site was used from 1951 until 1971 for disposal of miscellaneous waste chemicals from laboratories. The site is 10 ft x 10 ft x 12 ft pit located just north of the boundary between NSWCC-White Oak and the U.S. Army Adelphi Laboratory Center, at the end of the southern boundary patrol road. VOCs and metals were detected in soil and groundwater at the site.

Investigations and Removal Action History

The Abandoned Chemical Disposal Pit was identified in the IAS report (November 1984). The site was also included in the CS Report (April 1987), the RI Report (October 1992), the FS Report (March 1993), the DVR (August 1995), and the Post Removal Action Report (1997).

Design Verification Report

Using an electromagnetic survey and subsurface soil sampling, the location of the burial pit was identified. Organic and inorganic constituents were identified in the sampling at depths between 1 and 6 ft. No constituents were identified in soil samples in areas where wastes were originally placed.

Removal Action

Soil excavation and removal was proposed at the site. Approximately 58 tons of waste containing lead, cadmium, and TCE and 52 tons of non-hazardous waste were removed from Site 8. The site no longer presents an unacceptable risk for current or future land use as a result of exposure to subsurface soils within the action area. A draft Post Removal Action Report has been prepared for Site 8.

Current Status

A Remedial Investigation/Feasibility Study will be conducted to address the groundwater and any surface water and sediments near the site.

Regulatory Issues

The Removal Action Confirmation Report is being reviewed. The groundwater needs to be addressed.

Remediation Alternatives

During previous sampling events, two contaminants were detected above EPA Region III Risk-Based Concentrations (RBCs). Depending on the results of the RI, the alternatives that may be selected include natural attenuation or air stripping.

POAM

The current plan is to conduct a RI in this fiscal year, with the design to start in FY99, and remedial action to start in FY00, LTO starting in FY01 and LTM starting in FY05. The site closeout is scheduled in FY10.

Funding

FY97	RI/FS	\$ 70,000
FY99	RD	\$ 32,000
FY00	RA	\$ 182,000
FY01	LTO	\$ 179,000
FY00	LTM	\$ 192,000

Leaching Wells and/ Leaching Field Site

Site 9

SWMU 23, 24, 25, 26, 27, and 28

Site Descriptions: Site 9 consists of several leaching wells and aboveground discharges used for disposal of at least 7,200 lbs of explosive-contaminated liquid waste from the early 1950s to the mid-1970s. The site is located along an intermittent stream bank just east of the "300 Area," with Buildings 310A, 311, 344, 345, and 318 contributing to waste disposal in this area.

VOCs and nitroaromatic compounds were detected in soil, sediment, and groundwater; explosives were detected in soil and sediment at the site.

Investigations and Removal Action History

The 300 Area Industrial Waste Water Disposal Area was identified in the IAS report (November 1984). The site was also included in the CS Report (April 1987), the RI Report (October 1992), the FS Report (March 1993), and the DVR (August 1995).

Design Verification Report

Twenty leaching well and leaching field locations were identified within the area using historic drawings, a site reconnaissance, and a geophysical investigation (terrain conductivity).

Subsurface soil or waste sampling was conducted at each of the locations after it was determined if leaching wells had been removed or if they remained at the facility. If constituents of potential concern were identified in a sample, additional samples were collected in the vicinity. Organic compounds were identified in samples collected from the area of Leaching Well 9, although no constituents of potential concern were identified in samples collected from the area surrounding Leaching Well 9.

Recommended measures were to remove Leaching Well 9 at Site 9A and the impacted soil surrounding it. It was also recommended that Leaching Well 1 at Site 9B, the other remaining leaching well, be removed.

Removal Action

Twenty-seven tons of non-hazardous material was removed from site 9A. Eighty-one tons of material that was deemed hazardous for lead was removed from site 9B. A draft Post Removal Action Report has been prepared for Site 9.

Current Status

A Remedial Investigation/Feasibility Study will be conducted to address the groundwater and any surface water and sediments near the site.

Regulatory Issues

The Removal Action Confirmation Report is being reviewed by BCT. The groundwater needs to be addressed.

Remediation Alternatives

Depending on the results of the RI, the alternatives that may be selected include natural attenuation or air stripping.

POAM

The current plan is to conduct a RI in this fiscal year, with the design to start in FY00, and remedial action to start in FY01, LTO starting in FY02 and LTM starting in FY04. The site closeout is scheduled in FY09.

Funding

FY97	RI/FS	\$ 300,000
FY00	RD	\$ 100,000
FY01	RA	\$1,000,000
FY02	LTO	\$ 177,000
FY04	LTM	\$ 189,000

Site Descriptions: FDA Parcel Sites - Radiological Concerns

Site 10 (AOC E) - Building 74 Radioactive Drum waste storage area

Site 14 (AOC C) - Radioactive waste disposal site

Investigation History

Identified in IAS

Previous cleanup actions

Not part of RI/FS

Current status

No actions.

Regulatory issues

Need plan for remediation

Remediation Alternatives

Soil removal is the anticipated remedial action.

POAM

Current plan is to conduct RI on these sites in FY98, with design and start of cleanup in FY99.

The sites are scheduled for completion of remediation in FY00.

Funding

FY98 RI/FS - \$209,000

FY99 - RD - \$146,000

FY99 - RA - \$228,000 (Site 10 - \$28,000; Site 14 - \$200,000)

FY00 - RA - \$234,000 (all site 14)

Industrial Waste Water Disposal Area 100

Site 11

SWMU 10, 11, 12, 13, 14, 15, 16, 17, 18, 19

Site Descriptions

Site 11 consisted of 13 leaching wells located throughout approximately 16 acres in the "100 Area." It has been estimated that over 20,000 gal of waste was disposed in the leaching wells. Disposed wastes included dissolved metals (including silver, chromium, and lead ions), acids, chlorinated/non-chlorinated solvents, alcohols, lead azide, and organic explosive compounds.

VOCs and metals were detected in soil and groundwater; oil and grease were detected in groundwater at the site.

Investigations and Removal Action History

The 100 Area Industrial Waste Water Disposal Area was identified in the IAS report (November 1984). The site was also included in the CS Report (April 1987), the RI Report (October 1992), the FS Report (March 1993), and the DVR (August 1995).

Design Verification Report

Thirteen leaching well locations were identified within the site using historical drawings, a site reconnaissance, and a geophysical investigation (terrain conductivity). Subsurface soil or waste sampling was conducted at each of the locations after it was determined if the leaching well had been removed or remained at the facility. If initial sampling indicated the presence of constituents of potential concern, additional sampling was performed in the vicinity to evaluate the extent of constituent migration.

Constituents of potential concern were found in the leaching wells at Sites 11A (Leaching Wells 12 and 13) and 11C (Leaching Well 2). Inorganic analytes were identified in Leaching Well 2, semivolatile organic compounds were identified in Leaching Well 13, and trace amounts of

volatile organic compounds were identified in Leaching Well 12. The results of soil sampling did not identify constituents of potential concern in the soil surrounding the leaching wells. It was recommended that the leaching wells be removed.

Removal Action

One thousand three hundred and eighty-two tons of non-hazardous material was removed from Site 11A. The excavation at Site 11B yielded 110 tons of non-hazardous material at LW-4 and 88 tons of material containing lead, cadmium, and TCE at LW-5. At Site 11C, 91 tons of material considered hazardous (due to lead content) were removed. Site 11 no longer presents an unacceptable risk for current or future land use as a result of exposure to subsurface soils within the action area. A draft Post Removal Action Report has been prepared for Site 11.

Current Status

Groundwater sampling is being conducted. The existing monitoring well has been sampled the second/third week of May 1997. The new well points (hydropunch) and new monitoring wells (around and in the FDA building footprint) installation shall be conducted the last two weeks of May 1997. The sampling results will be incorporated in the Remedial Investigation. Any surface water and sediment sampling will also be conducted for the RI.

Regulatory Issues

The Removal Action Confirmation Report is being reviewed. The groundwater needs to be addressed.

Remediation Alternatives

Depending on the results of the RI, the alternatives that may be selected include natural attenuation or air stripping.

POAM

The current plan is to conduct a RI in this fiscal year, with the design to start in FY98, and remedial action to start in FY99, LTO starting in FY01 and LTM starting in FY07. The site closeout is scheduled in FY12.

Funding

FY97	RI/FS	\$ 100,000
FY98	RD	\$ 50,000
FY99	RA	\$ 518,000
FY01	LTO	\$ 179,000
FY07	LTM	\$ 192,000

Sanitary Sewer System

Site 26 (SWMU 46)

Site Description

This system is located throughout the facility as underground piping which manages sanitary sewage and some industrial waste and wastewaters. The system discharged to the Former Wastewater Plant until the plant was deactivated and disassembled in 1982. Since that time, the system has discharged sanitary and industrial wastewaters from the "100" Area into the Washington Suburban Sanitary Commission (WSSC) system.

Investigation History

This site was identified in the RCRA Facility Assessment.

Current Status

Need to discuss for inclusion in AOC 1 as part of FDA Parcel

Regulatory Issue

Needs characterization

BCT needs to review and make recommendation

Remediation Alternative

Selection of the remediation will be determined after characterization.

POAM

The RI/FS will be conducted in FY99, with the design to start in FY01 and the RA to start in FY02. Site closeout is in FY03.

Funding

FY99 RI/FS	\$ 67,000
FY01 RD	\$ 43,000
FY02 RA	\$ 368,000

Storm Drain System

Site 27 (SWMU 48)

Site Description

The system is located throughout the facility as open drains, some of which are concrete-lined. The concrete drains are generally slightly below-grade, and measure 4 feet wide and 1 foot deep, with a V-shaped cross-section. The unit manages facility runoff, and has managed industrial wastewater from several buildings at the facility.

Investigation History

This site was identified in the RCRA Facility Assessment.

Current Status

No action at this time.

Regulatory Issue

Needs characterization
BCT needs to review and make recommendation

Remediation Alternative

A determination of a treatment technology (if necessary) will be made after the remedial investigation has been completed

POAM

The RI will be conducted in FY99 and FY00. Site closeout is in FY01.

Funding

FY99 RI/FS \$130,000

FY00 RI/FS \$142,000

Chemical Storage (TCE) Site

Site 46

Site Description

This is a potential site that was identified by a neighboring installation. It is believed that TCE was leaving this site.

Investigation History

The Army was investigating some concerns near one of its sites, when TCE was detected. The Army believes that the TCE is from the Navy's property.

Current Status

This site is undergoing a site investigation.

Regulatory Issue

Need to characterize groundwater to determine source of TCE.
Navy needs to submit work plan for BCT review.

Remediation Alternative

The technology selected to remediate the site (provided contamination is found) is air stripping with well extraction.

POAM

The SS will be conducted this fiscal year with the RI/FS starting in FY98, the design to start in FY00 and the RA to start in FY00. Site closeout is in FY01.

Funding

FY97 SS	\$ 100,000
FY98 RI/FS	\$ 250,000
FY00 RD	\$ 30,000
FY00 RA	\$ 300,000

Sites 1, 5, 6, 12, 13, 28, 29, 31, 32, 33, AOC 100

Site Descriptions: AOC 1 - FDA Parcel

- Site 1 (SWMU 3) - Parking Lot Landfill
- Site 5 - Former Open Burn Area (SWMU 32)
- Site 6 - Former Sewage Sludge Composting Area (SWMU 6)
- Site 12 - Former Building 201 South Leaching Well (SWMU 21)
- Site 13 - Former Oil/Sludge Disposal Area (SWMU 7)
- Site 28 (SWMU 88) - Building T14 (Scrapyard)
- Site 29 (SWMU 74) - Building 76
- Site 31 (SWMU 72) - Building 25 Drum Storage Area
- Site 32 (AOC O) - NPDES Outfall
- Site 33 (SWMU 39) - Building 25 Plating Shop Equalization Tank
- AOC 100 - Indoor Underground Pistol Range

Investigation History:

Site 1 (SWMU 3) - Parking Lot Landfill

The parking Lot Landfill was used as an open disposal site and landfill between 1948 and 1953. The site is located east of Building 101A and is adjacent to the Apple Orchard Landfill (Site 2). Waste supposedly disposed within this landfill includes waste lubricating oil, battery acid, plating wastes and metal scrap. It has been reported that approximately 60 automobile batteries were disposed in the site over its operating life. The site is now used as a parking lot and is paved with asphalt.

Site 5 - Former Open Burn Area (SWMU 32)

This site was used from late 1940s until 1970 for disposal of paper, cardboard, wood, and other bulky ignitable matter. Combustible trash was burned in the incinerator in Building 108 until 1973. In 1969-70, materials were ignited using pyrotechnic devices. Hazardous materials were

not disposed of at this site in quantities large enough to present a hazard to human health and the environment.

Site 6 - Former sewage Sludge Composting Area (SWMU 6)

This site was used between 1946 and 1982 for disposal of sludge from the sewage treatment plant. This site is located in the extreme northeast corner of the Center and occupies an area of approximately one acre.

Site 12 - Former Building 201 South Leaching Well (SWMU 21)

This site consists of a single leaching well for acid waste. The well is located just north of Building 201, and was probably used from 1945 until the late 1970s. It is believed that this well only received small quantities of waste.

Site 13 - Former Oil/Sludge Disposal Area (SWMU 7)

This site was used from 1970 to 1978 for disposal of sludge from fuel oil tanks. The site is located near the northeastern corner of the Center, between Dahlgren Road and the northern boundary patrol road. This site occupies about 0.7 acre. The waste disposed of here was an oily sludge from settling of heavy fuels oils, probably number 6 fuel oil. About 6,000 to 10,000 gallons of this material were reported to have been spread over the surface of the site during an eight year period.

Site 28 (SWMU 88) - Building T14 (Scrapyard)

The Building T-14 Scrapyard is a fenced area used for the management of materials awaiting disposal or reuse. The site measures 150 feet by 300 feet, was used to store transformers directly on hardpacked gravel between 1967 and 1975. Other areas of the site are covered with concrete.

Site 29 (SWMU 74) - Building 76

The site consists of a concrete pad measuring ten feet, and was used for staging wastes generated within the Plastics Laboratory until disposal off-site. Waste managed included epoxies and resin waste generated within the Plastics Laboratory. The pad was surrounded by a concrete berm.

Site 31 (SWMU 72) - Building 25 Drum Storage Area

This site is located on the east side of Taylor Road near Building 25. The site consists of a 4 foot by fifteen foot asphalt pad which was to store a maximum of 55-gallon drums of waste solvents and lubrication oils from a shop located within Building 25. The solvents contained trichloroethylene, methylene chloride, 2-butoxyethanol, xylene, toluene, ethylbenzene, and other unspecified hydrocarbon. The drums were stored for a one or two day period prior to transport off-site for disposal. Portions of the pad are stained. Metal objects are also embedded within the asphalt.

Site 32 (AOC O) - NPDES Outfall

The site is located behind building 112, adjacent to Outfall #002. The outfall received wastewater generated from various buildings within Area 100. The outfall was permitted to discharge 2,600 gallons per day (gpd). Sources associated with the outfall include Building 100 car wash wastewater (300 gpd), and steam condensate and backwash from water treatment equipment in Building 101, the Boiler Plant (2,300 gpd). Due to the nature of the research activities conducted at the base, the wastewater may have contained explosive materials. The outfall was eliminated prior to applying for a modified NPDES permit, but was never formally closed under RCRA. The RFA (1990) stated that the unit was deactivated on an unknown date.

Site 33 (SWMU 39 - Building 25 Plating Shop Equalization Tank

This site is a former sump located on the east side of Building 25 Plating Shop in the northwest portion of the facility. The sump is a closed underground concrete tank measuring approximately 5 feet by 7 feet by 8 feet deep, with terra terra-cotta inlet and outlet pipes. The sump is covered by a metal lid and contained a weir. It received wastewater containing chromium, cadmium,

copper, lead, nickel, and cyanide from the Plating Shop via the floor drains and discharged to the Sanitary Sewer System (SWMU 46). The sump began operation in the late 1940s and was deactivated in 1984, when operation in the Plating Shop ceased.

AOC 100 - Indoor Underground Pistol Range

AOC 100 was identified during the Environmental Baseline Survey (EBS) conducted in 1996. Prior to the EBS, the area was identified as a concern. AOC 100 is the location of a former indoor underground pistol range which is currently being taken out of service. The range is located on the southern side of Building 71 adjacent to Maury Road.

Current Status

Sites identified as in the FDA parcel but not yet in the way of FDA building construction. Navy preparing work plan for complete site screening study of these sites.

Regulatory Issues

Need to finalize draft sampling and analysis plan and implement plan

Need to include soil sampling at Sites 29 and 31

Need groundwater sampling at Site 28

Remediation Alternatives

Site 1 (SWMU 3) - Parking Lot Landfill

The selected technology for remediation is a RCRA Cap with monitoring of groundwater. The technology may change depending on the results of the RI/FS.

Site 5 - Former Open Burn Area (SWMU 32)

The selected technologies for remediation Soil Vapor Extraction, Excavation and Hauling and Sidewall Protection with monitoring of groundwater. The technologies may change depending on the results of the RI/FS.

Site 6 - Former sewage Sludge Composting Area (SWMU 6)

The selected technologies for remediation Low Temperature Thermal Desorption, Excavation and Hauling and Sidewall Protection with monitoring of groundwater. The technologies may change depending on the results of the RI/FS.

Site 12 - Former Building 201 South Leaching Well (SWMU 21)

The selected technology for remediation is well extraction and disposal with monitoring of groundwater. The technology may change depending on the results of the RI/FS.

Site 13 - Former Oil/Sludge Disposal Area (SWMU 7)

The selected technology for this site is enhance bioremediation. The selected technology may change depending on the results of the RI/FS.

Site 28 (SWMU 88) - Building T14 (Scrapyard)

The selected technologies for remediation are Low Temperature Thermal Desorption, some excavation and hauling and sidewall protection with monitoring of groundwater. The technologies may change depending on the results of the RI/FS.

Site 29 (SWMU 74) - Building 76

The selected technologies for remediation excavation and hauling and sidewall protection with monitoring of groundwater. The technologies may change depending on the results of the RI/FS.

Site 31 (SWMU 72) - Building 25 Drum Storage Area

The selected technology for remediation is to removal and dispose of contaminated soil with monitoring of groundwater. The technology may change depending on the results of the RI/FS.

Site 32 (AOC O) - NPDES Outfall

The selected technology for remediation is to removal and dispose of contaminated soil with monitoring of groundwater. The technology may change depending on the results of the RI/FS.

Site 33 (SWMU 39 - Building 25 Plating Shop Equalization Tank

The selected technology for remediation is to removal and dispose of contaminated soil with monitoring of groundwater. The technology may change depending on the results of the RI/FS.

AOC 100 - Indoor Underground Pistol Range

A removal action has been conducted on this site. The results of the RI/FS will determine if additional cleanup is required. If additional remediation is required than the site will be clean closed.

POAM:

Site 1 (SWMU 3) - Parking Lot Landfill

The current plan is to conduct a SS in this fiscal year, with design to start in FY00, and remedial action to start in FY00, and LTM starting in FY02. The site closeout is scheduled in FY06.

Site 5 - Former Open Burn Area (SWMU 32)

The current plan is to conduct a RI/FS to start in FY00, the design to start in FY01, remedial action to start in FY02, and LTM starting in FY03. The site closeout is scheduled in FY07.

Site 6 - Former sewage Sludge Composting Area (SWMU 6)

The current plan is to conduct a RI/FS to start in FY00, design to start in FY01, remedial action to start in FY02, and LTM starting in FY03. The site closeout is scheduled in FY07.

Site 12 - Former Building 201 South Leaching Well (SWMU 21)

The current plan is to conduct a RI/FS to start in FY00, design to start in FY01, remedial action to start in FY02, the LTO to start in FY03 and LTM starting in FY04. The site closeout is scheduled in FY09.

Site 13 - Former Oil/Sludge Disposal Area (SWMU 7)

The current plan is to conduct a RI/FS to start in FY00, design to start in FY01, and remedial action to start in FY02. The site closeout is scheduled in FY03.

Site 28 (SWMU 88) - Building T14 (Scrapyard)

The current plan is to conduct a SS in this current fiscal year, the RI in FY98, with the design to start in FY00, remedial action to start in FY01 and the LTM in FY02. The site closeout is scheduled in FY06.

Site 29 (SWMU 74) - Building 76

The current plan is to conduct a SS in this fiscal year, with the RI/FS in FY98 design to start in FY99, and remedial action to start in FY99. The site closeout is scheduled in FY01.

Site 31 (SWMU 72) - Building 25 Drum Storage Area

The current plan is to conduct a SS in this fiscal year, with the RI/FS to start in FY98, design to start in FY00, and remedial action to start in FY02, and LTM starting in FY02. The site closeout is scheduled in FY06.

Site 32 (AOC O) - NPDES Outfall

The current plan is to conduct a SS in this fiscal year, with the RI/FS to start in FY98, design to start in FY99, and remedial action to start in FY99. The site closeout is scheduled in FY01.

Site 33 (SWMU 39 - Building 25 Plating Shop Equalization Tank

The current plan is to conduct a SS in this fiscal year, with the RI/FS to start in FY99, and remedial action to start in FY00. The site closeout is scheduled in FY06.

AOC 100 - Indoor Underground Pistol Range

The current plan is to conduct a SS in this fiscal year.

Funding

Funding for site screening for all sites and AOC under AOC 1 is \$275,000, for FY97

Site 1 (SWMU 3) - Parking Lot Landfill

FY00	RD	\$ 10,000
FY00	RA	\$ 330,000
FY02	LTM	\$ 15,000

Site 5 - Former Open Burn Area (SWMU 32)

FY96	SS	\$ 90,000
FY00	RI/FS	\$ 288,000
FY01	RD	\$ 37,000
FY02	RA	\$ 184,000
FY03	LTM	\$ 15,000

Site 6 - Former Sewage Sludge Composting Area

FY96 SS	\$ 90,000
FY00 RI/FS	\$ 114,000
FY01 RD	\$ 60,000
FY02 RA	\$ 509,000
FY03 LTM	\$ 13,000

Site 12 - Former Building 201 South Leaching Well (SWMU 21)

FY96 SS	\$ 90,000
FY00 RI/FS	\$ 277,000
FY01 RD	\$ 33,000
FY02 RA	\$ 283,000
FY03 LTO	\$ 1,000
FY04 LTM	\$ 6,000

Site 13 - Former Oil/Sludge Disposal Area (SWMU 7)

FY96 SS	\$ 90,000
FY00 RI/FS	\$ 50,000
FY01 RD	\$ 10,000
FY02 RA	\$ 50,000

Site 28 (SWMU 88) - Building T14 (Scrapyard)

FY96 SS	\$ 90,000
FY98 RI/FS	\$ 114,000
FY00 RD	\$ 15,000
FY01 RA	\$ 434,000
FY02 LTM	\$ 439,000

Site 29 (SWMU 74) - Building 76

FY96	SS	\$ 90,000
FY98	RI/FS	\$ 288,000
FY99	RD	\$ 10,000
FY99	RA	\$ 100,000

Site 31 (SWMU 72) - Building 25 Drum Storage Area

FY96	SS	\$ 90,000
FY98	RI/FS	\$ 250,000
FY00	RD	\$ 200,000
FY02	RA	\$ 182,000
FY00	LTM	\$ 312,000

Site 32 (AOC O) - NPDES Outfall

FY98	RI/FS	\$ 88,000
FY99	RD	\$ 10,000
FY99	RA	\$ 100,000

Site 33 (SWMU 39 - Building 25 Plating Shop Equalization Tank

FY99	RI/FS	\$ 50,000
FY00	RA	\$ 200,000

AOC 100 - Indoor Underground Pistol Range

See beginning of section.

AOC 2: NON-FDA Group I

Site 15 - Former Building 310A Waste Disposal Area (SWMU 8)

Site 16 - Former Building 409 Paint Branch Waste Disposal Area (SWMU 9)

Site 17 - Former Building 130 South Leaching Well (SWMU 17)

Site 18 - Building 201 Oil/Water Separator (SWMU 52)

Site 21 - Stoneyard (SWMU 35)

Site 22 - Former Building 305 Wastewater Collection System (SWMU 40)

Site 23 - Former Building 311 Oxidation Ditch (SWMU 41)

Site 24 - Former 318 Wash Down Disposal System (SWMU 42)

SWMU 33 - Former 305 Demilitarization Site

SWMU 36 - Former Building 108 Incinerator

SWMU 37 - Building 310A Liquid Waste Collection Areas

SWMU 53 - Building 406 Oil/Water Separator

SWMU 54 - Former Waste Oil Recycling Operations Site

SWMU 60 - Building 406 Waste Oil Storage Units

SWMU 75 - Building 315 Waste Photographic Chemical Storage Area

SWMU 76 - Building 430 Waste oil Storage Area

SWMU 86 - Building 409 Solid Waste Storage Unit

AOC M - Former Outfall 004 at Building 611

AOC N - Former Outfall 006 at Building 201

AOC P - Former Outfall 012 at Building 312

AOC Q - Former Outfall 014 at Building 328

AOC R - Former Outfall 017 at Building 318

AOC S - Former Outfall 018 at Building 310A

Site Descriptions:

Site 15 - Former Building 310A Waste Disposal Area (SWMU 8)

Waste from laboratory operation was routinely disposed of in this area by two means. The first was disposed down the lab sink, with subsequent discharge to storm drain, and then the

intermittent stream. The other method reportedly involved toxic compounds being poured directly onto the soil.

Site 16 - Former Building 409 Paint Branch Waste Disposal Area (SWMU 9)

This site was located on an embankment of Paint Branch Creek east of Building 409. The site was reportedly approximately 25 feet wide and 75 to 100 feet long, running down the 30-foot embankment. The area managed waste from the diatomaceous earth filters used to clean water in the Building 409 mine tank. The waste was transported from Building 409 to Paint Branch Creek, where it was disposed of directly on the soil of the embankment.

Site 17 - Former Building 130 South Leaching Well (SWMU 20)

This site consisted of a leaching pit and two leaching wells that may have received battery acids from operations in the area. No releases were documented.

Site 18 - Building 201 Oil/Water Separator (SWMU 52)

This unit is located on the southwest corner of Building 201, in the central portion of the facility. The unit is an above grade, 275-gallon, closed steel tank, which manages waste oil. The waste oil overflows from the upgradient boiler fuel tanks. The waste oil was removed and transported to the Former Area 141 Waste Oil USTs (SWMU 61) from 1963 to 1988.

Site 21 - Stoneyard (SWMU 35)

This site is located across the road from Building 108 in the north-central section of the facility, within 50 feet of the north boundary road. This is an open area which was used to sandblast ordnance items. The sandblasting was performed using glass beads. Until 1983, the glass beads and material removed from sandblasted items were disposed at the Former Apple Orchard Landfill.

Site 22 - Former Building 305 Wastewater Collection System (SWMU 40)

The unit is located at Building 305 in the east-central portion of the facility. The unit managed explosive-contaminated wastewater from cleanup of the TNT melt-casting operation in the Former Building 305 Demilitarization Site (SWMU 33). It operated on a daily basis, processing approximately 100 pounds of TNT. The unit consisted of a Wastewater Channel, a Sump and an Overflow Pipe. During the 1950s and 1960s, sludge from the Sump was collected and deposited in the Former Ordnance Burn Area (SWMU 31).

Site 23 - Former Building 311 Oxidation Ditch (SWMU 41)

The unit was located behind Building 311 in the southeastern portion of the facility. This unit was used to test the biological treatment of TNT in wastewater. Effluent drained into the other part of the unit, a Settling Tank. The Tank discharged its effluent to an adjacent intermittent tributary of Paint Branch Creek.

Site 24 - Former 318 Wash Down Disposal System (SWMU 42)

The unit is located in Building 318 in the southwestern portion of the facility. The unit which collects explosive-contaminated wastewater, consists of Floor Drains, Sump, and Former Overflow Pipe. The Sump is known to be cracked, and the explosive wastewater have released to the soil underneath. During the first 25 years of the units life, the Sump discharged into an Overflow Pipe, which in turn discharged into the Storm Drain System. Around 1979, the Overflow Pipe was plugged, and the Former Building 318 Pilot Treatment Plant was installed. In 1982, the Building 318 Carbon Absorption Treatment System replaced the Former Building 318 Pilot Treatment Plant. Wastewater in the Sump is pumped to the Settling Tank (SWMU 44A), in the Building 318 Carbon Absorption Treatment System, via a 3-inch Effluent Pipe (SWMU 42E).

SWMU 33 - Former 305 Demilitarization Site

The unit was located inside Building 305 in the east-central portion of the facility. The unit reportedly consisted of casting kettles, where waste explosive was melted and removed from ordnance casings. The waste explosive was collected and stored inside Building 305 prior to

transfer to Building T-35. The unit was cleaned with water, which discharged into the Former Building 305 Wastewater Collection System.

SWMU 36 - Former Building 108 Incinerator

The unit is attached to the south side of Building 108, in the north-central section of the facility, within 600 feet of the north boundary road. The unit consists of a brick oven with an attached 35-foot-tall stack. The unit incinerated municipal-type wastes until 1973, when incineration was stopped in order to comply with Maryland air pollution regulations.

SWMU 53 - Building 406 Oil/Water Separator

The unit is located along the south wall inside Building 406 in the north central portion of the facility. The unit manages compressor blowdown associated with operation of the hypersonic wind tunnel in Building 406. The unit uses gravity separation to remove waste oil from the wastewater stream. The wastewater is then discharged through an internal NPDES outfall into Paint Branch Creek.

SWMU 54 - Former Waste Oil Recycling Operations Site

The unit was located at the west edge of the Former Apple Orchid Landfill and adjacent to the Former Area 141 Waste Oil USTs. The unit was located above open ground, which was used to separate oil and water. Waste was then transferred to the adjacent Area 141 Waste Oil USTs.

SWMU 60 - Building 406 Waste Oil Storage Units

The unit is found at two locations at Building 406 in the north central portion of the facility. The unit consists of two above grade, closed waste oil storage units: (1) a 55-gallon Drum and (2) a 275-gallon Tank. The sub-units store waste oil from compressor blowdown of the hypersonic wind tunnel operations in Building 406.

SWMU 75 - Building 315 Waste Photographic Chemical Storage Area

The unit is located in Building 315 in the southeastern portion of the facility. The unit manages waste photographic chemicals used in the developing and printing of photographs. The unit consists of a plastic 55-gallon drum stored on the concrete floor. Waste from the Drum is transferred to the Building 508 Hazardous Waste Storage Facility.

SWMU 76 - Building 430 Waste oil Storage Area

The unit is located on a concrete pad outside the southeast corner of Building 430 in the north-central portion of the facility. The unit manages 55-gallon steel drums containing waste oil from the compressors used in the hypervelocity wind tunnel operations in the building. Until 1988, the waste oil was removed from the unit and transported to the Area 141 Waste Oil USTs.

SWMU 86 - Building 409 Solid Waste Storage Unit

The unit located on the east side of Building 409 in the north-central portion of the facility. The storage unit is an underground unit which stores spent diatomaceous earth from the water filtration system for the testing tank in Building 409.

AOC M - Former Outfall 004 at Building 611

This unit was a storm drain in front of Building 611. The discharge rate for this unit was 1,000 gallons per day.

AOC N - Former Outfall 006 at Building 201

This unit is located 50 feet south of Building 201. The discharge rate for this unit is unknown.

AOC P - Former Outfall 012 at Building 312

This unit was located between Buildings 312A and 312B. The discharge rate was 2600 gallons per day.

AOC Q - Former Outfall 014 at Building 328

This unit is located adjacent to a sanitary sewer. The discharge rate for this unit is 8,000 gallons per day.

AOC R - Former Outfall 017 at Building 318

This unit was located adjacent to Building 318. The discharge rate for this unit was 150 gallons per day.

AOC S - Former Outfall 018 at Building 310A

This unit was located 20 feet north of Building 310A. The discharge rate for this unit was 6,000 gallons per day.

Investigations and Removal Action History

These sites were either identified in the IAS or RFA as potential areas of concern.

Current Status

The Site Screening process will be conducted on the sites as the first step in determining the remedial options.

Regulatory Issues

Need concurrence from BCT with split between AOCs and with schedule/cost estimates/level of effort. Need SOW and cost estimate for award in October 1997 for first site screening.

Remediation Alternatives

Site 15 - Former Building 310A Waste Disposal Area SWMU 8)

The selected technologies for remediation are low temperature thermal desorption, some excavation and hauling, and sidewall protection with monitoring of groundwater. The technologies may change depending on the results of the RI/FS.

Site 16 - Former Building 409 Paint Branch Waste Disposal Area (SWMU 9)

The selected technologies for remediation are Low Temperature Thermal Desorption, some excavation and hauling and sidewall protection with monitoring of groundwater. The technologies may change depending on the results of the RI/FS.

Site 17 - Former Building 130 South Leaching Well (SWMU 17)

The selected technologies for remediation are Low Temperature Thermal Desorption, some excavation and hauling and sidewall protection with monitoring of groundwater. The technologies may change depending on the results of the RI/FS.

Site 18 - Building 201 Oil/Water Separator (SWMU 52)

The groundwater of this site will be monitored to assess potential for impact. Remove tank and any impacted soils.

Site 21 - Stoneyard (SWMU 35)

The selected technologies for remediation are Low Temperature Thermal Desorption, some excavation and hauling and sidewall protection with monitoring of groundwater. The technologies may change depending on the results of the RI/FS.

Site 22 - Former Building 305 Wastewater Collection System (SWMU 40)

The selected technologies for remediation are Low Temperature Thermal Desorption, some excavation and hauling and sidewall protection with monitoring of groundwater. The technologies may change depending on the results of the RI/FS.

Site 23 - Former Building 311 Oxidation Ditch (SWMU 41)

The selected technologies for remediation are Low Temperature Thermal Desorption, some excavation and hauling and sidewall protection with monitoring of groundwater. The technologies may change depending on the results of the RI/FS.

Site 24 - Former 318 Wash Down Disposal System (SWMU 42)

The selected technologies for remediation are Low Temperature Thermal Desorption, some excavation and hauling and sidewall protection with monitoring of groundwater. The technologies may change depending on the results of the RI/FS.

SWMU 33, 36, 37, 53, 54, 60, 75, 76, 86, AOCs M, N, P, Q, R, and S

The technologies to remediate these sites will be decided by the BCT upon the conclusion of the RI.

POAM

The SS for all sites under AOC 2 is scheduled to be conducted in FY 98.

Site 15 - Former Building 310A Waste Disposal Area SWMU 8)

Site closed out in FY07.

Site 16 - Former Building 409 Paint Branch Waste Disposal Area (SWMU 9)

The current plan is to conduct the RI/FS in FY98, the design in FY00, the remedial action in FY02, and LTM in FY02. Site closeout is scheduled in FY06.

Site 17 - Former Building 130 South Leaching Well (SWMU 17)

The site closeout is scheduled in FY08.

Site 18 - Building 201 Oil/Water Separator (SWMU 52)

The current plan is to conduct a RI/FS in FY00, design in FY01, remedial action in FY02, and LTM starting in FY03. The site closeout is scheduled in FY08.

Site 21 - Stoneyard (SWMU 35)

The current plan is to conduct a RI/FS in FY00, design in FY01, and remedial action in FY02. The site closeout is scheduled in FY03.

Site 22 - Former Building 305 Wastewater Collection System (SWMU 40)

The current plan is to conduct a SS in this fiscal year, with the RI/FS to start in FY00, design to start in FY01, remedial action to start in FY02, and LTM starting in FY03. The site is scheduled closeout in FY07.

Site 23 - Former Building 311 Oxidation Ditch (SWMU 41)

The current plan is to conduct a RI/FS to start in FY00, design to start in FY01, remedial action to start in FY02, and LTM starting in FY03. The site closeout is scheduled in FY08.

Site 24 - Former 318 Wash Down Disposal System (SWMU 42)

The current plan is to conduct a RI/FS to start in FY98, design to start in FY98, and remedial action to start in FY99, and LTM starting in FY01. The site closeout is scheduled in FY08.

SWMUs 33, 36, 53, 54, 60, 75, 76, 86, AOCs M, N, P, Q, R, and S

The RI/FS for all of the remaining sites are scheduled to be conducted in FY00.

Funding

The funding for site screening for all sites under AOC 2 is \$400,000, for FY98.

Site 15 - Former Building 310A Waste Disposal Area SWMU 8)

FY00	RI/FS	\$ 114,000
FY01	RD	\$ 51,000
FY02	RA	\$ 434,000
FY03	LTM	\$ 431,000

Site 16 - Former Building 409 Paint Branch Waste Disposal Area (SWMU 9)

FY98	RI/FS	\$ 114,000
FY00	RD	\$ 51,000
FY01	RA	\$ 250,000
FY02	LTM	\$ 432,000

Site 17 - Former Building 130 South Leaching Well (SWMU 17)

FY00	RI/FS	\$ 114,000
FY01	RD	\$ 10,000
FY02	RA	\$ 100,000
FY03	LTM	\$ 13,000

Site 18 - Building 201 Oil/Water Separator (SWMU 52)

FY00	RI/FS	\$ 37,000
FY01	RD	\$ 10,000
FY02	RA	\$ 100,000
FY03	LTM	\$ 9,000

Site 21 - Stoneyard (SWMU 35)

FY00	RI/FS	\$ 100,000
FY01	RD	\$ 38,000
FY02	RA	\$ 326,000

Site 22 - Former Building 305 Wastewater Collection System (SWMU 40)

FY00	RI/FS	\$ 114,000
FY01	RD	\$ 10,000
FY02	RA	\$ 100,000
FY03	LTM	\$ 6,000

Site 23 - Former Building 311 Oxidation Ditch (SWMU 41)

FY00	RI/FS	\$ 114,000
FY01	RD	\$ 51,000
FY02	RA	\$ 434,000
FY03	LTM	\$ 432,000

Site 24 - Former 318 Wash Down Disposal System (SWMU 42)

FY98	RI/FS	\$ 67,000
FY98	RD	\$ 51,000
FY99	RA	\$ 434,000
FY01	LTM	\$ 432,000

SWMU 33, 36, 53, 54, 60, 75, 76, 86, AOCs M, N, P, Q, R, and S

FY98 SS	\$ 400,000
FY00 RI/FS	\$ 250,000

AOC 3: NON-FDA Group II

SWMU 34 - Former 377 Demilitarization Site
SWMU 47 - Former Wastewater Treatment Plant
SWMU 85 - Building 501 Asbestos Storage Area
SWMU 87 - Building 611 Solid Waste Storage Area
SWMU 93 - Building 619 Explosive Sludge Removal Unit
AOC 108 - Metal Bricks at Building 108
AOC 142 - Facility 142 Containment Area
AOC 150 - Stressed Vegetation Area
AOC 151 - Uncovered Storage Area
AOC 303 - Explosive Test Area
AOC 304-3 - Staining, Cracking, and Gritty Substance on Floor
AOC 315 - Excavation of Unknown Origin
AOC 334 - Outside Paint and Battery Storage
AOC 340 - Outside Storage of Potentially Explosive Contaminated Waste
AOC 387 - Staining and Battery Parts in Centrifuge Area
AOC 500A - Containers of Chemicals
AOC 500B - Former Pistol Range
AOC 600 - 4th of July Pit
AOC 630 - Small Piles of Soil With Green Coloration
AOC 700 - Former Trash Pit
AOC All - Streams Throughout White Oak

Site Descriptions:

SWMU 34 - Former 377 Demilitarization Site

The unit was located on the ground in front of Building 377. Explosives were reportedly steamed out of the weapons casings, spilled onto the ground, and collected after drying for disposal.

SWMU 47 - Former Wastewater Treatment Plant

The unit was located in the north-central portion of the facility off Blandy Road. The Treatment Plant consisted of an Imhoff Tank, four Sand Filters, a Chlorine Contact Chamber and a tile-lined Sludge Drying Bed. The sub-units were connected by terra cotta pipe and were all of concrete construction. The Plant discharges were regulated under the facility's NPDES permit, with the wastewater discharging to Paint Branch Creek.

SWMU 85 - Building 501 Asbestos Storage Area

The unit is located approximately 25 feet northeast of Building 501 in the Hazardous Waste Storage Facility. The unit consists of an area on the soil where wooden crates containing waste asbestos are stored.

SWMU 87 - Building 611 Solid Waste Storage Area

The unit is located west of Building 611 in the south-central portion of the facility. The area is a patch of ground within 50 feet of Paint Branch Creek, where unknown individuals have reportedly disposed wood, metal waste, and other debris.

SWMU 93 - Building 619 Explosive Sludge Removal Unit

The unit is located in the northeast corner of Building 619, in the central portion of the facility. The unit is a mobile sump pump and cleaner which is used to remove explosive sludge and explosive-contaminated wastewater from the floor trenches in the adjacent Building 620 on an as-needed basis.

AOC 108 - Metal Bricks at Building 108

The site description is not available at this time. The information is presently being developed by the contractor.

AOC 142 - Facility 142 Containment Area

The site description is not available at this time. The information is presently being developed by the contractor.

AOC 150 - Stressed Vegetation Area

The site description is not available at this time. The information is presently being developed by the contractor.

AOC 151 - Uncovered Storage Area

The site description is not available at this time. The information is presently being developed by the contractor.

AOC 303 - Explosive Test Area

The site description is not available at this time. The information is presently being developed by the contractor.

AOC 304-3 - staining, Cracking, and Gritty Substance on Floor

The site description is not available at this time. The information is presently being developed by the contractor.

AOC 315 - Excavation of Unknown Origin

The site description is not available at this time. The information is presently being developed by the contractor.

AOC 334 - Outside Paint and Battery Storage

The site description is not available at this time. The information is presently being developed by the contractor.

AOC 340 - Outside Storage of Potentially Explosive Contaminated Waste

The site description is not available at this time. The information is presently being developed by the contractor.

AOC 387 - Staining and Battery Parts in Centrifuge Area

The site description is not available at this time. The information is presently being developed by the contractor.

AOC 500A - Containers of Chemicals

The site description is not available at this time. The information is presently being developed by the contractor.

AOC 500B - Former Pistol Range

The site description is not available at this time. The information is presently being developed by the contractor.

AOC 600 - 4th of July Pit

The site description is not available at this time. The information is presently being developed by the contractor.

AOC 630 - Small Piles of Soil With Green Coloration

The site description is not available at this time. The information is presently being developed by the contractor.

AOC 700 - Former Trash Pit

The site description is not available at this time. The information is presently being developed by the contractor.

AOC All - Streams Throughout White Oak

The site description is not available at this time. The information is presently being developed by the contractor.

Investigations and Removal Action History

These sites were either identified in the RFA or EBS as areas of concern.

Current Status

No action until FY00.

Regulatory Issues

Need to characterize the sites for potential contamination.
Need to determine if remediation is needed

Remediation Alternatives

The selected technology for remediation is expected to be excavation and disposal.

POAM

The plan is to conduct the SS in FY00, with the RI/FS starting in FY01, the design starting in FY 03 and the RA starting in FY04. The site closeout is slated for FY05.

Funding

FY00	SS	\$ 400,000
FY01	RI/FS	\$ 300,000
FY03	RD	\$ 50,000
FY04	RA	\$ 500,000

4.5 Schedules

Schedules for the planned actions outlined in this BCP are included as Figure 4-2. The overall schedule is labeled as Figure 4-2. Additional detailed schedules are included as Figures 4-2a through 4-2m.

Figure 4-2. Overall Draft Schedule NSWC V... Oak Environmental Restoration Timeline

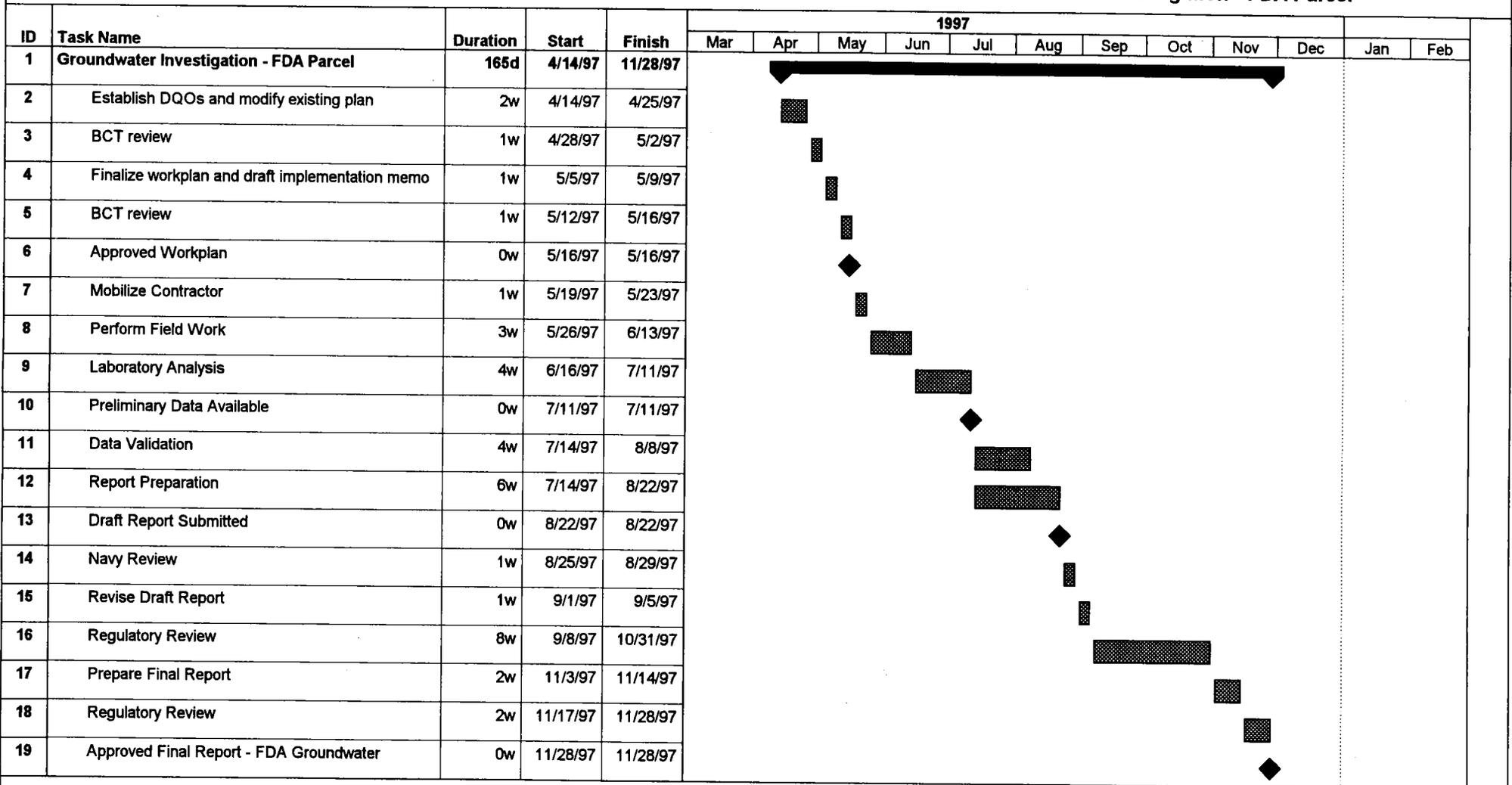
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					Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4
1	Groundwater Investigation - FDA Parcel (Figure 4-2a)	33w	4/14/97	11/28/97												
2	Groundwater Investigation - Back Area (Figure 4-2b)	42w	4/14/97	1/30/98												
3	Background Investigation (Figure 4-2c)	38w	4/14/97	1/2/98												
4	Site Screening - FDA Parcel Area - AOC Group 1 (Figure 4-2d)	36w	4/14/97	12/19/97												
5	Follow - Up RI/FS - FDA Parcel Area	52w	1/1/98	12/30/98												
6	Site 46 - Investigation (Figure 4-2e)	51w	4/23/97	4/14/98												
7	Site 46 - RI/FS - ROD	52w	5/1/98	4/29/99												
8	Master Workplan (Figure 4-2f)	22w	3/24/97	8/22/97												
9	Site Screening - AOC Group 2 (Figure 4-2g)	62w	10/14/97	12/21/98												
10	UST Remediation (Figure 4-2h)	13w	4/21/97	7/18/97												
11	Removals - Sites 4, 33, and 36 (Figure 4-2i)	64.2w	7/17/97	10/8/98												
12	RI - Sites 2 and 3 - thru ROD (Figure 4-2j)	68w	6/1/97	9/18/98												
13	RD/RA - Sites 2 and 3	52w	10/1/98	9/29/99												
14	RI - Site 11 - thru ROD (Figure 4-2k)	68w	6/2/97	9/18/98												
15	RD/RA - Site 11	52w	10/1/98	9/29/99												
16	RI - Site 8 - thru ROD (Figure 4-2l)	93w	7/1/97	4/12/99												
17	RI - Sites 7 and 9 - thru ROD (Figure 4-2m)	116w	10/1/97	12/21/99												
18	RCRA Closure SWMUs	104w	3/24/97	3/19/99												
19	Sites 10 and 14 - Study and Remediation	104w	7/1/97	6/28/99												
20	AOC Group 3 - Site Screening	52w	10/1/98	9/29/99												

- Notes:
- 1) "AOC Group 1", "AOC Group 2", "AOC Group 3" refer to groups of AOCs that will be screened together. The group number for each AOC is included in the "status" column of Table 3-1.
 - 2) Corresponding budget information for each activity (where applicable) is included in Appendix A.
 - 3) Schedules are based on calendar years, rather than fiscal years.

* ASSUMES 1 YR GWM
5/28/97

Task  Milestone 

Figure 4-2a. Draft Schedule NSWC White Oak Environmental Restoration Timeline - Groundwater Investigation - FDA Parcel



* ASSUMES 1 YR GWM
5/28/97

Task



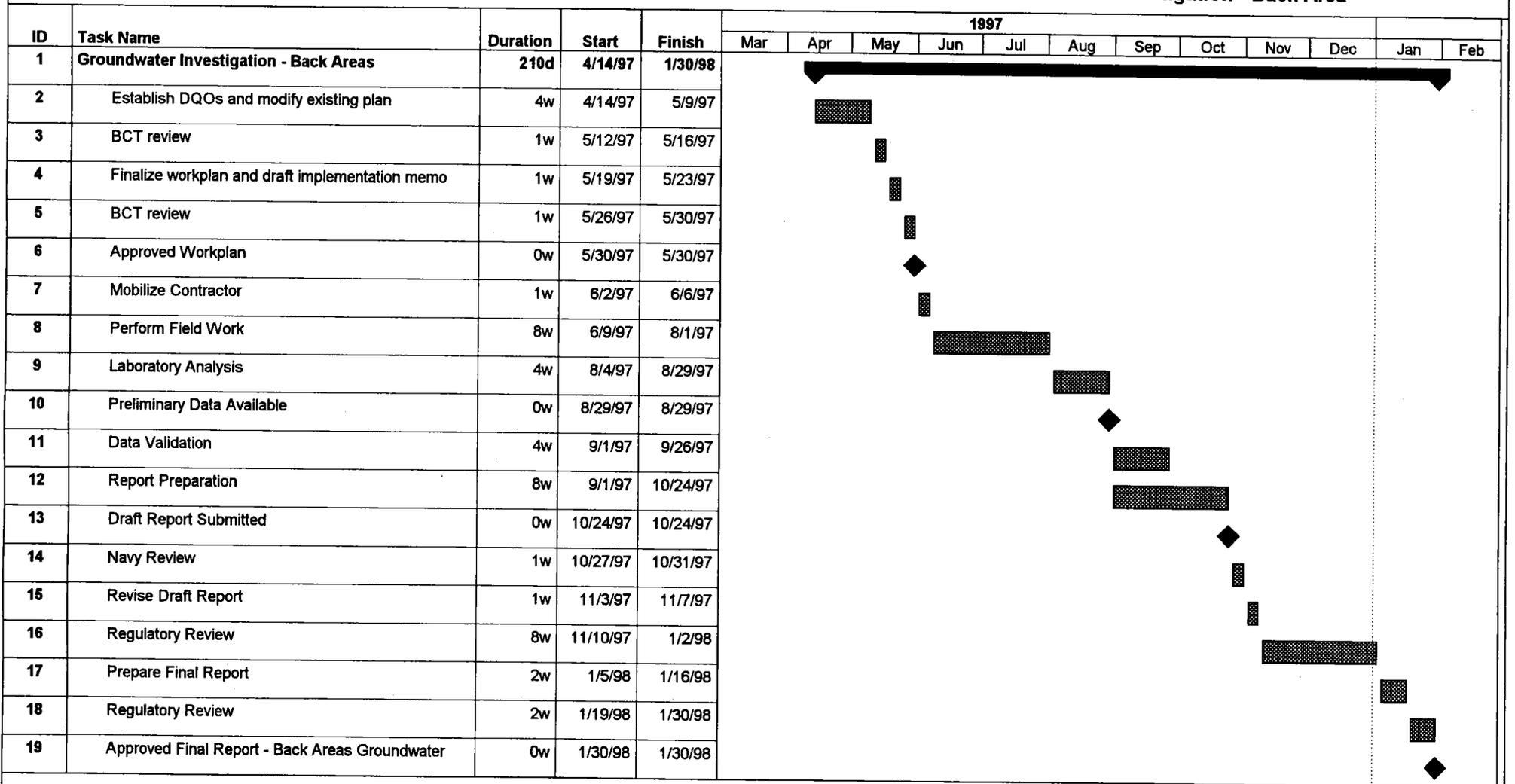
Milestone



Summary



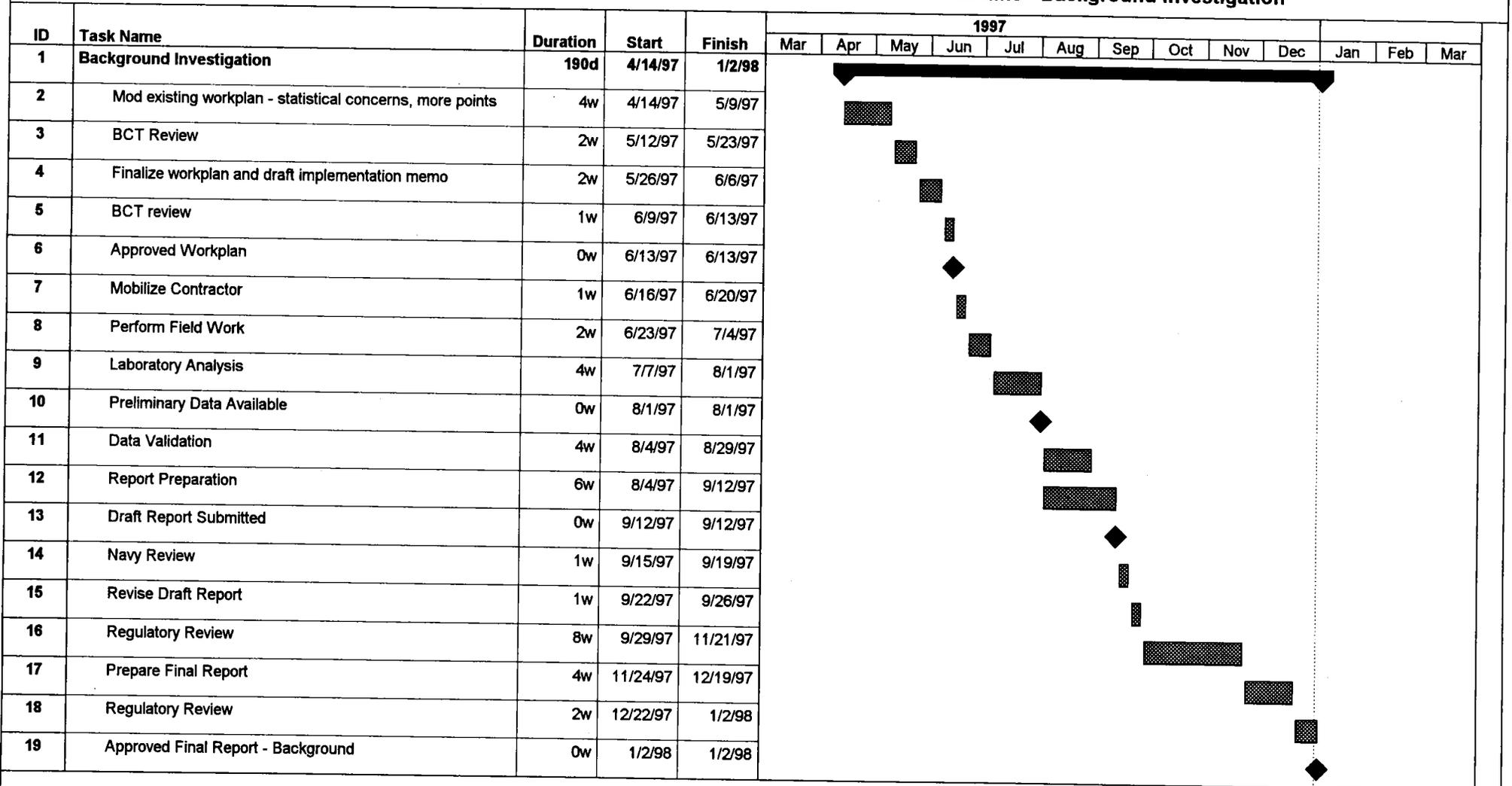
Figure 4-2b. Draft Schedule NSW White Oak Environmental Restoration Timeline - Groundwater Investigation - Back Area



* ASSUMES 1 YR GWM
5/28/97

Task [Task bar icon] Milestone [Milestone diamond icon] Summary [Summary bar icon]

Figure 4-2c. Draft Schedule NSWC White Oak Environmental Restoration Timeline - Background Investigation



* ASSUMES 1 YR GWM
5/28/97

Task



Milestone



Summary



Figure 4-2d. Draft Schedule NSWC White Oak Environmental Restoration Timeline - Site Screening - FDA Parcel Area

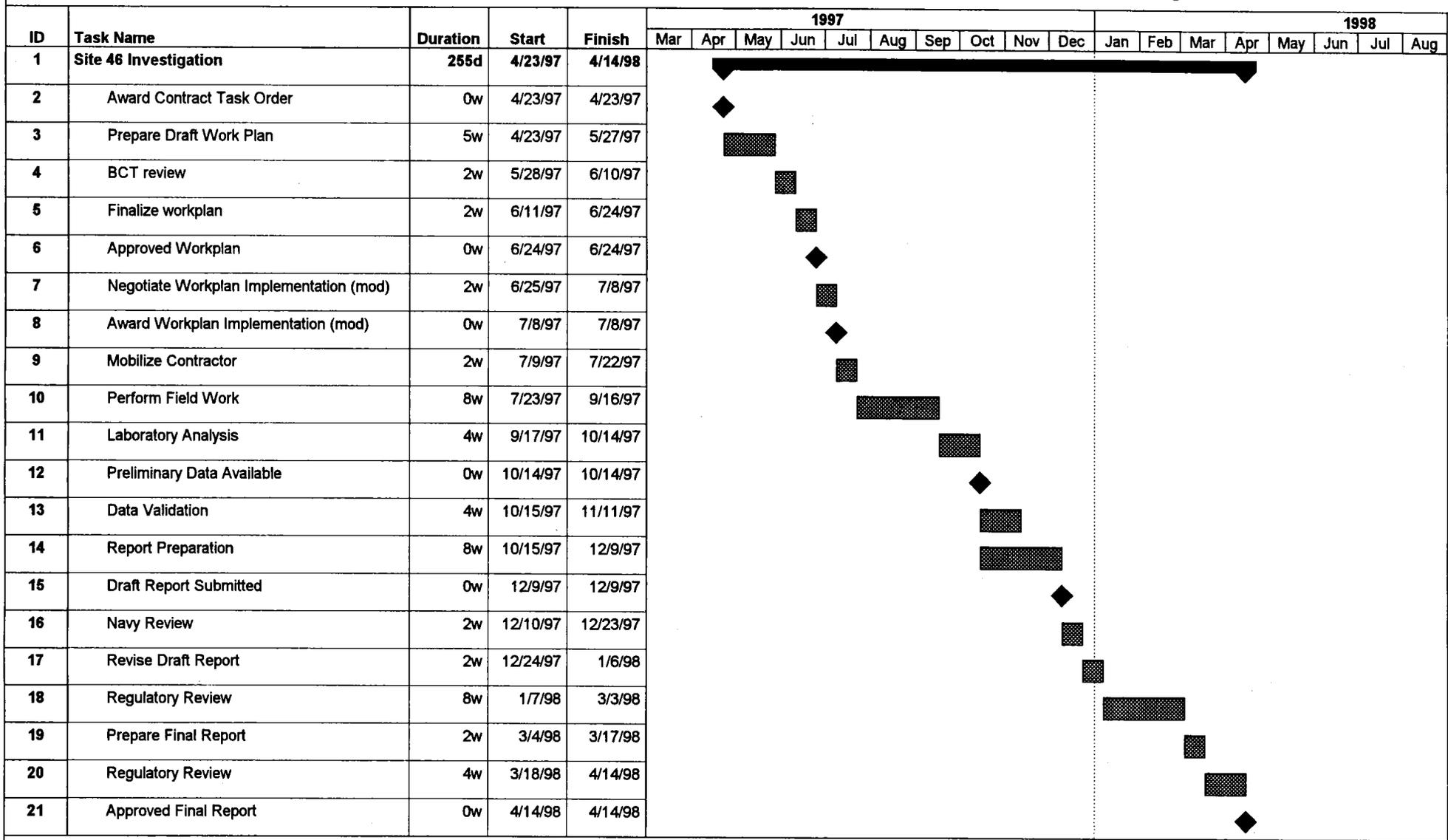
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					Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	
1	Site Screening - FDA Parcel Area - AOC Group 1	180d	4/14/97	12/19/97												
2	Establish DQOs and Modify Existing Workplan	4w	4/14/97	5/9/97												
3	BCT review	1w	5/12/97	5/16/97												
4	Finalize workplan	1w	5/19/97	5/23/97												
5	Approved Workplan	0w	5/23/97	5/23/97												
6	Perform Field Work	4w	5/26/97	6/20/97												
7	Laboratory Analysis	4w	6/23/97	7/18/97												
8	Preliminary Data Available	0w	7/18/97	7/18/97												
9	Data Validation	4w	7/21/97	8/15/97												
10	Report Preparation	8w	7/21/97	9/12/97												
11	Draft Report Submitted	0w	9/12/97	9/12/97												
12	Regulatory Review	8w	9/15/97	11/7/97												
13	Prepare Final Report	2w	11/10/97	11/21/97												
14	Regulatory Review	4w	11/24/97	12/19/97												
15	Approved Final Report	0w	12/19/97	12/19/97												

Note: Table 3-1 ("Status" column) indicates which sites are included in AOC Group 1.

* ASSUMES 1 YR GWM
5/28/97

Task  Milestone 

Figure 4-2e. Draft Schedule NSWC Whtie Oak Environmental Restoration Timeline - Site 46 Investigation



* ASSUMES 1 YR GWM
5/28/97

Task



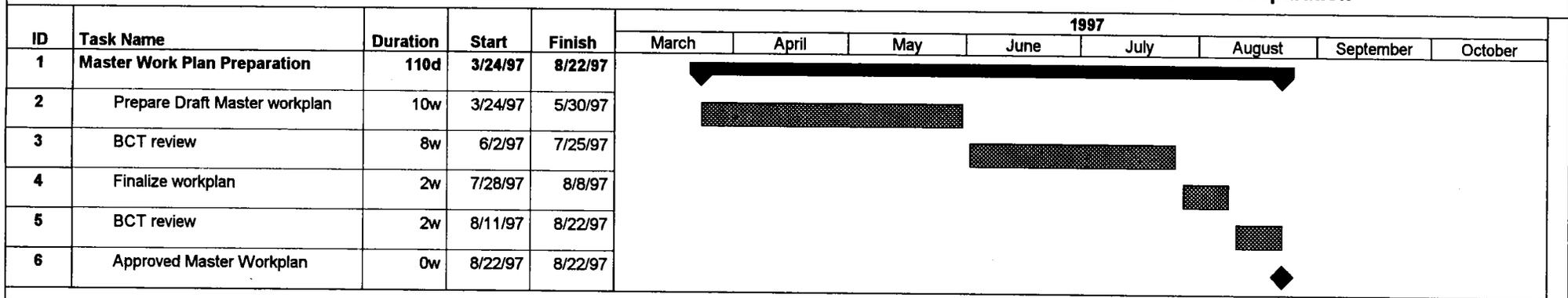
Milestone



Summary



Figure 4-2f. Draft Schedule NSWC White Oak Environmental Restoration Timeline - Master Work Plan Preparation



* ASSUMES 1 YR GWM
5/28/97

Task

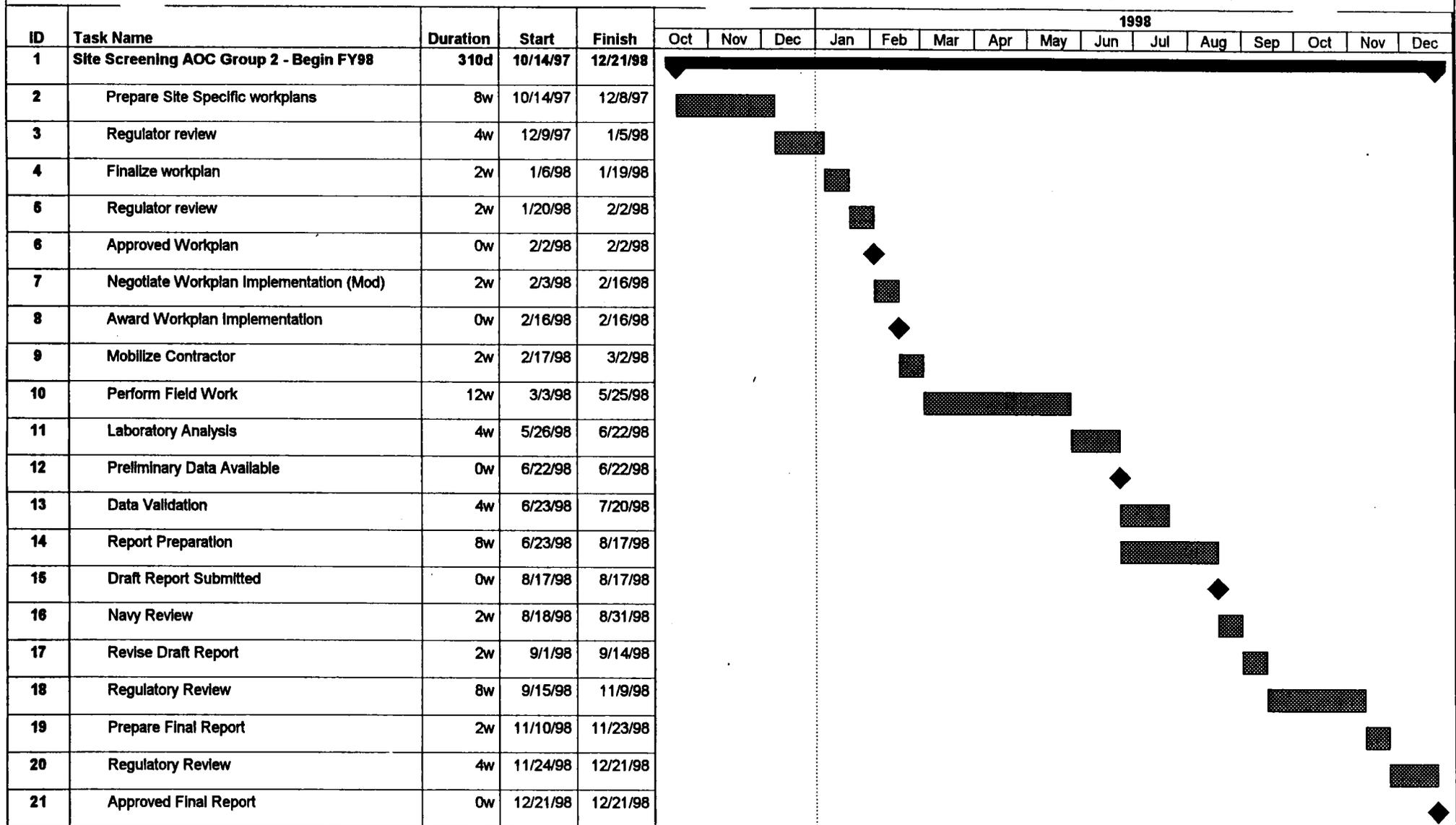


Milestone

Summary



Figure 4-2g. Draft Schedule NSWC White Oak Environmental Restoration Timeline - Site Screening - AOC Group 2



Note:
 Table 3-1 ("Status" column) indicates which sites are included in AOC Group 2.
 AOC Group 2 work will begin once Master Work Plan is complete.

* ASSUMES 1 YR GWM
 5/28/97

Task



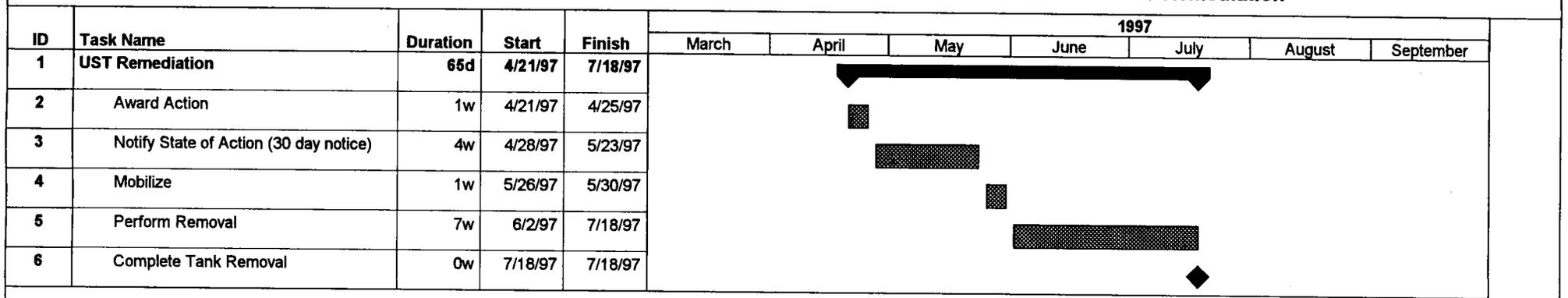
Milestone



Summary



Figure 4-2h. Draft Schedule NSWC White Oak Environmental Restoration Timeline - UST Remediation



* ASSUMES 1 YR GWM
5/28/97

Task



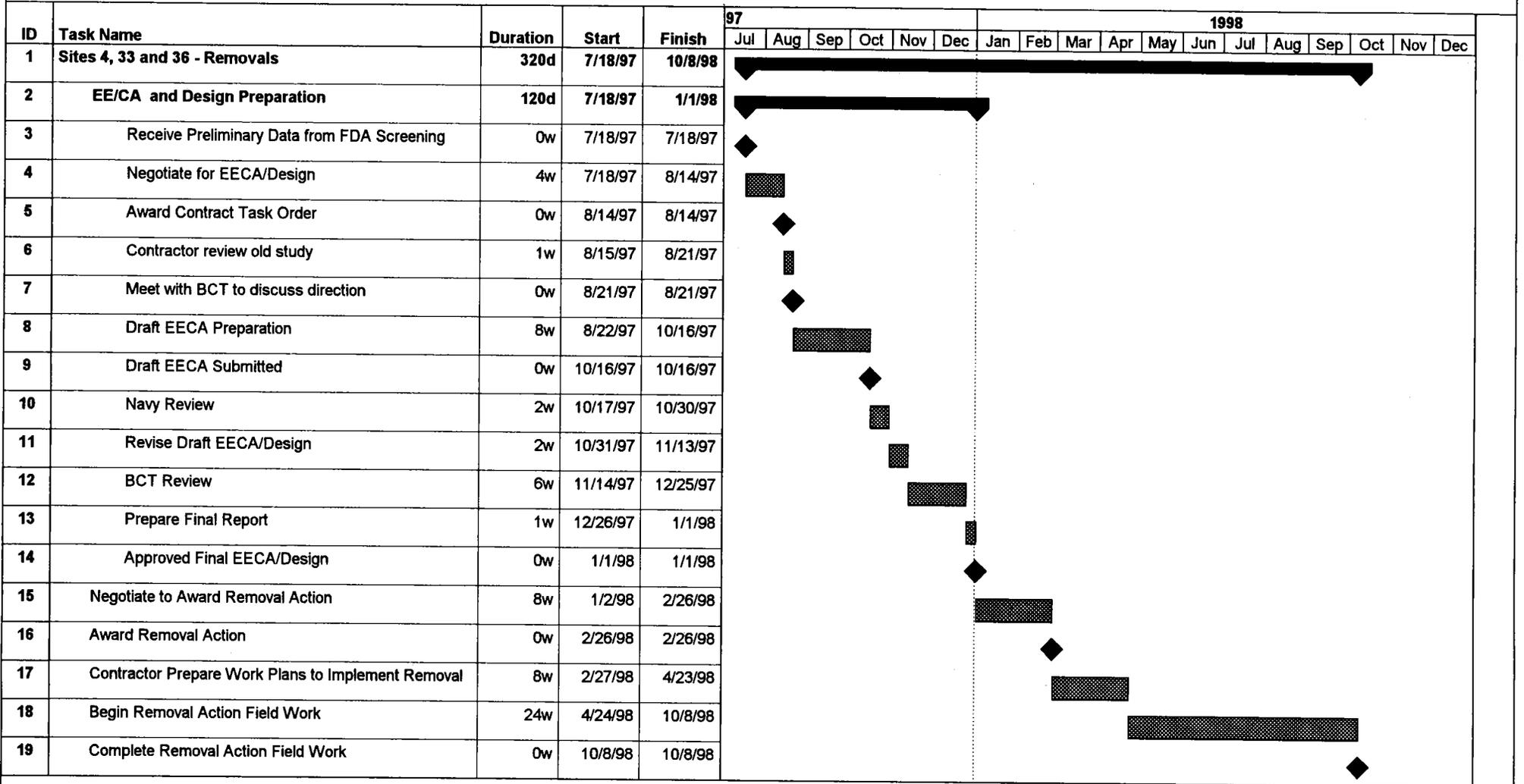
Milestone



Summary



Figure 4-2i. Draft Schedule NSWC White Oak Environmental Restoration Timeline - Sites 4, 33, and 36 Removals

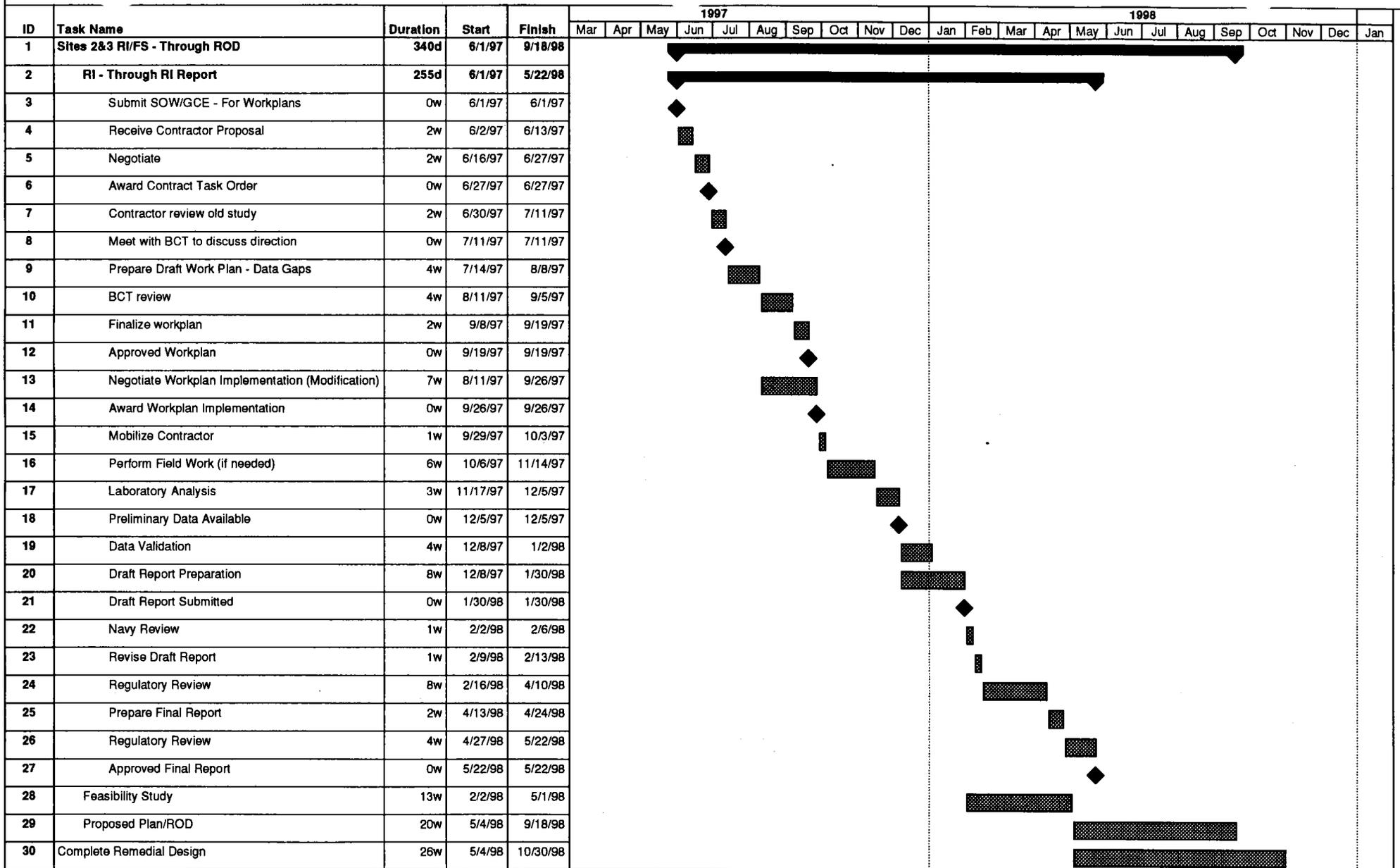


* ASSUMES 1 YR GWM
5/28/97

Task [Task bar icon] Milestone [Milestone diamond icon]

Summary [Summary bar icon]

Figure 4-2]. Draft Schedule NSWC White Environmental Restoration Timeline - Sites 2 & 3



* ASSUMES 1 YR GWM
5/28/97

Task

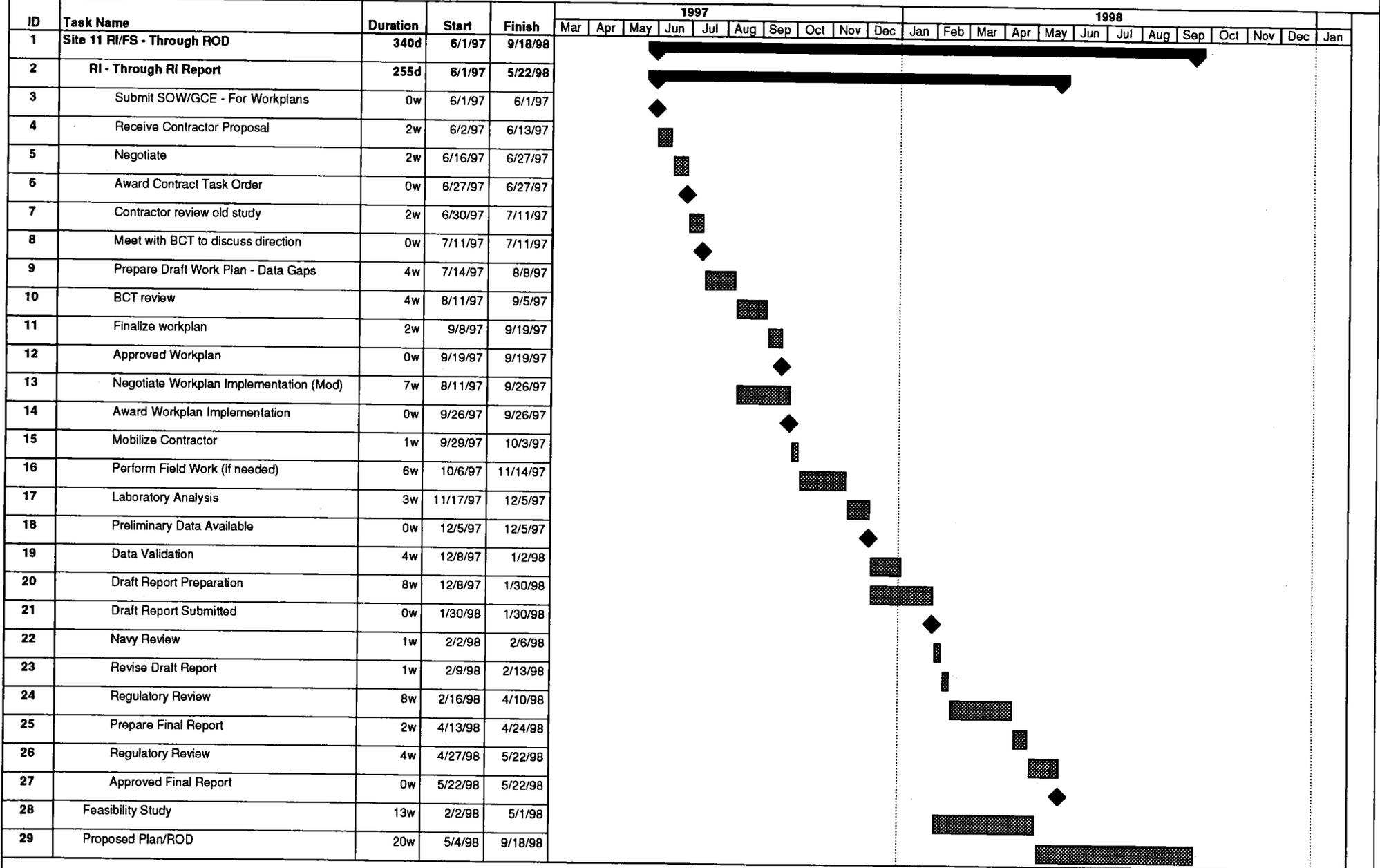


Milestone

Summary



Figure 4-2k. Draft Schedule NSWC White Oak Environmental Restoration Timeline - Site 11



* ASSUMES 1 YR GWM
5/28/97

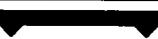
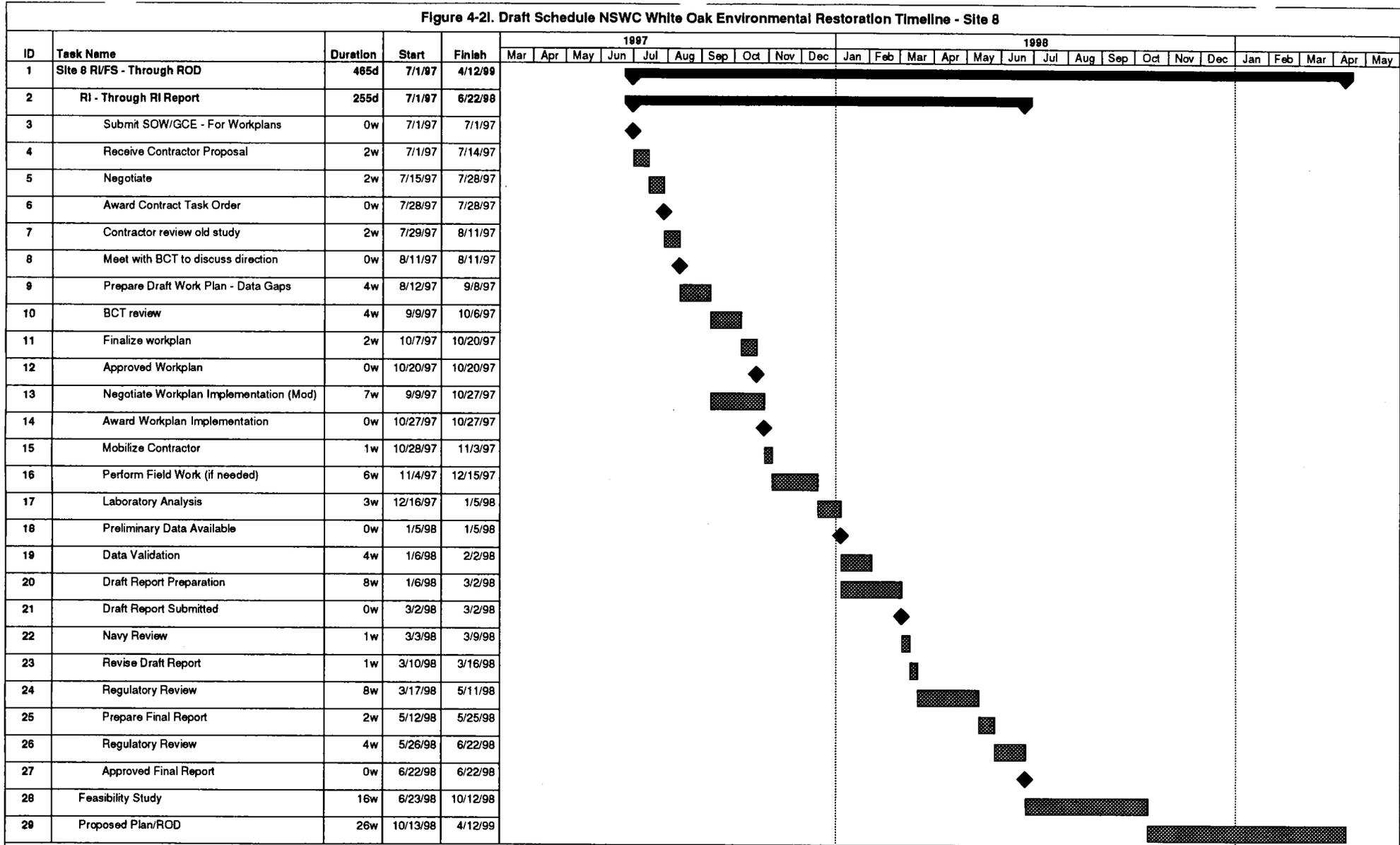
Task  Milestone  Summary 

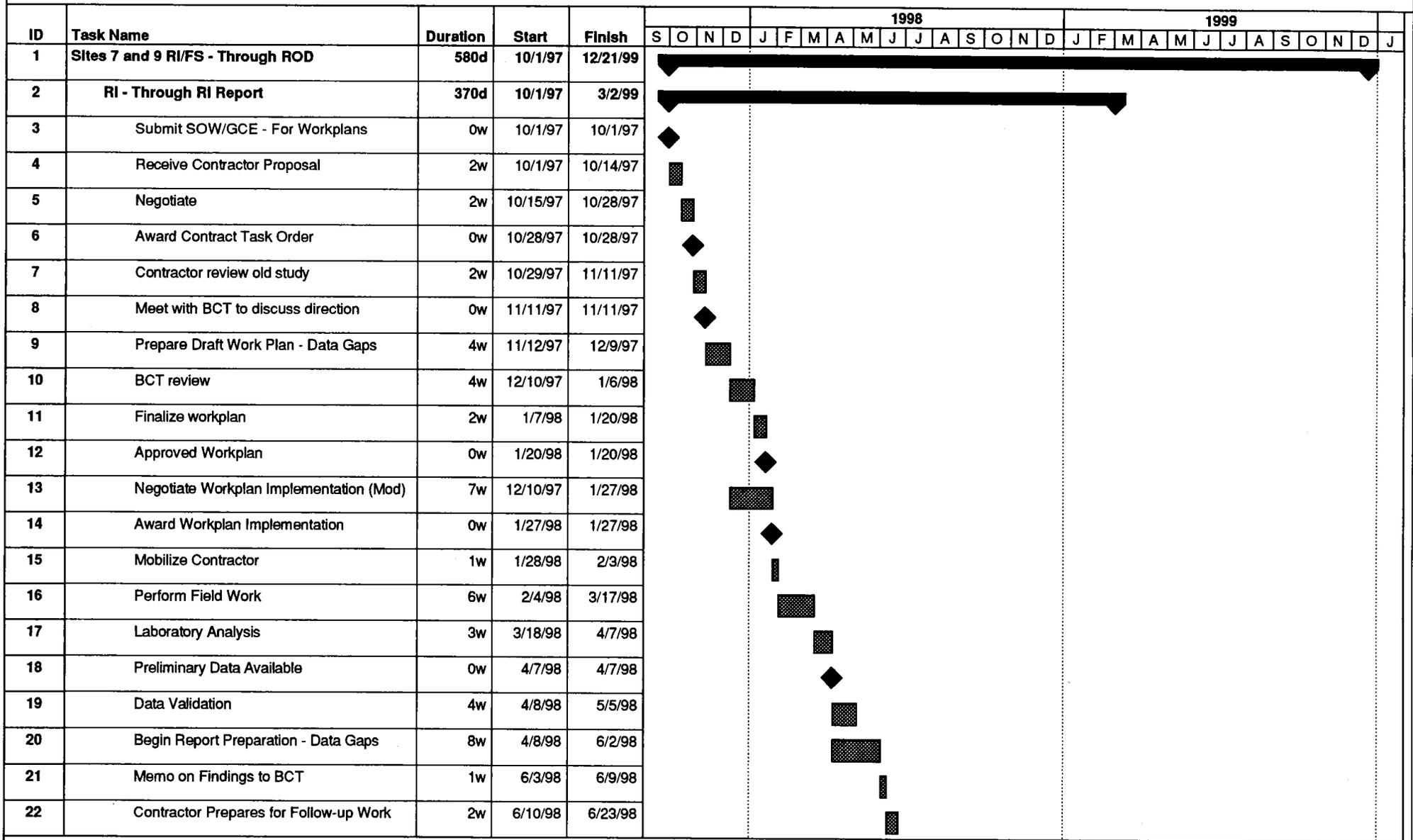
Figure 4-2I. Draft Schedule NSWC White Oak Environmental Restoration Timeline - Site 8



* ASSUMES 1 YR GWM
5/28/97

Task [Task bar] Milestone [Milestone diamond] Summary [Summary bar]

Figure 4-2m. Draft Schedule NSWC White Oak Environmental Restoration Timeline - Sites 7 and 9



* ASSUMES 1 YR GWM
5/28/97

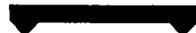
Task



Milestone



Summary



Chapter 5

Technical and Other Issues to be Resolved

Technical and other issues to be resolved by the BCT are included in this section. These issues include data usability, information management, data gaps, risk assessments, conceptual models, background levels, ARARs/cleanup standards, and initiatives for accelerating cleanups.

5.1 Conceptual Model Development Strategy

This section describes the strategy for development of conceptual models summarizing environmental programs at NSWC-White Oak.

5.1.1 BCT Action Items

The BCT is tasked to develop conceptual model data summaries for environmental sites.

5.1.2 Rationale

Conceptual models depict potential contaminant sources, pathways, and receptors, and illustrate processes affecting transport of constituents of potential concern from source areas to receptors. They can be used to identify data gaps, plan data collection, assess risk, develop and implement early actions, and scope remedial alternatives.

5.1.3 Status/Strategy

Insufficient information is available about the environmental sites at NSWC-White Oak to complete conceptual model data summaries. Conceptual models will be developed, when appropriate, as site data become available through field investigations.

5.2 Data Gaps

This section summarizes issues pertaining to the evaluation and collection of data needed to complete environmental restoration at NSWC-White Oak.

5.2.1 BCT Action Items

Continue to review planned hydrogeologic investigations, laboratory analyses, conceptual models, and risk assessments. Evaluate ability of planned activities to address data requirements.

5.2.2 Rationale

Effective identification and filling of data gaps will permit the development of comprehensive conceptual site models for site characterization and risk assessment. Effective analysis of data gaps will also facilitate completion of RI efforts, so that appropriate remedial actions can be identified and evaluated. This information will also facilitate the identification of areas at NSWC-White Oak where no further environmental actions are necessary.

5.2.3 Status/Strategy

Data gaps have been and will continue to be identified through review of data collected during environmental investigations. For example, groundwater sampling and analysis is planned to fill data gaps throughout the facility. In addition, sampling to establish background concentrations had been previously identified as a data gap; a background investigation is planned to fill this gap. Evaluation of activities in the planning stages, in terms of data quality objectives, will help to ensure that fewer data gaps occur in the future.

5.3 Data Quality/Usability

This section summarizes issues pertaining to Data Quality Objectives (DQOs) and to the validity of using historical data as the basis for future investigations and remedial actions.

5.3.1 BCT Action Items

DQOs will continue to be developed to supplement the historical data. Historical data can then be used along with the obtained results to support decisions. The BCT will continue to seek input from regulators to streamline the investigative process.

5.3.2 Rationale

At the beginning of a project, DQOs allow stakeholders to identify the objectives of additional sampling and the expected sampling results. Although the objectives will require additional time to establish, the stakeholders will better understand the results and subsequent data interpretation.

Analytical data contribute to the completion of site characterizations and risk assessments by filling data gaps. Data collected during field investigations are critical to the completion of site characterization efforts, comprehensive conceptual model development, risk assessments, and ultimately the selection of remedial actions to protect human health and the environment.

5.3.3 Status/Strategy

The BCT will review historical data to evaluate the usability of previously collected data. In addition, the BCT will review planned data collection efforts, in order to identify data quality/usability issues.

5.4 Data Integration and Management

This section summarizes issues pertaining to management and integration of data collected in the environmental restoration and compliance programs.

5.4.1 BCT Action Items

The BCT will continue to review and recommend management techniques utilized for data collected at NSWC-White Oak.

5.4.2 Rationale

It is important for agencies and contractors associated with environmental activities at NSWC-White Oak to have access to data for decision making. Effective data management ensures that data can be stored and retrieved efficiently and accurately.

5.4.3 Status/Strategy

The BCT will evaluate the feasibility of electronic management for data.

5.5 Background Levels

This section summarizes issues pertaining to the establishment of background concentrations of compounds and elements in the environment at NSWC-White Oak.

5.5.1 BCT Action Items

The BCT will continue to review and evaluate methods and procedures for establishing background levels used in baseline risk assessment computations and risk management decision making.

5.5.2 Rationale

Background concentration values of compounds and elements in the soil, groundwater, surface water, and sediment are useful for completion of risk assessments. The values should be representative of manmade alterations to the media, as well as naturally occurring conditions. EPA and MDE must concur on the background levels established.

5.5.3 Status/Strategy

The BCT will continue to exchange views and information with the EPA and MDE to scope background investigations. A statistical evaluation of samples collected to represent background is planned.

5.6 ARARs/Cleanup Standards

This section summarizes issues pertaining to the establishment of ARARs and cleanup standards for soil and groundwater.

5.6.1 BCT Action Items

The BCT will continue to review proposed guidance and risk-based ARARs and cleanup standards on a site-specific basis. The applicability of ARARs, ARAR waivers, and alternative concentration limits will be evaluated. Information obtained from risk assessments and reuse plans in the ARAR evaluation process will also be included.

5.6.2 Rationale

ARARs and cleanup standards need to be established to evaluate remedial alternatives.

5.6.3 Status/Strategy

Some compliance programs, such as the UST and TSCA programs, have established cleanup standards. Where federal or state-mandated cleanup standards for hazardous waste or constituents are not available or are not applicable, the approach for providing potential ARARs and remediation criteria for environmental media is either through performance of a site-specific risk assessment or the use of more generic guidance levels. A risk-based approach (to be developed with input from the BCT) will be used to establish cleanup levels for sites, when applicable.

5.7 Risk Assessments

This section summarizes issues pertaining to the completion of risk assessments required to complete the environmental restoration and compliance programs at NSWC-White Oak.

5.7.1 BCT Action Items

The BCT will continue to evaluate the role of anticipated land use as a criterion in developing appropriate scenarios in conducting exposure assessments, and continue to review the value of previously conducted risk assessments. Plans and procedures for conducting future ecological and human health risk assessments will also be considered.

5.7.2 Rationale

Risk assessment is a tool used to determine risk-based remediation goals and target areas for remediation, as well as areas requiring no further action.

5.7.3 Status/Strategy

Risk assessments have been conducted according to CERCLA and NCP protocols during RIs at IR Program sites. Finalization of the risk assessments is planned. In addition, the BCT will evaluate the use of risk calculations for evaluation of data collected during the site screening process at the RCRA SWMUs and AOCs, and EBS AOCs.

5.8 Initiatives for Accelerating Cleanup

The following initiatives have been or will be implemented by the Project Team in order to expedite response actions at NSWC-White Oak:

- EPA guidance documents describing presumptive remedies have been reviewed and are potentially applicable to sites at NSWC-White Oak.
- Selected technologies continue to be reviewed for application of expedited solutions.
- Source areas will continue to be targeted for early removal actions.
- Phases of the cleanup process are being overlapped, when possible. RCRA SWMUs and AOCs are being investigated, through the site screening process, prior to EPA issuance of a HSWA corrective action permit. Where applicable, cleanup plans and draft RODs or decision documents will be developed concurrently to facilitate simultaneous review by regulatory agencies.

- The BCT and the BRAC Project Team are working closely with GSA in the implementation of reuse plans. The community is also informed about the reuse plans through monthly RAB meetings.
- The BCT and the BRAC Project Team will continue to review potential ARARs as early in investigations as possible, utilizing lists of ARARs developed by regulatory agencies and experience with similar sites in Maryland. Risk-based criteria and risk assessments will aid in the development of ARARs.
- The BCT and the BRAC Project Team will continue to address risk-based cleanup standards based on future land use and risk assessment strategies.

5.9 Contracting Strategy

The contracting strategy for NSWC-White Oak is generally to use one of the several existing contracting vehicles available through EFACHES, Naval Facilities Engineering Command (NAVFAC). These vehicles include two types of Architect/Engineering service contracts as follows: "fixed price indefinite quantity" and "cost plus".

NAVFAC has two types of cost plus contracts referred to as Comprehensive Long-Term Environmental Action Navy (CLEAN) for investigation and design services, and Remediation Action contracts (RAC) for implementation of remedial actions.

Cost plus contracts allow the Navy to award work when scopes are not clearly defined, when scopes cannot be accurately estimated, or when continuity of services is required.

Fixed price indefinite quantity contracts are used for environmental projects when project scopes are well defined. Fixed price contracts for storage tank removals, cultural studies, wetlands mapping, floodplain mapping, and EIS development have also been established.

Appendix A
Fiscal Year Funding Requirements/Costs

Appendix A Budgetary Process

The Navy with the BCT prepares budget requirements that include all costs associated with environmental compliance and cleanup at each BRAC installation, including NSWC-White Oak. The Navy with the BCT then programs costs in fiscal years according to constraints and priorities established by the Department of Defense and in accordance with stakeholder (RAB, regulators, community) interests. See Sections A1 and A2. The process is outlined in Figures A1 and A2. Figure A1 shows the budget process within EFA Chesapeake and the BCT. Figure A2 shows the budget process through Congressional Appropriation and fund execution. Following is a discussion of the budgetary process at NSWC-White Oak:

1. Cost of Projects:

Cost estimates for all requirements through final cleanup are prepared by the Navy with the participation of the BCT. The requirements are identified by the Navy with the BCT. The cost estimates are developed independently of any funding or priority constraints. The Navy prepares the estimates using a standard model (Cost to Complete (CTC)) which computes costs based on past experience. The same model is used for all environmental BRAC compliance and cleanup projects throughout the Navy.

2. Project Scheduling:

As shown in Figure A2, the Navy's long range budget planning is done through the Program Objectives Memorandum (POM) process. The Navy prepares a POM every other year (even years) showing program budget requirements for the next six years. In March of 1997, EFA Chesapeake forwarded data for POM 2000, which went through FY 2005. Every other year, the Navy reviews the POM through the Program Review (PR). In March of 1996, EFA Chesapeake forwarded data for PR 99, a review of POM 1998 data through FY 2003.

The Navy (NAVFAC Headquarters, Chief of Naval Operations (CNO) Code N4 (BRAC Office) and the Navy Comptroller (NAVCOMP) use the POM and PR data to set budget controls which are passed down to the individual executing agencies including EFA Chesapeake. These controls, or targets, are based on anticipated levels of Congressional funding. The executing agencies, including EFA Chesapeake, forward budget data meeting these controls at the end of September every year. The data covers the fiscal years included in the current POM (For September 1997, we will update data in POM 2000). This budget information goes to DoD (the Office of the Secretary of Defense (OSD)) and the Office of Management and Budget (OMB) and is used to prepare the President's budget request to Congress. In September of 1996, we submitted the data to support the budget request for FY 1999.

Under this system, twice per year (end of March and September), EFA Chesapeake provides budget information by fiscal year to NAVFAC Headquarters. They prepare this budget in consultation with the BCT and following priorities established by DoD and locally for NSWC-White Oak. Navy BRAC funding priorities are shown in Section A1. NSWC-White Oak specific funding priorities are shown in Section A2. The Navy submitted a FY 1998 budget request to Congress for NSWC-White Oak. The information is based on budget data submitted by EFA Chesapeake in September of 1996. Congress usually passes an Appropriation Bill providing the funds near the beginning of the fiscal year in October. This money is passed down to EFA Chesapeake for execution soon after the bill is passed or the beginning of the fiscal year, whichever is later.

The Navy uses a system called NORM (Normalization of Data) to prepare the funding plan. Table A-1 is a summary, by fiscal year, of the data from NORM for NSWC-White Oak. Table A-2 summarizes the activities to be supported by the funding. Table A-3 is the actual NORM budget table submitted in March 1997 to NAVFAC Headquarters to support PR 99. Table A-4 shows the President's budget for closure of NSWC-White Oak.

3. Project Execution:

Funding is passed to EFA Chesapeake in a lump sum based on the budget submission and Appropriation Bill, but it is not targeted for specific projects. The Navy has some discretion on what projects to fund in order to meet changing conditions at the site and new priorities. If, for example, a new source of contamination is found which is a greater threat to the community, then funds can be diverted from a project with less risk at the activity.

EFA Chesapeake uses two principle contract types to execute study and cleanup work under the BRAC program. The first type is the CLEAN contract (Comprehensive Long-Term Environmental Action, Navy). The second is the RAC (Remedial Action Contract). They are both "cost-plus" type contracts, which means the contractor is paid actual costs incurred, plus a profit based on performance.

Figure A1

Budget Preparation

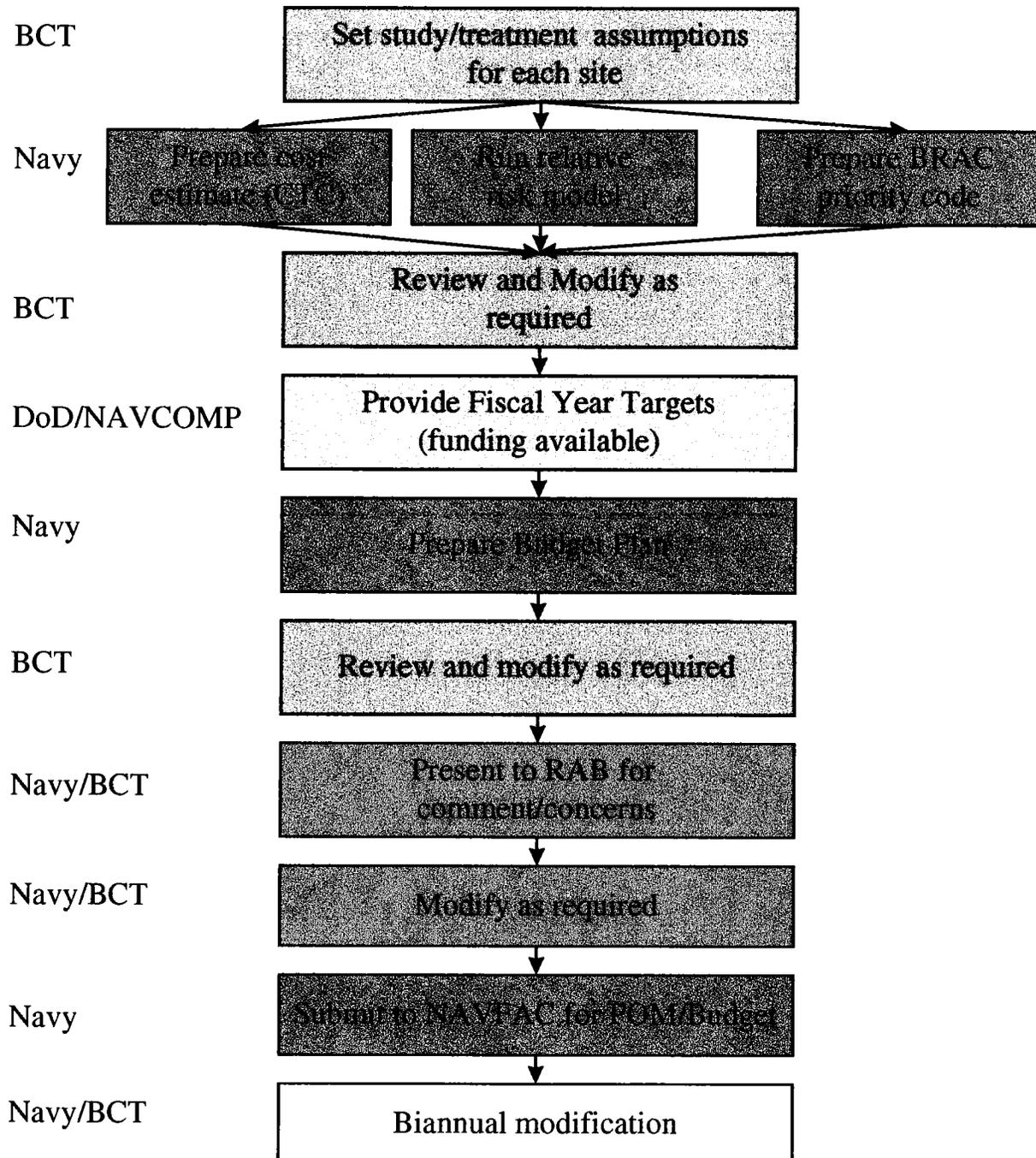
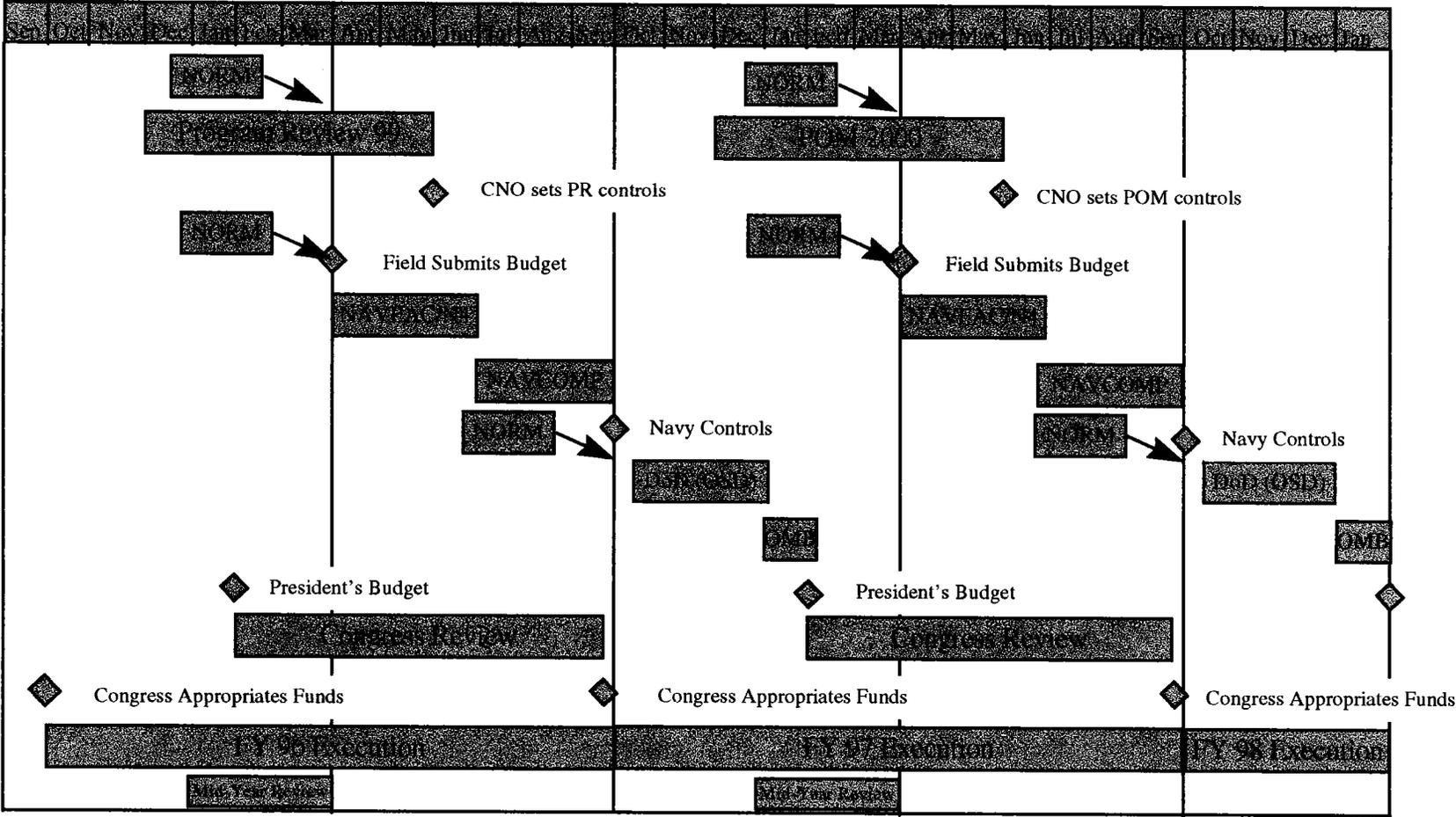


Table A2 Budget Process



Section A1

Navy BRAC Environmental Project Relative Priority Codes

These are the codes the Navy uses to prioritize work. Work is not always prioritized in the order given. In FY 1997, work in code E was funded before work in Code D. Within each code, work is prioritized by relative risk.

Reuse Priority A

A1 - Management Overhead. Limited to 9% of budget. Costs for in-house salary, DSMOA, ASTDR costs.

A2 - Operation of remedial actions and long term monitoring - costs associated with operating a treatment system after construction and for long term monitoring after the final record of decision (ROD).

A3 - Financial Increments for on-going projects. Under BRAC, the Navy is allowed to award contracts without having all funds in hand. Contractors can still not perform work unless funds have been awarded for the work. This is for funds to allow already awarded but unfunded work to be funded.

A4 - Imminent threat to human health and the environment

A5 - Requirements arising from approved Section 334 transfer agreements. Section 334 allows land to be transferred outside the Federal government before cleanup is completed if the Navy and the Governor (and EPA if NPL site) agree on a cleanup plan.

A6 - Legal drivers which can not be renegotiated.

Reuse Priority B - Studies required to complete Environmental Baseline Studies, complete Findings of Suitability to Transfer/Lease (FOST/L's) and other studies required to determine cleanup requirements.

Reuse Priority C - Inter-service commitments. This includes commitments to shipyard workers for BRAC work from the Charleston and Mare Island Naval Shipyards. Will end in FY99.

Reuse Priority D

D1 - Requirements arising from a section 334 transfer agreement.

D2 - Requirements to support a finding of suitability to lease (FOSL).

D3 - Sites with approved reuse plans and identified recipient.

Reuse Priority E - Work critical to a Fed to Fed transfer.

Reuse Priority F - Reuse Plan approved but no identified recipient.

Reuse Priority G - Non-critical Fed to Fed transfers.

Reuse Priority H - Reuse concept agreed/ reuse plan being forwarded for approval.

Reuse Priority I - No reuse concept/plan

Section A2

White Oak Priorities

These are White Oak specific funding/action priorities used to allocate resources (manpower and project funding) and to prepare project schedules as provided in Section 5 of this Plan. They will be updated as new information becomes available and as actions are completed (such as the transfers to the army and GSA).

1. Imminent threat sites
 - a. Site 46 removal action and testing
 - b. Site 8 groundwater sampling to determine threat
 - c. Sites 4 and 7 removal actions

2. Actions required to permit transfer of property to GSA.
 - a. closures of permits
 - b. removal of underground storage tanks
 - c. groundwater testing in FDA Parcel

3. Actions required to allow GSA to begin demolition/construction of FDA campus. Will add other actions as development plans for GSA and Army transfer property become identified.
 - a. possible treatment of groundwater at site 11

4. Actions required to complete all required remediation of sites in the FDA campus parcel, not including those in the construction footprint. (see 3)
 - a. site screening of AOC 1 sites - sites in FDA Parcel
 - b. study and cleanup of Sites 10 and 14
 - c. study and remediation of Site 1

5. All other actions to complete all remediation required to protect human health and the environment.
 - a. all remaining studies and cleanups

**NSWC White Oak
BRAC Environmental Budget Plan**

TABLE A-1

Funding Summary	NSWC BRAC Environmental		
FY 1996	\$1,465		
FY 1997	\$1,095		
FY 1998	\$5,004		
FY 1999	\$3,731		
FY 2000	\$4,608		
FY 2001	\$3,119		
FY 2002	\$4,603		
FY 2003	\$1,044		
FY 2004	\$1,766		
FY 2005	\$1,210		

Table A-2
NSWC-White Oak Funding Summary

FY 1997 Funding

1. Close out removal actions at Sites 8, 9, 11
2. Get OHM (construction contractor) involved in landfill design
3. Removal action at Site 46 (TCE release), at Army Bldg 500 outfall
4. Study of Site 46 to determine if it is source of TCE
5. Removal of underground storage tanks
6. Site screening of FDA parcel sites
7. General base wide groundwater sampling
8. Establish background levels
9. RI/FS for original IR Program sites
10. Complete Community Relations Plan
11. Complete Master Work Plan for future studies

FY98

1. Finish landfill designs and start construction of remediation, Site 2 and 3
2. Interim removal actions at Sites 4 and 7
3. Interim removal actions at Sites 33 (FDA Parcel Sites) and 36
4. Site screening of part of non-FDA parcel SWMUs (AOC 2)
5. Continue operation of interim removal action at Site 46
6. Start design for groundwater treatment (if required) at Site 11
7. Start remediation designs at sites 24, 39, 41, and 42
8. Complete RIs and decision documents (RODs) at original IR sites, Sites 2, 3, 4, 7, 8, 9, 11
9. Start RIs at Sites 1, 28, 29, 31, 32 and 33 (FDA Parcel Sites)
10. Start RIs at Sites 16, 24, 25, 39 and 41.
11. Start RI as follow up to SI at Site 46
12. Start RIs at rad sites, Sites 10 and 14

Site 4 - Chemical Burial Area

Site 7 - Ordnance Burn Area

FY99

1. Complete landfill remediation, Sites 2 and 3
2. Start and complete design for groundwater cleanup (if required) for Sites 8
3. Start and complete design for remediation at FDA Parcel sites, Sites 29 and 32
4. Start and complete remediation design and start remediation for rad sites, Sites 10 and 14
5. Start remediation of groundwater (if required) at Site 11 (may be bumped up if required earlier for FDA construction)
6. Start remediation of FDA Parcel sites, Sites 24, 29, 32, 39, 41 and 42
7. Start RIs at Sites 26, 27, 33 and 36
8. Continue removal action at Site 46

FY 2000

1. Follow on RIs for AOC 2 sites as required, this includes Sites 5, 6, 12, 13, 15, 17, 18, 19, 20, 21, 22, 23, and 27
2. Start of site screening of remaining SWMUs/AOCs (AOC 3). This completes all site screenings
3. Start of long term monitoring at Site 3 and long term operation of groundwater treatment (if required) at Site 2
4. Start of remediation designs for remaining original IR sites, Sites 4, 7, and 9
5. Start of remediation designs for FDA Parcel sites, Sites 16, 28, and 37
6. Continuation of groundwater treatment at Site 11
7. Start of groundwater treatment at Site 8
8. Continuation of treatment of rad site, Site 14
9. Start of remediation at Sites 24 and 37
10. Design and remediation of groundwater at Site 46
11. Continuation of removal action at Site 46

FY 2001

1. Start and continuation of long term operation of groundwater treatment systems and continuation of long term monitoring to gauge success of remediation efforts.
2. RIs as required at remaining sites (AOC 3).
3. Implementation of cleanups at Sites 4, 7, 9, 16, and 28.
4. Design of required cleanup actions at Sites 5, 6, 12, 13, 15, 17, 18, 19, 20, 21, 22, 23, and 26.

FY 2002

1. Start and continuation of long term operation of groundwater treatment systems and continuation of long term monitoring to gauge success of remediation efforts.
2. Implementation of cleanup requirements at Sites 5, 6, 12, 13, 15, 17, 18, 19, 20, 21, 22, 23 and 26.

FY 2003

1. Start and continuation of long term operation of groundwater treatment systems and continuation of long term monitoring to gauge success of remediation efforts.
2. Design of required cleanup at remaining sites (AOC 3).

FY 2004

1. Start and continuation of long term operation of groundwater treatment systems and continuation of long term monitoring to gauge success of remediation efforts.
2. Implementation of required cleanup at remaining sites (AOC 3).

FY 2005

1. Start and continuation of long term operation of groundwater treatment systems and continuation of long term monitoring to gauge success of remediation efforts.

**Table A-3
NSWC White Oak
BRAC Environmental Budget Plan**

Activity	Site	Phase	RC	CTC	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05	Priority
NSWC White Oak	AOC 000001	Site Screening	9/30/99	0	0	275	0	0	0	0	0	0	0	0	B
NSWC White Oak	AOC 000001	RI/FS	9/30/99	0	0	0	0	0	0	0	0	0	0	0	B
NSWC White Oak	AOC 000001	RD	9/30/99	0	0	0	0	0	0	0	0	0	0	0	B
NSWC White Oak	AOC 000001	RA	9/30/99	0	0	0	0	0	0	0	0	0	0	0	B
NSWC White Oak	AOC 000001	REMOVAL	9/30/99	0	0	0	0	0	0	0	0	0	0	0	B
NSWC White Oak	AOC 000001	LTO	9/30/99	0	0	0	0	0	0	0	0	0	0	0	B
NSWC White Oak	AOC 000001	LTM	9/30/99	0	0	0	0	0	0	0	0	0	0	0	B
Total				0	0	275	0	0	0	0	0	0	0	0	
NSWC White Oak	AOC 000002	Site screening	9/30/03	400	0	0	400	0	0	0	0	0	0	0	B
NSWC White Oak	AOC 000002	RI/FS	9/30/03	250	0	0	0	0	250	0	0	0	0	0	B
NSWC White Oak	AOC 000002	RD	9/30/03	0	0	0	0	0	0	0	0	0	0	0	E
NSWC White Oak	AOC 000002	RA	9/30/03	0	0	0	0	0	0	0	0	0	0	0	E
NSWC White Oak	AOC 000002	REMOVAL	9/30/03	0	0	0	0	0	0	0	0	0	0	0	E
NSWC White Oak	AOC 000002	LTO	9/30/03	0	0	0	0	0	0	0	0	0	0	0	E
NSWC White Oak	AOC 000002	LTM	9/30/03	0	0	0	0	0	0	0	0	0	0	0	E
Total				650	0	0	400	0	250	0	0	0	0	0	
NSWC White Oak	AOC 000003	Site Screening	9/30/04	400	0	0	0	0	400	0	0	0	0	0	B
NSWC White Oak	AOC 000003	RI/FS	9/30/04	300	0	0	0	0	0	300	0	0	0	0	B
NSWC White Oak	AOC 000003	RD	9/30/04	50	0	0	0	0	0	0	0	50	0	0	E
NSWC White Oak	AOC 000003	RA	9/30/04	500	0	0	0	0	0	0	0	0	500	0	E
NSWC White Oak	AOC 000003	REMOVAL	9/30/04	0	0	0	0	0	0	0	0	0	0	0	E
NSWC White Oak	AOC 000003	LTO	9/30/04	0	0	0	0	0	0	0	0	0	0	0	E
NSWC White Oak	AOC 000003	LTM	9/30/04	0	0	0	0	0	0	0	0	0	0	0	E
Total				1250	0	0	0	0	400	300	0	50	500	0	
NSWC White Oak	ASB 000001	INVENTORY	9/1/97	0	0	0	0	0	0	0	0	0	0	0	B
NSWC White Oak	ASB 000001	O&M PLN	9/1/97	0	106	0	0	0	0	0	0	0	0	0	B
NSWC White Oak	ASB 000001	DESIGN	9/1/97	0	0	0	0	0	0	0	0	0	0	0	E
NSWC White Oak	ASB 000001	ABATEMENT	9/1/97	0	0	0	0	0	0	0	0	0	0	0	E
NSWC White Oak	ASB 000001	O&M	9/1/97	0	0	0	0	0	0	0	0	0	0	0	E
Total				0	106	0	0	0	0	0	0	0	0	0	
NSWC White Oak	BCP BASEWD	O&M	9/1/97	0	65	0	0	0	0	0	0	0	0	0	B
Total				0	65	0	0	0	0	0	0	0	0	0	
NSWC White Oak	EBS BASEWD	O&M	7/30/96	0	25	0	0	0	0	0	0	0	0	0	B
Total				0	25	0	0	0	0	0	0	0	0	0	
NSWC White Oak	SITE 00001	PA/SI	9/30/01	0	90	0	0	0	0	0	0	0	0	0	B

Table A-3
NSWC White Oak
BRAC Environmental Budget Plan

Activity	Site	Phase	RC	CTC	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05	Priority
NSWC White Oak	SITE 00001	RI/FS	9/30/01	250	0	0	250	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00001	RD	9/30/01	10	0	0	0	0	10	0	0	0	0	0	E
NSWC White Oak	SITE 00001	RA	9/30/01	330	0	0	0	0	330	0	0	0	0	0	E
NSWC White Oak	SITE 00001	IRA	9/30/01	0	0	0	0	0	0	0	0	0	0	0	E
NSWC White Oak	SITE 00001	LTO	9/30/01	0	0	0	0	0	0	0	0	0	0	0	E
NSWC White Oak	SITE 00001	LTM	9/30/01	15	0	0	0	0	0	0	3	3	3	3	E
Total				605	90	0	250	0	340	0	3	3	3	3	
NSWC White Oak	SITE 00002	PA/SI	11/1/02	0	0	0	0	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00002	RI/FS	11/1/02	100	0	0	100	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00002	RD	11/1/02	10	0	0	10	0	0	0	0	0	0	0	E
NSWC White Oak	SITE 00002	RA	11/1/02	2213	0	0	500	1713	0	0	0	0	0	0	E
NSWC White Oak	SITE 00002	IRA	11/1/02	0	0	0	0	0	0	0	0	0	0	0	E
NSWC White Oak	SITE 00002	LTO	11/1/02	8	0	0	0	0	3	3	2	0	0	0	E
NSWC White Oak	SITE 00002	LTM	11/1/02	0	0	0	0	0	0	0	0	0	0	0	E
Total				2331	0	0	610	1713	3	3	2	0	0	0	
NSWC White Oak	SITE 00003	PA/SI	9/30/99	0	0	0	0	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00003	RI/FS	9/30/99	100	0	0	100	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00003	RD	9/30/99	66	0	0	66	0	0	0	0	0	0	0	E
NSWC White Oak	SITE 00003	RA	9/30/99	558	0	0	100	458	0	0	0	0	0	0	E
NSWC White Oak	SITE 00003	IRA	9/30/99	0	0	0	0	0	0	0	0	0	0	0	E
NSWC White Oak	SITE 00003	LTO	9/30/99	0	0	0	0	0	0	0	0	0	0	0	E
NSWC White Oak	SITE 00003	LTM	9/30/99	6	0	0	0	0	1	1	1	1	1	1	E
Total				730	0	0	266	458	1	1	1	1	1	1	
NSWC White Oak	SITE 00004	PA/SI	10/15/10	0	0	0	0	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00004	RI/FS	10/15/10	100	0	0	0	100	0	0	0	0	0	0	B
NSWC White Oak	SITE 00004	RD	10/15/10	30	0	0	0	0	30	0	0	0	0	0	E
NSWC White Oak	SITE 00004	RA	10/15/10	270	0	0	0	0	0	270	0	0	0	0	E
NSWC White Oak	SITE 00004	IRA	10/15/10	300	0	0	300	0	0	0	0	0	0	0	E
NSWC White Oak	SITE 00004	LTO	10/15/10	841	0	0	0	0	0	0	100	100	100	100	E
NSWC White Oak	SITE 00004	LTM	10/15/10	0	0	0	0	0	0	0	0	0	0	0	E
Total				1541	0	0	300	100	30	270	100	100	100	100	
NSWC White Oak	SITE 00005	PA/SI	9/30/02	0	90	0	0	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00005	RI/FS	9/30/02	288	0	0	0	0	288	0	0	0	0	0	B
NSWC White Oak	SITE 00005	RD	9/30/02	37	0	0	0	0	0	37	0	0	0	0	G
NSWC White Oak	SITE 00005	RA	9/30/02	184	0	0	0	0	0	0	184	0	0	0	G
NSWC White Oak	SITE 00005	IRA	9/30/02	0	0	0	0	0	0	0	0	0	0	0	G
NSWC White Oak	SITE 00005	LTO	9/30/02	0	0	0	0	0	0	0	0	0	0	0	G

Table A-3
NSWC White Oak
BRAC Environmental Budget Plan

Activity	Site	Phase	RC	CTC	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05	Priority
NSWC White Oak	SITE 00005	LTM	9/30/02	15	0	0	0	0	0	0	0	3	3	3	G
Total				524	90	0	0	0	288	37	184	3	3	3	
NSWC White Oak	SITE 00006	PA/SI	9/30/02	0	90	0	0	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00006	RI/FS	9/30/02	114	0	0	0	0	114	0	0	0	0	0	B
NSWC White Oak	SITE 00006	RD	9/30/02	60	0	0	0	0	0	60	0	0	0	0	G
NSWC White Oak	SITE 00006	RA	9/30/02	509	0	0	0	0	0	0	509	0	0	0	G
NSWC White Oak	SITE 00006	IRA	9/30/02	0	0	0	0	0	0	0	0	0	0	0	G
NSWC White Oak	SITE 00006	LTO	9/30/02	0	0	0	0	0	0	0	0	0	0	0	G
NSWC White Oak	SITE 00006	LTM	9/30/02	13	0	0	0	0	0	0	0	3	3	3	G
Total				696	90	0	0	0	114	60	509	3	3	3	
NSWC White Oak	SITE 00007	PA/SI	10/15/05	0	0	0	0	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00007	RI/FS	10/15/05	63	0	0	63	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00007	RD	10/15/05	20	0	0	0	0	20	0	0	0	0	0	E
NSWC White Oak	SITE 00007	RA	10/15/05	200	0	0	0	0	0	200	0	0	0	0	E
NSWC White Oak	SITE 00007	IRA	10/15/05	300	0	0	300	0	0	0	0	0	0	0	E
NSWC White Oak	SITE 00007	LTO	10/15/05	162	0	0	0	0	0	0	0	82	80	0	E
NSWC White Oak	SITE 00007	LTM	10/15/05	461	0	0	0	0	0	0	0	0	0	0	E
Total				1206	0	0	363	0	20	200	0	82	80	0	
NSWC White Oak	SITE 00008	PA/SI	5/15/05	0	0	0	0	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00008	RI/FS	5/15/05	70	0	0	70	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00008	RD	5/15/05	32	0	0	0	32	0	0	0	0	0	0	E
NSWC White Oak	SITE 00008	RA	5/15/05	182	0	0	0	0	182	0	0	0	0	0	E
NSWC White Oak	SITE 00008	IRA	5/15/05	0	182	0	0	0	0	0	0	0	0	0	E
NSWC White Oak	SITE 00008	LTO	5/15/05	179	0	0	0	0	0	36	36	36	36	35	E
NSWC White Oak	SITE 00008	LTM	5/15/05	192	0	0	0	0	0	0	0	0	0	30	E
Total				655	182	0	70	32	182	36	36	36	36	65	
NSWC White Oak	SITE 00009	PA/SI	4/15/04	0	0	0	0	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00009	RI/FS	4/15/04	300	0	0	300	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00009	RD	4/15/04	100	0	0	0	0	100	0	0	0	0	0	G
NSWC White Oak	SITE 00009	RA	4/15/04	1000	0	0	0	0	0	1000	0	0	0	0	G
NSWC White Oak	SITE 00009	IRA	4/15/04	0	182	0	0	0	0	0	0	0	0	0	G
NSWC White Oak	SITE 00009	LTO	4/15/04	177	0	0	0	0	0	0	77	50	50	0	G
NSWC White Oak	SITE 00009	LTM	4/15/04	189	0	0	0	0	0	0	0	0	20	40	G
Total				1766	182	0	300	0	100	1000	77	50	70	40	
NSWC White Oak	SITE 00010	PA/SI	9/30/00	0	0	0	0	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00010	RI/FS	9/30/00	95	0	0	95	0	0	0	0	0	0	0	B

**Table A-3
NSWC White Oak
BRAC Environmental Budget Plan**

Activity	Site	Phase	RC	CTC	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05	Priority
NSWC White Oak	SITE 00010	RD	9/30/00	32	0	0	0	32	0	0	0	0	0	0	E
NSWC White Oak	SITE 00010	RA	9/30/00	28	0	0	0	28	0	0	0	0	0	0	E
NSWC White Oak	SITE 00010	IRA	9/30/00	0	0	0	0	0	0	0	0	0	0	0	E
NSWC White Oak	SITE 00010	LTO	9/30/00	0	0	0	0	0	0	0	0	0	0	0	E
NSWC White Oak	SITE 00010	LTM	9/30/00	34	0	0	0	0	0	12	12	10	0	0	E
Total				189	0	0	95	60	0	12	12	10	0	0	
NSWC White Oak	SITE 00011	PA/SI	10/1/06	0	0	0	0	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00011	RI/FS	10/1/06	0	0	100	0	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00011	RD	10/1/06	50	0	0	50	0	0	0	0	0	0	0	E
NSWC White Oak	SITE 00011	RA	10/1/06	518	0	0	0	200	318	0	0	0	0	0	E
NSWC White Oak	SITE 00011	IRA	10/1/06	0	182	0	0	0	0	0	0	0	0	0	E
NSWC White Oak	SITE 00011	LTO	10/1/06	179	0	0	0	0	0	45	45	45	44	0	E
NSWC White Oak	SITE 00011	LTM	10/1/06	192	0	0	0	0	0	0	0	0	0	0	E
Total				939	182	100	50	200	318	45	45	45	44	38	E
NSWC White Oak	SITE 00012	PA/SI	6/30/03	0	90	0	0	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00012	RI/FS	6/30/03	277	0	0	0	0	277	0	0	0	0	0	B
NSWC White Oak	SITE 00012	RD	6/30/03	33	0	0	0	0	0	33	0	0	0	0	E
NSWC White Oak	SITE 00012	RA	6/30/03	283	0	0	0	0	0	0	283	0	0	0	E
NSWC White Oak	SITE 00012	IRA	6/30/03	0	0	0	0	0	0	0	0	0	0	0	E
NSWC White Oak	SITE 00012	LTO	6/30/03	1	0	0	0	0	0	0	0	1	0	0	E
NSWC White Oak	SITE 00012	LTM	6/30/03	6	0	0	0	0	0	0	0	0	1	1	E
Total				600	90	0	0	0	277	33	283	1	1	1	
NSWC White Oak	SITE 00013	PA/SI	12/31/02	0	93	0	0	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00013	RI/FS	12/31/02	50	0	0	0	0	50	0	0	0	0	0	B
NSWC White Oak	SITE 00013	RD	12/31/02	10	0	0	0	0	0	10	0	0	0	0	G
NSWC White Oak	SITE 00013	RA	12/31/02	50	0	0	0	0	0	0	50	0	0	0	G
NSWC White Oak	SITE 00013	IRA	12/31/02	0	0	0	0	0	0	0	0	0	0	0	G
NSWC White Oak	SITE 00013	LTO	12/31/02	0	0	0	0	0	0	0	0	0	0	0	G
NSWC White Oak	SITE 00013	LTM	12/31/02	0	0	0	0	0	0	0	0	0	0	0	G
Total				110	93	0	0	0	50	10	50	0	0	0	
NSWC White Oak	SITE 00014	PA/SI	9/30/01	0	0	0	0	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00014	RI/FS	9/30/01	114	0	0	114	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00014	RD	9/30/01	51	0	0	0	51	0	0	0	0	0	0	E
NSWC White Oak	SITE 00014	RA	9/30/01	434	0	0	0	200	234	0	0	0	0	0	E
NSWC White Oak	SITE 00014	IRA	9/30/01	0	0	0	0	0	0	0	0	0	0	0	E
NSWC White Oak	SITE 00014	LTO	9/30/01	0	0	0	0	0	0	0	0	0	0	0	E
NSWC White Oak	SITE 00014	LTM	9/30/01	432	0	0	0	0	0	0	100	100	100	132	E

Table A-3
NSWC White Oak
BRAC Environmental Budget Plan

Activity	Site	Phase	RC	CTC	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05	Priority
Total				1031	0	0	114	251	234	0	100	100	100	132	
NSWC White Oak	SITE 00015	PA/SI	9/30/02	0	0	0	0	0	0	0	0	0	0	0	0 B
NSWC White Oak	SITE 00015	RI/FS	9/30/02	114	0	0	0	0	114	0	0	0	0	0	0 B
NSWC White Oak	SITE 00015	RD	9/30/02	51	0	0	0	0	0	51	0	0	0	0	0 G
NSWC White Oak	SITE 00015	RA	9/30/02	434	0	0	0	0	0	0	434	0	0	0	0 G
NSWC White Oak	SITE 00015	IRA	9/30/02	0	0	0	0	0	0	0	0	0	0	0	0 G
NSWC White Oak	SITE 00015	LTO	9/30/02	0	0	0	0	0	0	0	0	0	0	0	0 G
NSWC White Oak	SITE 00015	LTM	9/30/02	431	0	0	0	0	0	0	0	86	86	86	0 G
Total				1030	0	0	0	0	114	51	434	86	86	86	
NSWC White Oak	SITE 00016	PA/SI	9/30/01	0	0	0	0	0	0	0	0	0	0	0	0 B
NSWC White Oak	SITE 00016	RI/FS	9/30/01	114	0	0	114	0	0	0	0	0	0	0	0 B
NSWC White Oak	SITE 00016	RD	9/30/01	51	0	0	0	0	51	0	0	0	0	0	0 G
NSWC White Oak	SITE 00016	RA	9/30/01	250	0	0	0	0	0	250	0	0	0	0	0 G
NSWC White Oak	SITE 00016	IRA	9/30/01	0	0	0	0	0	0	0	0	0	0	0	0 G
NSWC White Oak	SITE 00016	LTO	9/30/01	0	0	0	0	0	0	0	0	0	0	0	0 G
NSWC White Oak	SITE 00016	LTM	9/30/01	432	0	0	0	0	0	0	100	85	85	85	0 G
Total				847	0	0	114	0	51	250	100	85	85	85	
NSWC White Oak	SITE 00017	PA/SI	9/30/02	0	0	0	0	0	0	0	0	0	0	0	0 B
NSWC White Oak	SITE 00017	RI/FS	9/30/02	114	0	0	0	0	114	0	0	0	0	0	0 B
NSWC White Oak	SITE 00017	RD	9/30/02	10	0	0	0	0	0	10	0	0	0	0	0 G
NSWC White Oak	SITE 00017	RA	9/30/02	100	0	0	0	0	0	0	100	0	0	0	0 G
NSWC White Oak	SITE 00017	IRA	9/30/02	0	0	0	0	0	0	0	0	0	0	0	0 G
NSWC White Oak	SITE 00017	LTO	9/30/02	0	0	0	0	0	0	0	0	0	0	0	0 G
NSWC White Oak	SITE 00017	LTM	9/30/02	13	0	0	0	0	0	0	0	3	3	2	0 G
Total				237	0	0	0	0	114	10	100	3	3	2	
NSWC White Oak	SITE 00018	PA/SI	9/30/02	0	0	0	0	0	0	0	0	0	0	0	0 B
NSWC White Oak	SITE 00018	RI/FS	9/30/02	37	0	0	0	0	37	0	0	0	0	0	0 B
NSWC White Oak	SITE 00018	RD	9/30/02	10	0	0	0	0	0	10	0	0	0	0	0 G
NSWC White Oak	SITE 00018	RA	9/30/02	100	0	0	0	0	0	0	100	0	0	0	0 G
NSWC White Oak	SITE 00018	IRA	9/30/02	0	0	0	0	0	0	0	0	0	0	0	0 G
NSWC White Oak	SITE 00018	LTO	9/30/02	0	0	0	0	0	0	0	0	0	0	0	0 G
NSWC White Oak	SITE 00018	LTM	9/30/02	9	0	0	0	0	0	0	0	2	2	2	0 G
Total				156	0	0	0	0	37	10	100	2	2	2	
NSWC White Oak	SITE 00019	PA/SI	9/30/02	0	0	0	0	0	0	0	0	0	0	0	0 B
NSWC White Oak	SITE 00019	RI/FS	9/30/02	114	0	0	0	0	114	0	0	0	0	0	0 B
NSWC White Oak	SITE 00019	RD	9/30/02	43	0	0	0	0	0	43	0	0	0	0	0 G

**Table A-3
NSWC White Oak
BRAC Environmental Budget Plan**

Activity	Site	Phase	RC	CTC	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05	Priority
NSWC White Oak	SITE 00019	RA	9/30/02	368	0	0	0	0	0	0	368	0	0	0	G
NSWC White Oak	SITE 00019	IRA	9/30/02	0	0	0	0	0	0	0	0	0	0	0	G
NSWC White Oak	SITE 00019	LTO	9/30/02	0	0	0	0	0	0	0	0	0	0	0	G
NSWC White Oak	SITE 00019	LTM	9/30/02	370	0	0	0	0	0	0	0	0	74	74	G
Total				895	0	0	0	0	114	43	368	0	74	74	
NSWC White Oak	SITE 00020	PA/SI	9/30/02	0	0	0	0	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00020	RI/FS	9/30/02	149	0	0	0	0	149	0	0	0	0	0	B
NSWC White Oak	SITE 00020	RD	9/30/02	68	0	0	0	0	0	68	0	0	0	0	G
NSWC White Oak	SITE 00020	RA	9/30/02	576	0	0	0	0	0	0	576	0	0	0	G
NSWC White Oak	SITE 00020	IRA	9/30/02	0	0	0	0	0	0	0	0	0	0	0	G
NSWC White Oak	SITE 00020	LTO	9/30/02	0	0	0	0	0	0	0	0	0	0	0	G
NSWC White Oak	SITE 00020	LTM	9/30/02	573	0	0	0	0	0	0	0	0	115	115	G
Total				1366	0	0	0	0	149	68	576	0	115	115	
NSWC White Oak	SITE 00021	PA/SI	9/30/02	0	0	0	0	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00021	RI/FS	9/30/02	100	0	0	0	0	100	0	0	0	0	0	B
NSWC White Oak	SITE 00021	RD	9/30/02	38	0	0	0	0	0	38	0	0	0	0	G
NSWC White Oak	SITE 00021	RA	9/30/02	326	0	0	0	0	0	0	326	0	0	0	G
NSWC White Oak	SITE 00021	IRA	9/30/02	0	0	0	0	0	0	0	0	0	0	0	G
NSWC White Oak	SITE 00021	LTO	9/30/02	0	0	0	0	0	0	0	0	0	0	0	G
NSWC White Oak	SITE 00021	LTM	9/30/02	0	0	0	0	0	0	0	0	0	0	0	G
Total				464	0	0	0	0	100	38	326	0	0	0	
NSWC White Oak	SITE 00022	PA/SI	9/30/02	0	0	0	0	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00022	RI/FS	9/30/02	114	0	0	0	0	114	0	0	0	0	0	B
NSWC White Oak	SITE 00022	RD	9/30/02	10	0	0	0	0	0	10	0	0	0	0	G
NSWC White Oak	SITE 00022	RA	9/30/02	100	0	0	0	0	0	0	100	0	0	0	G
NSWC White Oak	SITE 00022	IRA	9/30/02	0	0	0	0	0	0	0	0	0	0	0	G
NSWC White Oak	SITE 00022	LTO	9/30/02	0	0	0	0	0	0	0	0	0	0	0	G
NSWC White Oak	SITE 00022	LTM	9/30/02	6	0	0	0	0	0	0	0	2	1	1	G
Total				230	0	0	0	0	114	10	100	2	1	1	
NSWC White Oak	SITE 00023	PA/SI	9/30/02	0	0	0	0	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00023	RI/FS	9/30/02	114	0	0	0	0	114	0	0	0	0	0	B
NSWC White Oak	SITE 00023	RD	9/30/02	51	0	0	0	0	0	51	0	0	0	0	G
NSWC White Oak	SITE 00023	RA	9/30/02	434	0	0	0	0	0	0	434	0	0	0	G
NSWC White Oak	SITE 00023	IRA	9/30/02	0	0	0	0	0	0	0	0	0	0	0	G
NSWC White Oak	SITE 00023	LTO	9/30/02	0	0	0	0	0	0	0	0	0	0	0	G
NSWC White Oak	SITE 00023	LTM	9/30/02	432	0	0	0	0	0	0	0	87	87	87	G
Total				1031	0	0	0	0	114	51	434	87	87	87	

Table A-3
NSWC White Oak
BRAC Environmental Budget Plan

Activity	Site	Phase	RC	CTC	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05	Priority
NSWC White Oak	SITE 00024	PA/SI	9/30/00	0	0	0	0	0	0	0	0	0	0	0	0 B
NSWC White Oak	SITE 00024	RI/FS	9/30/00	67	0	0	67	0	0	0	0	0	0	0	0 B
NSWC White Oak	SITE 00024	RD	9/30/00	51	0	0	51	0	0	0	0	0	0	0	0 E
NSWC White Oak	SITE 00024	RA	9/30/00	434	0	0	0	200	234	0	0	0	0	0	0 E
NSWC White Oak	SITE 00024	IRA	9/30/00	0	0	0	0	0	0	0	0	0	0	0	0 E
NSWC White Oak	SITE 00024	LTO	9/30/00	0	0	0	0	0	0	0	0	0	0	0	0 E
NSWC White Oak	SITE 00024	LTM	9/30/00	432	0	0	0	0	0	62	62	62	62	62	0 E
Total				984	0	0	118	200	234	62	62	62	62	62	
NSWC White Oak	SITE 00025	PA/SI	9/30/99	0	0	0	0	0	0	0	0	0	0	0	0 B
NSWC White Oak	SITE 00025	RI/FS	9/30/99	114	0	0	114	0	0	0	0	0	0	0	0 B
NSWC White Oak	SITE 00025	RD	9/30/99	0	0	0	0	0	0	0	0	0	0	0	0 E
NSWC White Oak	SITE 00025	RA	9/30/99	0	0	0	0	0	0	0	0	0	0	0	0 E
NSWC White Oak	SITE 00025	IRA	9/30/99	0	0	0	0	0	0	0	0	0	0	0	0 E
NSWC White Oak	SITE 00025	LTO	9/30/99	0	0	0	0	0	0	0	0	0	0	0	0 E
NSWC White Oak	SITE 00025	LTM	9/30/99	8	0	0	0	0	0	2	2	2	1	1	0 E
Total				122	0	0	114	0	0	2	2	2	1	1	
NSWC White Oak	SITE 00026	PA/SI	12/31/02	0	0	0	0	0	0	0	0	0	0	0	0 B
NSWC White Oak	SITE 00026	RI/FS	12/31/02	67	0	0	0	67	0	0	0	0	0	0	0 B
NSWC White Oak	SITE 00026	RD	12/31/02	43	0	0	0	0	0	43	0	0	0	0	0 G
NSWC White Oak	SITE 00026	RA	12/31/02	368	0	0	0	0	0	0	368	0	0	0	0 G
NSWC White Oak	SITE 00026	IRA	12/31/02	0	0	0	0	0	0	0	0	0	0	0	0 G
NSWC White Oak	SITE 00026	LTO	12/31/02	0	0	0	0	0	0	0	0	0	0	0	0 G
NSWC White Oak	SITE 00026	LTM	12/31/02	374	0	0	0	0	0	0	0	0	75	75	0 G
Total				852	0	0	0	67	0	43	368	0	75	75	
NSWC White Oak	SITE 00027	PA/SI	7/1/01	0	0	0	0	0	0	0	0	0	0	0	0 B
NSWC White Oak	SITE 00027	RI/FS	7/1/01	272	0	0	0	130	142	0	0	0	0	0	0 B
NSWC White Oak	SITE 00027	RD	7/1/01	0	0	0	0	0	0	0	0	0	0	0	0 G
NSWC White Oak	SITE 00027	RA	7/1/01	0	0	0	0	0	0	0	0	0	0	0	0 G
NSWC White Oak	SITE 00027	IRA	7/1/01	0	0	0	0	0	0	0	0	0	0	0	0 G
NSWC White Oak	SITE 00027	LTO	7/1/01	0	0	0	0	0	0	0	0	0	0	0	0 G
NSWC White Oak	SITE 00027	LTM	7/1/01	13	0	0	0	0	0	0	0	0	3	3	0 G
Total				285	0	0	0	130	142	0	0	0	3	3	
NSWC White Oak	SITE 00028	PA/SI	9/30/01	0	90	0	0	0	0	0	0	0	0	0	0 B
NSWC White Oak	SITE 00028	RI/FS	9/30/01	114	0	0	114	0	0	0	0	0	0	0	0 B
NSWC White Oak	SITE 00028	RD	9/30/01	51	0	0	0	0	51	0	0	0	0	0	0 G
NSWC White Oak	SITE 00028	RA	9/30/01	434	0	0	0	0	0	434	0	0	0	0	0 G

Table A-3
NSWC White Oak
BRAC Environmental Budget Plan

Activity	Site	Phase	RC	CTC	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05	Priority
NSWC White Oak	SITE 00028	IRA	9/30/01	0	0	0	0	0	0	0	0	0	0	0	G
NSWC White Oak	SITE 00028	LTO	9/30/01	0	0	0	0	0	0	0	0	0	0	0	G
NSWC White Oak	SITE 00028	LTM	9/30/01	439	0	0	0	0	0	0	88	88	88	88	G
Total				1038	90	0	114	0	51	434	88	88	88	88	
NSWC White Oak	SITE 00029	PA/SI	9/30/01	0	90	0	0	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00029	RI/FS	9/30/01	288	0	0	288	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00029	RD	9/30/01	10	0	0	0	10	0	0	0	0	0	0	E
NSWC White Oak	SITE 00029	RA	9/30/01	100	0	0	0	100	0	0	0	0	0	0	E
NSWC White Oak	SITE 00029	IRA	9/30/01	0	0	0	0	0	0	0	0	0	0	0	E
NSWC White Oak	SITE 00029	LTO	9/30/01	0	0	0	0	0	0	0	0	0	0	0	E
NSWC White Oak	SITE 00029	LTM	9/30/01	0	0	0	0	0	0	0	0	0	0	0	E
Total				398	90	0	288	110	0	0	0	0	0	0	
NSWC White Oak	SITE 00031	PA/SI	9/30/01	0	90	0	0	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00031	RI/FS	9/30/01	250	0	0	250	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00031	RD	9/30/01	37	0	0	0	0	37	0	0	0	0	0	E
NSWC White Oak	SITE 00031	RA	9/30/01	200	0	0	0	0	200	0	0	0	0	0	E
NSWC White Oak	SITE 00031	IRA	9/30/01	0	0	0	0	0	0	0	0	0	0	0	E
NSWC White Oak	SITE 00031	LTO	9/30/01	0	0	0	0	0	0	0	0	0	0	0	E
NSWC White Oak	SITE 00031	LTM	9/30/01	312	0	0	0	0	0	0	63	63	63	63	E
Total				799	90	0	250	0	237	0	63	63	63	63	
NSWC White Oak	SITE 00032	PA/SI	9/30/01	0	0	0	0	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00032	RI/FS	9/30/01	88	0	0	88	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00032	RD	9/30/01	10	0	0	0	10	0	0	0	0	0	0	E
NSWC White Oak	SITE 00032	RA	9/30/01	100	0	0	0	100	0	0	0	0	0	0	E
NSWC White Oak	SITE 00032	IRA	9/30/01	0	0	0	0	0	0	0	0	0	0	0	E
NSWC White Oak	SITE 00032	LTO	9/30/01	0	0	0	0	0	0	0	0	0	0	0	E
NSWC White Oak	SITE 00032	LTM	9/30/01	0	0	0	0	0	0	0	0	0	0	0	E
Total				198	0	0	88	110	0	0	0	0	0	0	
NSWC White Oak	SITE 00033	PA/SI	9/30/00	0	0	0	0	0	0	0	0	0	0	0	B
NSWC White Oak	SITE 00033	RI/FS	9/30/00	50	0	0	0	50	0	0	0	0	0	0	B
NSWC White Oak	SITE 00033	RD	9/30/00	0	0	0	0	0	0	0	0	0	0	0	E
NSWC White Oak	SITE 00033	RA	9/30/00	0	0	0	0	0	0	0	0	0	0	0	E
NSWC White Oak	SITE 00033	IRA	9/30/00	200	0	0	200	0	0	0	0	0	0	0	E
NSWC White Oak	SITE 00033	LTO	9/30/00	0	0	0	0	0	0	0	0	0	0	0	E
NSWC White Oak	SITE 00033	LTM	9/30/00	0	0	0	0	0	0	0	0	0	0	0	E
Total				250	0	0	200	50	0	0	0	0	0	0	

Table A-3
NSWC White Oak
BRAC Environmental Budget Plan

Activity	Site	Phase	RC	CTC	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05	Priority
NSWC White Oak	SITE 00036	PA/SI	9/30/00	0	0	0	0	0	0	0	0	0	0	0	0 B
NSWC White Oak	SITE 00036	RI/FS	9/30/00	50	0	0	0	50	0	0	0	0	0	0	0 B
NSWC White Oak	SITE 00036	RD	9/30/00	0	0	0	0	0	0	0	0	0	0	0	0 E
NSWC White Oak	SITE 00036	RA	9/30/00	0	0	0	0	0	0	0	0	0	0	0	0 E
NSWC White Oak	SITE 00036	IRA	9/30/00	200	0	0	200	0	0	0	0	0	0	0	0 E
NSWC White Oak	SITE 00036	LTO	9/30/00	0	0	0	0	0	0	0	0	0	0	0	0 E
NSWC White Oak	SITE 00036	LTM	9/30/00	0	0	0	0	0	0	0	0	0	0	0	0 E
Total				250	0	0	200	50	0	0	0	0	0	0	0
NSWC White Oak	SITE 00039	PA/SI	9/30/99	0	0	0	0	0	0	0	0	0	0	0	0 B
NSWC White Oak	SITE 00039	RI/FS	9/30/99	25	0	0	25	0	0	0	0	0	0	0	0 B
NSWC White Oak	SITE 00039	RD	9/30/99	25	0	0	25	0	0	0	0	0	0	0	0 E
NSWC White Oak	SITE 00039	RA	9/30/99	50	0	0	0	50	0	0	0	0	0	0	0 E
NSWC White Oak	SITE 00039	IRA	9/30/99	0	0	0	0	0	0	0	0	0	0	0	0 E
NSWC White Oak	SITE 00039	LTO	9/30/99	0	0	0	0	0	0	0	0	0	0	0	0 E
NSWC White Oak	SITE 00039	LTM	9/30/99	0	0	0	0	0	0	0	0	0	0	0	0 E
Total				100	0	0	50	50	0	0	0	0	0	0	0
NSWC White Oak	SITE 00041	PA/SI	9/30/99	0	0	0	0	0	0	0	0	0	0	0	0 B
NSWC White Oak	SITE 00041	RI/FS	9/30/99	25	0	0	25	0	0	0	0	0	0	0	0 B
NSWC White Oak	SITE 00041	RD	9/30/99	25	0	0	25	0	0	0	0	0	0	0	0 E
NSWC White Oak	SITE 00041	RA	9/30/99	25	0	0	0	25	0	0	0	0	0	0	0 E
NSWC White Oak	SITE 00041	IRA	9/30/99	0	0	0	0	0	0	0	0	0	0	0	0 E
NSWC White Oak	SITE 00041	LTO	9/30/99	0	0	0	0	0	0	0	0	0	0	0	0 E
NSWC White Oak	SITE 00041	LTM	9/30/99	0	0	0	0	0	0	0	0	0	0	0	0 E
Total				75	0	0	50	25	0	0	0	0	0	0	0
NSWC White Oak	SITE 00042	PA/SI	9/30/99	0	0	0	0	0	0	0	0	0	0	0	0 B
NSWC White Oak	SITE 00042	RI/FS	9/30/99	25	0	0	25	0	0	0	0	0	0	0	0 B
NSWC White Oak	SITE 00042	RD	9/30/99	25	0	0	25	0	0	0	0	0	0	0	0 E
NSWC White Oak	SITE 00042	RA	9/30/99	25	0	0	0	25	0	0	0	0	0	0	0 E
NSWC White Oak	SITE 00042	IRA	9/30/99	0	0	0	0	0	0	0	0	0	0	0	0 E
NSWC White Oak	SITE 00042	LTO	9/30/99	0	0	0	0	0	0	0	0	0	0	0	0 E
NSWC White Oak	SITE 00042	LTM	9/30/99	0	0	0	0	0	0	0	0	0	0	0	0 E
Total				75	0	0	50	25	0	0	0	0	0	0	0
NSWC White Oak	SITE 00046	PA/SI	4/1/06	0	0	100	0	0	0	0	0	0	0	0	0 A
NSWC White Oak	SITE 00046	RI/FS	4/1/06	250	0	0	250	0	0	0	0	0	0	0	0 A
NSWC White Oak	SITE 00046	RD	4/1/06	30	0	0	0	0	30	0	0	0	0	0	0 G
NSWC White Oak	SITE 00046	RA	4/1/06	300	0	0	0	0	300	0	0	0	0	0	0 G
NSWC White Oak	SITE 00046	IRA	4/1/06	500	0	0	300	100	100	0	0	0	0	0	0 A

**Table A-3
NSWC White Oak
BRAC Environmental Budget Plan**

Activity	Site	Phase	RC	CTC	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05	Priority
NSWC White Oak	SITE 00046	LTO	4/1/06	400	0	0	0	0	0	40	80	80	80	80	A
NSWC White Oak	SITE 00046	LTM	4/1/06	0	0	0	0	0	0	0	0	0	0	0	G
Total				1480	0	100	550	100	430	40	80	80	80	80	
NSWC White Oak	UST 00001C	DESIGN	9/1/97	0	0	0	0	0	0	0	0	0	0	0	E
NSWC White Oak	UST 00001C	Removal	9/1/97	0	0	600	0	0	0	0	0	0	0	0	E
Total				0	0	600	0	0	0	0	0	0	0	0	
NSWC White Oak	UST 00002C	DESIGN	8/1/99	0	0	20	0	0	0	0	0	0	0	0	E
NSWC White Oak	UST 00002C	IMP	8/1/99	0	0	0	0	0	0	0	0	0	0	0	E
Total				0	0	20	0	0	0	0	0	0	0	0	

**Table A-3
NSWC White Oak
BRAC Environmental Budget Plan**

Activity	Site	Phase	RC	CTC	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05	Priority
					2930	2190	10008	7462	9216	6238	9206	2088	3532	2420	
					1465	1095	5004	3731	4608	3119	4603	1044	1766	1210	
					96	97	98	99	00	01	02	03	04	05	

**Table A-3
NSWC White Oak
BRAC Environmental Budget Plan**

Activity	Site	Phase	RC	CTC	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05	Priority
Funding Summary	NSWC BRAC	Environmental													
FY 1996	\$1,465														
FY 1997	\$1,095														
FY 1998	\$5,004														
FY 1999	\$3,731														
FY 2000	\$4,608														
FY 2001	\$3,119														
FY 2002	\$4,603														
FY 2003	\$1,044														
FY 2004	\$1,766														
FY 2005	\$1,210														

BASE CLOSURE IV
BASE REALIGNMENT (1995 COMMISSION)
FINANCIAL SUMMARY
(\$000)

Closure/Realignment Location: NSWC WHITE OAK, MD

ONE-TIME IMPLEMENTATION COSTS:	FY96	FY97	FY98	FY99	FY00	FY01	TOTAL
Military Construction	4500	0	0	0	0	0	4500
Family Housing							
Construction	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0
Environmental [	1461]	568]	6794]	71]	4992]	7585]	21471]
Studies	137	0	0	0	0	0	137
Compliance	1324	0	0	0	0	0	1324
Restoration	0	568	6794	71	4992	7585	20010
Operations & Maintenance	1643	3495	3823	0	0	0	8961
Military Personnel - PCS	0	12	0	0	0	0	12
Other	0	0	0	0	0	0	0
TOTAL COSTS	7604	4075	10617	71	4992	7585	34944
Land Sales Revenue	0	0	0	0	0	0	0
TOTAL BUDGET REQUEST	7604	4075	10617	71	4992	7585	34944

NET SAVINGS:

Military Construction	0	0	0	0	0	0	0
Family Housing							
Construction	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0
Operations & Maintenance	0	0	0	0	0	0	0
Military Personnel	0	0	0	0	0	0	0
Other	-500	-1800	-7429	-7581	-7731	-7901	-32942
Civilian ES (End Strength) [	0]	0]	-46]	-46]	-46]	-46]	
Military ES (End Strength) [	0]	0]	0]	0]	0]	0]	
TOTAL SAVINGS	-500	-1800	-7429	-7581	-7731	-7901	-32942

NET IMPLEMENTATION COSTS:	FY96	FY97	FY98	FY99	FY00	FY01	TOTAL
Military Construction	4500	0	0	0	0	0	4500
Family Housing							
Construction	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0
Environmental [	1461]	568]	6794]	71]	4992]	7585]	21471]
Studies	137	0	0	0	0	0	137
Compliance	1324	0	0	0	0	0	1324
Restoration	0	568	6794	71	4992	7585	20010
Operations & Maintenance	1643	3495	3823	0	0	0	8961
Military Personnel	0	12	0	0	0	0	12
Other	-500	-1800	-7429	-7581	-7731	-7901	-32942
Land Sales Revenue	0	0	0	0	0	0	0
Civilian ES (End Strength) [	0]	0]	-46]	-46]	-46]	-46]	
Military ES (End Strength) [	0]	0]	0]	0]	0]	0]	
NET IMPLEMENTATION COSTS	7104	2275	3188	-7510	-2739	-316	2002

BASE REALIGNMENT AND CLOSURE IV
(1995 COMMISSION)
PACKAGE DESCRIPTION

1740 - NSWC-White Oak, MD

CLOSURE/REALIGNMENT ACTION :

Close the Naval Surface Warfare Center, Dahlgren Division Detachment, White Oak, Maryland in 1997. Relocate the functions, personnel and equipment associated with Ship Magnetic Signature Control R&D Complex to the Naval Surface Warfare Center, Carderock, Maryland, and the functions and personnel associated with reentry body dynamics research and development to the Naval Surface Warfare Center, Dahlgren, Virginia.

Naval Surface Warfare Center, Dahlgren Division Detachment, White Oak, MD provides research, development, test and evaluation, engineering, and fleet support for surface warfare systems, surface ship combat systems, ordnance, mines, amphibious warfare systems, mine countermeasures, special warfare systems, and strategic systems.

ONE-TIME IMPLEMENTATION COSTS :

Military Construction :

	FY1996 Amount (\$000) -----
P-183U BETHESDA NSWCCARDERO BUILDING ALTERATIONS AND ADDITIONS	4,500
Total	4,500

Family Housing Construction :

No requirement.

Family Housing Operations :

No requirement.

Environmental :

Studies :

In compliance with the Defense Base Closure and Realignment Act, National Environmental Policy Act (NEPA) documentation must be completed prior to implementation of disposal/reuse actions. An Environmental Impact Statement (EIS) is required to analyze the impacts associated with the disposal and reuse of NSWC White Oak, MD. The EIS will address impacts to wetlands, class I trout stream, endangered species, air and water quality, traffic, and changes in land and facility use. The White Oak site is in non-attainment for some criteria pollutants and will also require the appropriate conformity studies under the Clean Air Act. Additional funding is required for the National Historic Preservation Act. Portions of the installation have not been surveyed for cultural resources. Depending on the reuse plan, a Historic American Building Survey recordation may be necessary prior to Navy disposal.

BASE REALIGNMENT AND CLOSURE IV
(1995 COMMISSION)
PACKAGE DESCRIPTION

1740 - NSWC-White Oak, MD

An Environmental Assessment for the relocation of assets to NSWC Carderock, MD was funded under NSWC Annapolis, MD. A Categorical Exclusion is required for the relocation of assets to NSWC Dahlgren, VA.

Compliance :

Compliance requirements for NSWC White Oak include initiation of the Environmental Baseline Survey (EBS) and preparation of a BRAC Cleanup Plan (BCP), Air Emissions Reduction Credits (ERC) and Ozone Depleting Substances (ODS) analyses. Also planned are: Asbestos and PCBs abatement; Underground Storage Tanks (USTs) study and removals; Solid Waste Management Units (SWMUs) study and corrective actions.

Installation Restoration :

NSWC White Oak's Installation Restoration Program has 7 active IR sites.

Operations and Maintenance :

The Reentry Dynamics group of the White Oak Detachment of the Dahlgren Division, Naval Surface Warfare Center, will be relocated from the White Oak facility to Dahlgren, Virginia. The Magnetic Silencing group and its associated equipment will relocate from the White Oak facility to the Carderock Division of the Naval Surface Warfare Center, located in Bethesda, Md. All tenants will vacate. Civilian personnel one-time costs include severance pay, separation incentive pay, extended health benefits and permanent change of station. The facility, including the unique facilities left after BRAC III, will be placed in layaway. Costs include building closure costs, relocations, tenant moving costs, equipment removal or equipment disposal and transportation costs including packaging, shipping, and reinstallation of office and laboratory equipment, and cleaning of vacated spaces. Also included are program management, administration, planning, design and management costs including staff support, technical support, travel, training, and management. Other costs include utilities, grounds, custodial, solid waste, security, explosive safety, architectural resource survey and layaway. Also included are caretaker, real estate, and other related labor, support, and contractual requirements necessary to complete disposal of the property.

Military Personnel -- PCS :

PCS costs have been derived by using the average cost factors for unit moves in most cases and operational moves in all other cases. The PCS costs are based on the total end strength assigned to the particular base, area, or realignment activity that is being affected by the BRAC 95 recommendations.

Other :

No requirement.

BASE REALIGNMENT AND CLOSURE IV
(1995 COMMISSION)
PACKAGE DESCRIPTION

1740 - NSWC-White Oak, MD

Land Sales Revenues :

None.

SAVINGS :

Military Personnel :

Savings are the result of a reduction in military PCS costs.

Other :

Includes civilian personnel salary savings resulting from the realignment or closure of the activity. Savings reflect reduced utility, maintenance and repair costs.

Appendix B

Installation Environmental Restoration Documents Summary Tables

Table B-1. Project Reports

Year	Phase	Project Title	BCP Ref. Report #	BCP Reference Site Numbers (From Table 3-1)	Report/Date/Preparer
1984	IAS (PA)	<i>Initial Assessment Study of Naval Surface Weapons Center, White Oak Laboratory</i>	1	1, 2, 16, 51-56, 72, 77-79, 115	IAS Report, 1984, NEESA 13-050.
1987	CS (SI)	<i>Confirmation Study, Naval Surface Warfare Center</i>	2	1, 2, 16, 51-56, 72, 77-79, 115	CS Report, April, 1987, Malcolm Pirnie, Inc.
1990	RFA	<i>RCRA Facility Assessment for the Naval Surface Warfare Center, White Oak, MD</i>	3	1-13, 16-40, 45-61, 64-68, 72-74, 77-111, 115-118	Report, November, 1990, A.T. Kearney, Inc.
1992	RI	<i>Remedial Investigation Report, Naval Surface Warfare Center, Dahlgren Division, Detachment White Oak, Silver Spring, MD</i>	4	2, 51, 52, 55, 72, 78, 115	RI Report, 1992, Malcolm Pirnie, Inc.
1993	FS	<i>Feasibility Study, Naval Surface Warfare Center, Dahlgren Division, Detachment White Oak, Silver Spring, MD</i>	5	2, 51, 52, 55, 72, 78, 115	FS Report, 1993, Malcolm Pirnie, Inc.
1995	RD	<i>Design Verification Report for Remedial Actions at Sites 2, 3, 4, and 9</i>	6	2, 51, 52, 72	DV Report, 1995, Brown and Root Environmental
1995	RD	<i>Design Verification Report for Remedial Actions at 8, 9, and 11</i>	7	72, 78, 115	DV Report, 1995, Brown and Root Environmental
1996	RA	<i>Action Memorandum for Non-Time Critical Removal Action for IR Sites 8, 9 and 11</i>	8	72, 78, 115	Action Memorandum, 1996, Engineering Field Activity Chesapeake

Year	Phase	Project Title	BCP Ref. Report #	BCP Reference Site Numbers (From Table 3-1)	Report/Date/Preparer
1997	IRA	<i>Final Closure Report for Removal Activities Sites 8, 9, 11 NSWC White Oak, Maryland</i>	9	72, 78, 115	Final Closure Report, 1997, OHM Remediation Services Corporation
1997	IRA	<i>Post Removal Action Report for Removal Action at Sites 8, 9, and 11</i>	10	72, 78, 115	Post-Removal Action Report, 1997, Brown & Root Environmental

Table B-2. Site Reports

BCP Reference Site Number (From Table 3-1)	PA/SI (IR Program) or RFA (RCRA Program) or EBS Phase II Screen^(a)	RI/FS (IR Program) or Stabilization (RCRA Program)^(a)	Remedial Design/Remedial Action^(a)	Close Out^(a)	Interim Remedial Action^(a)	Long-Term Monitoring^(a)	No Further Action^(a)
1	1, 2, 3						
2	1, 2, 3	4, 5	6				
3-13	3						
14, 15							
16	1, 2, 3						
17-40	3						
41-44							
45-50	3						
51, 52	1, 2, 3	4, 5	6				
53, 54	1, 2, 3						
55	1, 2, 3	4, 5					
56	1, 2, 3						
57-60	3						
61, 62							
63-67	3						
68-70							
71	3						

BCP Reference Site Number (From Table 3-1)	PA/SI (IR Program) or RFA (RCRA Program) or EBS Phase II Screen^(a)	RI/FS (IR Program) or Stabilization (RCRA Program)^(a)	Remedial Design/Remedial Action^(a)	Close Out^(a)	Interim Remedial Action^(a)	Long-Term Monitoring^(a)	No Further Action^(a)
72, 73	3						
74, 75							
76	1, 2, 3						
77	1, 2, 3	4, 5	7, 8		9, 10		
78	1, 2, 3						
79-110	3						
111-113							
114	1, 2, 3	4, 5	6, 7, 8		9, 10		
115	1, 2, 3	4, 5	7, 8		9, 10		
116-118	3						
119							

(a) Numbers in these columns indicate report numbers assigned in Table B-1.

Appendix C
Decision Document/ROD List

No decision documents or RODs have been prepared for the NSWC-White Oak.

Appendix D

No Further Response Action Planned List

No documents specifying "No Further Response Action Planned" have been prepared for the NSWC-White Oak.

Appendix E
Conceptual Site Model List

Insufficient information is available about the environmental sites at NSWC-White Oak to complete conceptual model data summaries. Conceptual models will be developed as site data become available through field investigations.

Appendix F
Navy Policy Statement

**CNO Guidance on Asbestos, Lead Paint, and Radon Policies
at BRAC Properties**



DEPARTMENT OF THE NAVY
 OFFICE OF THE CHIEF OF NAVAL OPERATIONS
 3000 NAVY PENTAGON
 WASHINGTON, D.C. 20350-3000

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From: Chief of Naval Operations

Subj: ASBESTOS, LEAD PAINT, RADON POLICIES AT BRAC PROPERTIES
 (BASE CLOSURE 034)

Ref: (a) OSHA STD 29 CFR1926.1101, Asbestos in Construction
 of 10 AUG 94
 (b) OSHA STD 29 CFR1926.62, Lead in Construction of
 4 May 94

- Encl:
- (1) DOD Policy on Asbestos at Base Realignment and Closure Properties
 - (2) DOD Policy on Lead-based Paint at Base Realignment and Closure Properties
 - (3) DOD Policy on Radon at Base Realignment and Closure Properties

1. Revised policy for asbestos, lead, and radon at BRAC properties is provided for your information and implementation.

2. The following clarifications are offered for enclosure (1):

a. Enclosure (1) makes reference to determination by "competent authority". A "competent authority" is someone who is capable of identifying hazards in the workplace, selecting the appropriate control strategy for asbestos exposure, who has the authority to take prompt corrective measures to eliminate them, and has "EPA specialty training" or equivalent as described in reference (a).

b. Enclosure (2) describes DOD policy on lead-based paint at BRAC properties.

c. With respect to enclosure (3), new radon assessments will not be performed; however, existing documentation will be transferred. Mitigation of radon is not to be performed at BRAC properties unless otherwise required by state or local law that applies to the entire community: i.e., not just BRAC properties.

P. W. BRENNON
 By direction

SENT BY:

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Subj: ASBESTOS, LEAD PAINT, RADON POLICIES AT BRAC PROPERTIES
(BASE CLOSURE 034)

Distribution:

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SNDL (ASSTSECNAV IE)
A1G (Department of the Navy Staff Offices) (CNR. only)
A2A (CHNAVPERS)
A5 (CINCLANTFLT)
21A1 (CINCPACFLT)
21A2 (COMNAVRESFOR)
23C (COMSC)
41A (COMNAVMETOCOM)
FD1 (COMNAVSECGRU)
FE1 (COMNAVCOMTELCOM)
FG1 (BUMED)
FH1 (SYSTEMS COMMANDS)
FKA1 (DIRSSP)
FKABF (ONI)
FS1 (CNET)
FT1 (N09BF)
CNO

**DOD Policies on Asbestos, Lead Paint, and Radon at BRAC Properties
of 31 October 1994**



ACQUISITION AND TECHNOLOGY

OFFICE OF THE UNDER SECRETARY OF DEFENSE

3000 DEFENSE PENTAGON
WASHINGTON DC 20301-3000



31 OCT 1994

MEMORANDUM FOR ASSISTANT SECRETARY OF THE ARMY
(INSTALLATIONS, LOGISTICS & ENVIRONMENT),
ASSISTANT SECRETARY OF THE NAVY
(INSTALLATIONS & ENVIRONMENT)
ASSISTANT SECRETARY OF THE AIR FORCE
(MANPOWER, RESERVE AFFAIRS, INSTALLATIONS &
ENVIRONMENT)
DIRECTOR, DEFENSE LOGISTICS AGENCY

SUBJECT: Asbestos, Lead Paint and Radon Policies at BRAC Properties

The purpose of this memorandum is to request that you implement the attached Department of Defense (DoD) policies on asbestos, lead paint and radon at base realignment and closure (BRAC) properties.

As you may recall, these policies were drafted and accepted within the Defense Environmental Security Council (DESC) structure. During its May 6, 1994, meeting the DESC accepted the draft DoD policy on radon at BRAC properties. At that meeting, the draft policies on asbestos and lead paint were referred to the Environment, Safety and Occupational Health Policy Board (ESOHPB) for revision and acceptance. During its May 10, 1994, meeting the ESOHPB accepted the revised draft DoD policies on asbestos and lead paint at BRAC properties.

Subsequent to DESC and ESOHPB action, these policies were coordinated formally with the Assistant Secretary of Defense (Economic Security) and the Office of the Deputy General Counsel (Acquisition & Logistics). If there are any questions concerning this request, please contact Ed Dyckman, DESC Executive Secretary at 703-697-9107.

Gary D. Vest
Principal Assistant Deputy Under Secretary
of Defense (Environmental Security)

Attachments



DOD POLICY ON ASBESTOS AT BASE REALIGNMENT AND CLOSURE PROPERTIES

Department of Defense (DoD) policy with regard to asbestos-containing material (ACM) is to manage ACM in a manner protective of human health and the environment, and to comply with all applicable Federal, State, and local laws and regulations governing ACM hazards. Therefore, unless it is determined by competent authority that the ACM in the property does pose a threat to human health at the time of transfer, all property containing ACM will be conveyed, leased, or otherwise disposed of as is through the Base Realignment and Closure (BRAC) process.

Prior to property disposal, all available information on the existence, extent, and condition of ACM shall be incorporated into the Environmental Baseline Survey (EBS) report or other appropriate document to be provided to the transferee. The survey report or document shall include:

- reasonably available information on the type, location, and condition of asbestos in any building or improvement on the property;
- any results of testing for asbestos;
- a description of any asbestos control measures taken for the property;
- any available information on costs or time necessary to remove all or any portion of the remaining ACM; however, special studies or tests to obtain this material are not required; and
- results of a site-specific update of the asbestos inventory performed to revalidate the condition of ACM.

Asbestos-containing material shall be remedied prior to property disposal only if it is of a type and condition that is not in compliance with applicable laws, regulations, and standards, or if it poses a threat to human health at the time of transfer of the property. This remediation should be accomplished by the active Service organization, by the Service disposal agent, or by the transferee under a negotiated requirement of the contract for sale or lease. The remediation discussed above will not be required when the buildings are scheduled for demolition by the transferee; the transfer document prohibits occupation of the buildings prior to the demolition; and the transferee assumes responsibility for the management of any ACM in accordance with applicable laws.

DOD POLICY ON LEAD-BASED PAINT AT BASE REALIGNMENT AND CLOSURE PROPERTIES

Department of Defense (DoD) policy with regard to lead-based paint (LBP) is to manage LBP in a manner protective of human health and the environment, and to comply with all applicable Federal, State, and local laws and regulations governing LBP hazards. The Federal requirements for residential structures/dwellings with LBP on Base Realignment and Closure (BRAC) properties differ, depending on: (1) the date of property transfer, and (2) the date of construction of the residential housing being transferred.

DoD policy is to manage LBP at BRAC installations in accordance with either 24 CFR 35 or P.L. 102-550, at the Service's discretion, until January 1, 1995; and, thereafter, solely in accordance with P.L. 102-550. Residential structures/dwellings are as defined in the applicable regulation and any regulation issued pursuant thereto. The Military Components may apply this policy to any other structures they deem appropriate.

On January 1, 1995, and thereafter, the provisions of the Residential Lead-Based Paint Hazard Reduction Act of 1992 (Title X of P.L. 102-550) concerning the transfer of Federal property for residential use take effect. These provisions, codified at (in pertinent part) 42 U.S.C. 4822, 4851-4856, and 15 U.S.C. 2688, are applicable to target housing, which is housing constructed prior to 1978, with limited exceptions for housing for the elderly or persons with disabilities or any 0-bedroom dwelling.

Target housing constructed after 1960 and before 1978 must be inspected for LBP and LBP hazards. The results of the inspection must be provided to prospective purchasers or transferees of BRAC property, identifying the presence of LBP and LBP hazards on a surface-by-surface basis. There is no Federal LBP hazard abatement requirement for such property. In addition, prospective transferees must be provided a lead hazard information pamphlet and the contract for sale or lease must include a lead warning statement.

Target housing constructed before 1960 must be inspected for LBP and LBP hazards, and such hazards must be abated. The results of the LBP inspection will be provided to prospective purchasers or transferees of BRAC property identifying the presence of LBP and LBP hazards on a surface-by-surface basis and a description of the abatement measures taken. In addition, prospective transferees must be provided with a lead hazard information pamphlet and the contract for transfer must include a lead warning statement.

The inspection and abatement discussed above will not be required when the building is scheduled for demolition by the transferee and the transfer document prohibits occupation of the building prior to the demolition; the building is scheduled for non-residential use; or, if the

building is scheduled for residential use, the transferee conducts renovation consistent with the regulatory requirements for the abatement of LPB hazards.

Effective January 1, 1995, DoD BRAC properties shall be transferred in accordance with any regulations implementing the Residential Lead-Based Paint Hazard Reduction Act of 1992. The Act also made Federal agencies subject to all Federal, State, interstate, and local substantive and procedural requirements respecting LBP and LBP hazards (see 15 U.S.C. 2688). Therefore, there may be more stringent local requirements applicable to Federal property transfers.

DOD POLICY ON RADON AT BASE REALIGNMENT AND CLOSURE PROPERTIES

In response to concerns with the potential health effects associated with radon exposure, and in accordance with the Indoor Radon Abatement provisions of Subchapter III of the Toxic Substances Control Act, 26 U.S.C. 2661 to 2671, the Department of Defense (DoD) conducted a study to determine radon levels in a representative sample of its buildings. In addition, as part of DoD's voluntary approach to reducing radon exposure, DoD has applied the Environmental Protection Agency (EPA) guidelines for residential structures with regard to remedial actions.

DoD policy is to ensure that any available and relevant radon assessment data pertaining to Base Realignment and Closure (BRAC) property being transferred shall be included in property transfer documents.

DoD policy is not to perform radon assessment and mitigation prior to transfer of BRAC property unless otherwise required by applicable law.

**DOD Policy on Determining Environmental Suitability for Leasing Property
Available as a Result of Base Closure or Realignment
of 17 June 1994**



ACQUISITION AND
TECHNOLOGY

OFFICE OF THE UNDER SECRETARY OF DEFENSE

3000 DEFENSE PENTAGON
WASHINGTON DC 20301-3000



11 7 JUN 1994

DUSD(ES)/CL

MEMORANDUM FOR DEPUTY ASSISTANT SECRETARY OF DEFENSE
(ECONOMIC REINVESTMENT & BRAC)
DEPUTY ASSISTANT SECRETARY OF THE ARMY
(ENVIRONMENT, SAFETY AND OCCUPATIONAL
HEALTH), OASA (IL&E)
DEPUTY ASSISTANT SECRETARY OF THE NAVY
(ENVIRONMENT AND SAFETY), OASN (I&E)
DEPUTY ASSISTANT SECRETARY OF THE AIR FORCE
(ENVIRONMENT, SAFETY AND OCCUPATIONAL
HEALTH), SAF/MI
DIRECTOR, DEFENSE LOGISTICS AGENCY (DLA-CAAE)

SUBJECT: Procedures to Determine Environmental Suitability for Leasing Property
Available as a Result of a Base Closure or Realignment

Enclosed for your information and use is the May 4, 1994 Memorandum of Understanding between the U.S. Environmental Protection Agency and the Department of Defense on the above subject. Please note that those procedures are the same as in the September 9, 1993 Deputy Secretary of Defense memorandum, subject: Fast Track Cleanup at Closing Installations.

My point of contact is Mr. Shah A. Choudhury, (703) 697-9793 or 697-8063.

Patricia A. Rivers

Patricia A. Rivers
Assistant Deputy Under Secretary of Defense
(Environmental Cleanup)

Enclosure

cc: DUSD(ES)/PI
Fast Track Cleanup Committee



MEMORANDUM OF UNDERSTANDING
BETWEEN THE
U.S. ENVIRONMENTAL PROTECTION AGENCY
AND THE U.S. DEPARTMENT OF DEFENSE

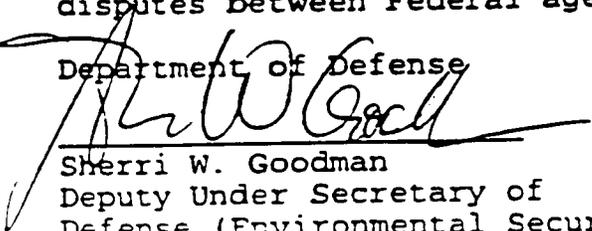
SUBJECT: Procedures to Determine Environmental Suitability for Leasing Property Available as a Result of a Base Closure or Realignment

1. Purpose: The purpose of this Memorandum of Understanding (MOU) between the Department of Defense (DoD) and the Environmental Protection Agency is to establish procedures and responsibilities for determining the environmental suitability for leasing property which is available as a result of a base closure or realignment initiated per the 1988 or 1990 Base Closure and Realignment Act. The MOU is entered into as provided by 10 U.S.C. 2667 (f), as amended by section 2906 of the Defense Authorization Act of 1994.

2. Scope: On September 9, 1993, the Deputy Secretary of Defense issued a memorandum, subject; Fast Track Clean-up at Closing Installations, which contained the attached DoD Policy on the Environmental Review Process to Reach a Finding of Suitability to Lease (FOSL) on the basis of an Environmental Baseline Survey (EBS). DoD and EPA agree that the DoD Components will make the determination of environmental suitability for leasing utilizing this FOSL policy. DoD prepared the FOSL policy in cooperation with EPA, and any modification of the FOSL policy will be the result of similar cooperation, without requiring modification of this MOU. DoD agrees that the Components will develop FOSL documents with input from the appropriate State Agency and EPA Regional Office, in accordance with the attached FOSL policy, and that the Components will respond to regulatory comments, as described in this policy.

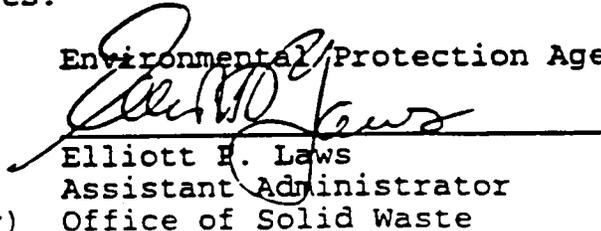
3. Duration and termination: This agreement expires September 30, 1998, but may be extended upon the agreement of the parties. Modifications to this agreement may be made upon the mutual agreement of the parties; however, modifications shall be made in writing. The agreement will remain unchanged absent a response. Conflicts arising between the parties shall be resolved administratively between the agencies. Absent agreement, dispute resolution shall be in accordance with procedures for resolving disputes between Federal agencies.

Department of Defense


Sherri W. Goodman
Deputy Under Secretary of
Defense (Environmental Security)

Date: 3/25/94

Environmental Protection Agency


Elliott E. Laws
Assistant Administrator
Office of Solid Waste
and Emergency Response

Date: 5/4/94

DOD POLICY ON THE ENVIRONMENTAL
REVIEW PROCESS TO REACH A
FINDING OF SUITABILITY TO LEASE (FOSL)

I. PURPOSE

This policy provides guidance to Department of Defense (DoD) Components on the process to identify and document parcels of real property made available through the Base Realignment and Closure (BRAC) process and which are environmentally suitable for outlease. The DoD Components may develop implementing procedures containing additional requirements based on their own specific organizational needs and unique requirements but which will, at a minimum, include, but not conflict with, the following documentation and procedures.

II. APPLICABILITY AND SCOPE

This policy applies to all DoD installations slated for closure or realignment pursuant to the Base Closure and Realignment Act of 1988 (P.L. 100-526) (BRAC 88) or the Defense Base Closure and Realignment Act of 1990 (P.L. 101-518) (BRAC 91, 93, and 95) and on which property is being considered for outlease. This policy is effective immediately. However, where DoD Components have been following a similar policy for arriving at FOSLs, and converting to these specific requirements would delay requested leases already being processed, those existing similar Component procedures may be followed until January 1, 1994. Nothing in this policy affects any requirement to comply with the National Environmental Policy Act (NEPA). The policy meets the following objectives:

- A. Ensure protection of human health and the environment.
- B. Develop a DoD-wide process to assess, determine and document the environmental suitability of properties (parcels) for outlease.
- C. Ensure outleases of properties do not interfere with environmental restoration schedules and activities being conducted under the provisions of law or regulatory agreements.
- D. Ensure compliance with all applicable environmental requirements and establish the basis for the DoD Components to make notifications to lessees regarding hazardous substances (including asbestos and any substance regulated under CERCLA, RCRA or state law) and petroleum products (including their derivatives,

Environmental Security -- Defending Our Future

such as aviation fuel and motor oil) potentially on the property.

- E. Provide adequate public and regulatory participation.

III. POLICY

- A. Requirement for Assessment, Determination and Documentation of Properties Suitable for Outlease

In the case of real property to which this policy applies, the head of the DoD Component with accountability over the property, or his/her designated representative, shall assess, determine and document when properties are suitable for outleasing. This assessment and determination will be based on an Environmental Baseline Survey (EBS) and will be documented in a Finding of Suitability to Lease (FOSL) as described below.

- E. Investigation

- 1. Environmental Baseline Survey (EBS). An EBS will be prepared encompassing any parcel to be outleased. The EBS will be based on all existing environmental information related to storage, release, treatment or disposal of hazardous substances or petroleum products on the property to determine or discover the obviousness of the presence or likely presence of a release or threatened release of any hazardous substance or petroleum product. In certain cases, additional data, including sampling and analysis, may be needed in the EBS to support the FOSL determination.

A previously conducted EBS may be updated as necessary and used for making a FOSL determination, where appropriate. An EBS also may satisfy other environmental requirements (e.g., to reach a Finding of Suitability to Transfer [FOST] or meet the uncontaminated parcel identification requirements of the Community Environmental Response Facilitation Act [CERFA]).

- 2. Procedures for Conducting an EBS. The EBS will consider all sources of available information concerning environmentally significant current and past uses of the real property and shall, at a minimum, consist of the following:

- a. Detailed search and review of available information and records in the possession of the DoD Components and records made available by the regulatory agencies or other involved Federal agencies. DoD Components are responsible for requesting and making reasonable inquiry into the existence and availability of relevant information and records to include any additional study information (e.g., surveys for asbestos, radon, lead-based paint, transformers containing PCB, Resource Conservation and Recovery Act Facility Assessments and Investigations [RFA and RFI]) to determine what, if any, hazardous substances or petroleum products may be present on the property.
- b. Review of all reasonably obtainable Federal, state, and local government records for each adjacent facility where there has been a release of any hazardous substance or any petroleum product, and which is likely to cause or contribute to a release or threatened release of any hazardous substance or any petroleum product on the real property.
- c. Analysis of aerial photographs that may reflect prior uses of the property which are in the possession of the Federal Government or are reasonably obtainable through state or local government agencies.
- d. Interviews with current and/or former employees involved in operations on the real property.
- e. Visual inspections of the real property; any buildings, structures, equipment, pipe, pipeline, or other improvements on the real property; and of properties immediately adjacent to the real property, noting sewer lines, runoff patterns, evidence of environmental impacts (e.g., stained soil, stressed vegetation, dead or ill wildlife) and other observations which indicate actual or potential release of hazardous substances or petroleum products.
- f. Identification of sources of contamination on the installation and on adjacent properties

which could migrate to the parcel during the lease term.

- g. Ongoing response actions or actions that have been taken at or adjacent to the parcel.
- h. A physical inspection of property adjacent to the real property, to the extent permitted by owners or operators of such property.
- i. Sampling, if the circumstances deem appropriate.

NOTE:

For the purposes of paragraphs b, e, f, g, & h above, "adjacent properties" should be defined as either those properties contiguous to the boundaries of the property being surveyed or other nearby properties. In either case, the survey should be addressed to those portions of the properties relatively near the installation that could pose significant environmental concern and/or have a significant impact on the results of the EBS.

- 3. Documentation of an EBS. At the completion of the EES, a report will be prepared which will include the following:
 - a. An Executive Summary briefly stating the areas of real property (or parcels) evaluated and the conclusions of the survey.
 - b. The property identification (e.g., address, assessor parcel number, legal description).
 - c. Any relevant information obtained from a detailed search of Federal Government records pertaining to the property, including available maps.
 - d. Any relevant information obtained from a review of the recorded chain of title documents regarding the real property. The review should address those prior ownerships/uses that could reasonably have contributed to an environmental concern, and, at a minimum, cover the preceding 60 years.
 - e. A description of past and current activities, including all past and current DoD and non-DoD uses to the extent such information is

reasonably available, on the property and on adjacent properties.

- f. A description of hazardous substances or petroleum products management practices (to include storage, release, treatment or disposal) at the property and at adjacent properties.
- g. Any relevant information obtained from records reviews and visual and physical inspections of adjacent properties.
- h. Description of ongoing response actions or actions that have been taken at or adjacent to the property.
- i. An evaluation of the environmental suitability of the property for lease for the intended purpose, if known, including the basis for the determination of such suitability.
- j. Reference to key documents examined (e.g., aerial photographs, spill incident reports, investigation results). (The documents will be made available by DoD upon request to DoD.)

C. Finding of Suitability to Lease (FOSL)

After completion and review of the EBS and any appropriate local community reuse plans, the DoD Component Official will sign a FOSL once a determination that the property is suitable to lease for the intended purpose has been made based on one of the following:

1. Hazardous substance notice need not be given because no hazardous substances or petroleum products were stored for one year or more, known to have been released, treated or disposed of on the parcel;
2. Hazardous substance notice will be given of the type and quantity of hazardous substances or petroleum products, and the time at which storage for one year or more, release, treatment or disposal took place, but the property is not now contaminated with hazardous substances or petroleum products (e.g., storage for one year or more but no release, a release has occurred but no

response action is required, or a response action has been completed); or

3. The property contains some level of contamination by hazardous substances or petroleum products, and hazardous substance notice will be given of the type and quantity of such hazardous substances or petroleum products, and the time at which storage for one year or more, release, treatment or disposal took place. However, this property can be used pursuant to the proposed lease, with the specified use restrictions in the lease, with acceptable risk to human health or the environment and without interference with the environmental restoration process. (The specific lease restrictions on the use of the parcel to protect human health and the environment and the environmental restoration process will be listed in the FOSL.)

IV. PROCEDURES AND RESPONSIBILITIES

- A. Regulatory agencies will be notified at the initiation of the EBS and the FOSL. The process of development of these documents will be designed to assure that regulators are provided adequate opportunity to express their views. Regulators will be provided with workable draft documents as they become available. Regulatory comments received during the development of these documents will be reviewed and incorporated as appropriate. Any unresolved regulatory comments will be included as attachments to the EBS or the FOSL.
- B. As required by CERCLA Section 120(h)(5), DoD shall notify the state prior to entering into any lease that will encumber the property beyond the date of termination of DoD's operations. These notifications shall include the length of lease, the name of lessee, and a description of the uses that will be allowed under the lease of the property. At National Priorities List (NPL) sites, DoD shall provide this notification to the United States Environmental Protection Agency (EPA) as well.
- C. The DoD Components will provide public notice of signing the FOSL; will retain the signed FOSL, including all regulatory comments and responses on the EBS and/or FOSL, in the transaction file (and the Administrative Record, where applicable); and will make the FOSL available to the public upon request.

- D. The EBS and the FOSL will be provided to each lessee prior to execution of the lease.
- E. Conditions will be included in the lease to ensure:
1. Notification of the existence of a Federal Facility Agreement (FFA), Interagency Agreement (IAG), or other regulatory agreements, orders or decrees for environmental restoration (e.g., RCRA/HSWA permit), if any. Terms of the lease shall not affect the rights and obligations of parties under the FFA, IAG, or other regulatory agreements, orders, or decrees.
 2. Environmental investigations and response oversight and activities will not be disrupted. Such conditions will include, but are not limited to:
 - a. providing for continued access for DoD and regulatory agencies to perform investigations as required on, or adjacent to, the real property, to monitor the effectiveness of the cleanup as required, to perform five-year reviews as required, and/or to take additional remedial or removal actions as required. At a minimum, such rights shall include all rights existing under the FFA.
 - b. ensuring that the proposed use will not disrupt remediation activities.
 3. Human health and the environment are protected by preventing the inappropriate use of the property.
 4. Compliance with health and safety plans.
 5. Subsequent transactions involving the property shall include such provisions.
- F. The attached model lease provisions will be included in all outleases and subleases, unless determined not to be appropriate by the DoD Component in consultation with the appropriate EPA or state representative. This determination will be documented by the DoD Component.
- G. Leases will provide that both the EBS and restrictive conditions in the lease, dealing with environmental requirements limiting use, will also be included in subleases as they occur. Copies of all subleases will be provided to the DoD Components with jurisdiction

over the parcel, retained in the transaction file and made available to the public upon request.

- H. Amendments, renewals or extensions of leases shall not require a new EBS or FOSL, or an updating of them, unless the leased premises change substantially or the permitted uses of them are to change in environmentally-significant ways.

MODEL LEASE PROVISIONS

NOTE: [] Indicates the need for lease-specific information (e.g., installation name).

ENVIRONMENTAL PROTECTION

1. The sole purpose(s) for which the leased premises and any improvements thereon may be used, in the absence of prior written approval of the Government for any other use, [insert intended use of the leased premises].
2. The Lessee shall neither transfer nor assign this Lease or any interest therein or any property on the leased premises, nor sublet the leased premises or any part thereof or any property thereon, nor grant any interest, privilege, or license whatsoever in connection with this Lease without the prior written consent of the Government. Such consent shall not be unreasonably withheld or delayed. Every sublease shall contain the Environmental Protection provisions herein.
3. The Lessee and any sublessee shall comply with the applicable Federal, state, and local laws, regulations, and standards that are or may become applicable to Lessee's activities on the Leased Premises.
4. The lessee and any sublessee shall be solely responsible for obtaining at its cost and expense any environmental permits required for its operations under the Lease, independent of any existing permits.
5. The Government's rights under this Lease specifically include the right for Government officials to inspect upon reasonable notice the Leased Premises for compliance with environmental, safety, and occupational health laws and regulations, whether or not the Government is responsible for enforcing them. Such inspections are without prejudice to the right of duly constituted enforcement officials to make such inspections. The Government normally will give the Lessee or sublessee twenty-four (24) hours prior notice of its intention to enter the Leased Premises unless it determines the entry is required for safety, environmental, operations, or security purposes. The Lessee shall have no claim on account of any entries against the United States or any officer, agent, employee, or contractor thereof.

NOTE: USE THE FOLLOWING PROVISION 6. IF THE LEASED PROPERTY IS PART OF A NATIONAL PRIORITIES LIST (NPL) SITE; ADAPT TO CLEANUP AGREEMENTS TO SUIT CLEANUPS UNDER STATE REGULATORY AUTHORITIES (E.G., A NON-NPL SITE).

6. The Government acknowledges that [insert name of military installation] has been identified as a National Priority List (NPL) Site under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) of 1980, as amended. The Lessee acknowledges that the Government has provided it with a copy of the [insert name of military installation] Federal Facility Agreement (FFA) entered into by the United States Environmental Protection Agency (EPA) Region [insert number], the state of [insert name of state], and the Military Department and effective on [insert date], and will provide the Lessee with a copy of any amendments thereto. The Lessee agrees that should any conflict arise between the terms of such agreement as it presently exists or may be amended ("FFA," "Interagency Agreement" or "IAG") and the provisions of this Lease, the terms of the FFA or IAG will take precedence. The Lessee further agrees that notwithstanding any other provision of the Lease, the Government assumes no liability to the Lessee or its sublessees or licensees should implementation of the FFA interfere with the Lessee's or any sublessee's or licensee's use of the Leased Premises. The Lessee shall have no claim on account of any such interference against the United States or any officer, agent, employee or contractor thereof, other than for abatement of rent.

NOTE: USE THE FOLLOWING PROVISION 7. IF A FEDERAL FACILITIES AGREEMENT (FFA) OR INTERAGENCY AGREEMENT (IAG) APPLIES TO THE PROPERTY BEING LEASED (E.G., AN NPL SITE).

7. The Government, EPA, and the [insert name of state agency] and their officers, agents, employees, contractors, and subcontractors have the right, upon reasonable notice to the Lessee and any sublessee, to enter upon the Leased Premises for the purposes enumerated in this subparagraph and for such other purposes consistent with any provision of the FFA:

- (a) to conduct investigations and surveys, including, where necessary, drilling, soil and water sampling, test-pitting, testing soil borings and other activities related to the [insert name of military installation] Installation Restoration Program, FFA or IAG;
- (b) to inspect field activities of the Government and its contractors and subcontractors in implementing the [insert name of military installation] IRP, FFA or IAG;

- (c) to conduct any test or survey required by the EPA or [insert name of state agency] relating to the implementation of the FFA or environmental conditions at the Leased premises or to verify any data submitted to the EPA or [insert name of state agency] by the Government relating to such conditions;
- (d) to construct, operate, maintain or undertake any other response or remedial action as required or necessary under the [insert name of military installation] IRP or the FFA or IAG, including, but not limited to monitoring wells, pumping wells and treatment facilities.

NOTE: USE THE FOLLOWING ALTERNATE PROVISION 7, IF THE INSTALLATION RESTORATION PROGRAM (IRP) OR OTHER ENVIRONMENTAL INVESTIGATION APPLIES TO THE PROPERTY BEING LEASED (E.G., A NON-NPL SITE).

7. The Government and its officers, agents, employees, contractors, and subcontractors have the right, upon reasonable notice to the Lessee and any sublessee, to enter upon the Leased Premises for the purposes enumerated in this subparagraph:

- (a) to conduct investigations and surveys, including, where necessary, drilling, soil and water sampling, test-pitting, testing soil borings and other activities related to the [insert name of military installation] Installation Restoration Program (IRP);
- (b) to inspect field activities of the Government and its contractors and subcontractors in implementing the [insert name of military installation] IRP;
- (c) to conduct any test or survey related to the implementation of the IRP or environmental conditions at the Leased premises or to verify any data submitted to the EPA or [insert name of state agency] by the Government relating to such conditions;
- (d) to construct, operate, maintain or undertake any other response or remedial action as required or necessary under the [insert name of military installation] IRP, including, but not limited to monitoring wells, pumping wells and treatment facilities.

8. The Lessee agrees to comply with the provisions of any health or safety plan in effect under the IRP or the FFA during the course of any of the above described response or remedial actions. Any inspection, survey, investigation, or other response or remedial action will, to the extent

practicable, be coordinated with representatives designated by the Lessee and any sublessee. The Lessee and sublessees shall have no claim on account of such entries against the United States or any officer, agent, employee, contractor, or subcontractor thereof. In addition, the lessee shall comply with all applicable Federal, state, and local occupational safety and health regulations.

9. The Lessee further agrees that in the event of any assignment or sublease of the Leased Premises, it shall provide to the EPA and [insert name of state agency] by certified mail a copy of the agreement or sublease of the Leased Premises (as the case may be) within fourteen (14) days after the effective date of such transaction. The Lessee may delete the financial terms and any other proprietary information from the copy of any agreement of assignment or sublease furnished pursuant to this condition.
10. The Lessee shall strictly comply with the hazardous waste permit requirements under Resource Conservation and Recovery Act, or its [insert name of state] equivalent. Except as specifically authorized by the Government in writing, the Lessee must provide at its own expense such hazardous waste management facilities, complying with all laws and regulations. Government hazardous waste management facilities will not be available to the Lessee. Any violation of the requirements of this condition shall be deemed a material breach of this Lease.
11. DoD Component accumulation points for hazardous and other wastes will not be used by the Lessee or any sublessee. Neither will the Lessee or sublessee permit its hazardous wastes to be commingled with hazardous waste of the DoD Component.
12. The Lessee shall have a Government-approved plan for responding to hazardous waste, fuel, and other chemical spills prior to commencement of operations on the leased premises. Such plan shall be independent of [insert name of installation] and, except for initial fire response and/or spill containment, shall not rely on use of installation personnel or equipment. Should the Government provide any personnel or equipment, whether for initial fire response and/or spill containment, or otherwise on request of the Lessee, or because the Lessee was not, in the opinion of the said officer, conducting timely cleanup actions, the Lessee agrees to reimburse the Government for its costs.
13. The Lessee shall not construct or make or permit its sublessees or assigns to construct or make any substantial alterations, additions, or improvements to or installations upon or otherwise modify or alter the leased premises in any

way which may adversely affect the cleanup, human health, or the environment without the prior written consent of the Government. Such consent may include a requirement to provide the Government with a performance and payment bond satisfactory to it in all respects and other requirements deemed necessary to protect the interests of the Government. For construction or alterations, additions, modifications, improvements or installations (collectively "work") in the proximity of operable units that are part of a National Priorities List (NPL) Site, such consent may include a requirement for written approval by the Government's Remedial Project Manager. Except as such written approval shall expressly provide otherwise, all such approved alterations, additions, modifications, improvements, and installations shall become Government property when annexed to the leased premises.

14. The Lessee shall not conduct or permit its sublessees to conduct any subsurface excavation, digging, drilling or other disturbance of the surface without the prior written approval of the Government.
15. The Lessee shall strictly comply with the hazardous waste permit requirements under the Resource Conservation and Recovery Act (RCRA), or its State equivalent and any other applicable laws, rules or regulations. The Lessee must provide at its own expense such hazardous waste storage facilities which comply with all laws and regulations as it may need for such storage. Any violation of the requirements of this provision shall be deemed a material breach of this Lease.

**DOD Policy on Finding Suitability to Transfer for BRAC Property
of 1 June 1994**



THE DEPUTY SECRETARY OF DEFENSE
 WASHINGTON, D.C. 20301-1000

Full Environmental
 1 JUN 1994



MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
 UNDER SECRETARIES OF DEFENSE
 COMPTROLLER
 DIRECTOR, DEFENSE RESEARCH AND ENGINEERING
 ASSISTANT SECRETARIES OF DEFENSE
 GENERAL COUNSEL
 INSPECTOR GENERAL
 ASSISTANTS TO THE SECRETARY OF DEFENSE
 DIRECTOR, ADMINISTRATION AND MANAGEMENT
 DIRECTORS OF THE DEFENSE AGENCIES

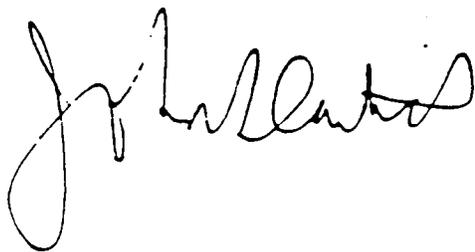
SUBJECT: Finding of Suitability to Transfer for BRAC Property

On September 9, 1993, we issued DoD policy on Fast Track Cleanup at Closing Installations as part of the Department's implementation of the President's program to Revitalize Base Closure Communities.

The two documents attached to this memorandum provide guidance on the environmental review process for transferring property. The guidance was prepared by a joint OSD, Military Department, EPA workgroup and is a fundamental element in our guidance for the lease or transfer by deed of BRAC properties. The other elements are: (1) our 4 May 1994 memorandum of understanding with EPA on the suitability of leasing, required by the FY 94 Defense Authorization Act; and (2) the proposed procedures for DoD implementation of Section 2908 of this Act for "Transfer Authority in Connection with Payment of Environmental Remediation Costs."

I would like to call your attention to Section 330 of the National Defense Authorization Act for Fiscal Year 1993, as amended, that requires the Secretary of Defense to indemnify transferees of closing Defense property from claims that result from the release or threatened release by DoD activities of hazardous substances or petroleum products. The attached procedures provide the framework for ensuring that we do not assume unwarranted risks as we transfer property.

Our best efforts in this area are crucial to the successful transition from base closure to economic redevelopment. I ask for your continued personal support.



Attachments

11103

DoD GUIDANCE ON THE ENVIRONMENTAL REVIEW PROCESS TO REACH A
FINDING OF SUITABILITY TO TRANSFER (FOST)
FOR PROPERTY WHERE RELEASE OR DISPOSAL HAS OCCURRED

I. PURPOSE.

This policy provides guidance to the Department of Defense (DoD) Components on the necessary process to document parcels of real property made available through the Base Realignment and Closure (BRAC) process and which are environmentally suitable for transfer by deed under Section 120(h) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 U.S.C. Section 9620(h)). This policy does not apply to transfers of property to persons paying the cost of environmental restoration activities under the provisions of Section 2908 of the National Defense Authorization Act for FY 94. The DoD Components may develop implementation procedures which may contain additional requirements based on their own specific needs and unique requirements but will, at a minimum, include the following documentation and procedures. This guidance applies to property where release or disposal of hazardous substances or petroleum products has occurred and which is being considered for transfer by deed. Nothing in this policy negates the requirement to comply with the National Environmental Policy Act (NEPA).

II. APPLICABILITY AND SCOPE.

This policy applies to all DoD installations selected for closure or realignment pursuant to the Base Closure and Realignment Act of 1988 (P.L. 100-526) (BRAC 88) or the Defense Base Closure and Realignment Act of 1990 (P.L. 101-510) (BRAC 91, 93, and 95). The policy's scope intends to meet the following objectives:

- A. Ensure protection of human health and the environment.
- B. Develop a DoD-wide process to assess, determine and document the environmental suitability of properties for transfer by deed.
- C. Ensure transfer of properties by deed does not interfere with response actions being conducted at National Priorities List (NPL) sites under the provisions of a Federal Facilities Agreement or at non-NPL sites under the provisions of other types of agreements or any corrective action orders.
- D. Ensure compliance with all applicable environmental cleanup requirements and allow the DoD Component to demonstrate compliance with Section 120(h) of CERCLA before properties are transferred by deed.

- E. Provide for adequate public and regulatory participation without unduly encumbering the Defense Department Components' authority and mandate to make property available for reuse in a timely manner.
- F. Ensure a sufficient environmental review of the real property being considered for transfer is conducted to avoid unwarranted risks of future liability.

III. POLICY.

- A. Requirement for Assessment, Determination and Documentation of Properties Suitable for Transfer by Deed.

In the case of real property to which this policy applies, the head of the DoD Component with accountability over the property, or his/her designated representative, shall assess, determine and document when properties where release or disposal of hazardous substances or petroleum products has occurred are suitable for transfer by deed. This assessment and determination will be based on an Environmental Baseline Survey (EBS) and will be documented in a Finding of Suitability to Transfer (FOST) as described below.

- B. Investigation.

- 1. Environmental Baseline Survey (EBS). An EBS will be prepared encompassing any property to be transferred. The EBS will be based on all existing environmental information related to storage, release, treatment or disposal of hazardous substances or petroleum products on the property to determine or discover the obviousness of the presence or likely presence of a release or threatened release of any hazardous substance or petroleum product. In certain cases additional data, including sampling, if appropriate under the circumstances, may be needed in the EBS to support the FOST determination.

A previously conducted EBS may be updated as necessary and used for making a FOST determination, where appropriate. An EBS also may satisfy other environmental requirements (e.g., to reach a Finding of Suitability to Lease [FOSL] or satisfy the requirements of the Community Environmental Response Facilitation Act [CERFA]).

2. Procedures for Conducting an EBS. The EBS will consider all sources of available information concerning all environmentally significant current and past uses of the real property and shall, at a minimum, consist of the following:
- a. Detailed search and review of available information and records in the possession of the DoD Components or records made available by the regulatory agencies or other involved Federal agencies. DoD Components are responsible for requesting and making reasonable inquiry into the existence and availability of relevant information and records to include any additional study information (e.g., surveys for radioactive materials, asbestos, radon, lead-based paint, transformers containing PCB, Resource Conservation and Recovery Act Facility Assessments and Investigations [RFA and RFI], Underground Storage Tank Cleanup Program) to determine the environmental condition of the property.
 - b. Review of all reasonably obtainable Federal, State, and local government records for each adjacent facility where there has been a release of any hazardous substance or any petroleum product, and which is likely to cause or contribute to a release or threatened release of any hazardous substance or any petroleum product on the real property.
 - c. Analysis of aerial photographs which are in the possession of the Federal Government or are reasonably obtainable through state or local government agencies that may reflect prior uses of the real property.
 - d. Interviews with current and/or former employees involved in operations on the real property.
 - e. Visual inspections of the real property; any buildings, structures, equipment, pipe, pipeline, or other improvements on the real property; and of properties immediately adjacent to the real property, noting sewer lines, runoff patterns, evidence of environmental impacts (e.g., stained soil, stressed vegetation, dead or ill wildlife)

and other observations which indicate actual or potential release of hazardous substances or petroleum products.

- f. Identification of sources of contamination on the installation and on adjacent properties which could migrate to the real property.
- g. Ongoing response actions and actions that have been taken at, or adjacent to, the real property.
- h. A physical inspection of property adjacent to the real property, as appropriate, and to the extent permitted by owners or operators of such property.

NOTE:

For the purposes of paragraphs b, e, f, g, & h above, "adjacent properties" are defined as either those properties contiguous to the boundaries of the property being surveyed or other nearby properties. In either case, the survey should be addressed to those portions of the properties relatively near the installation that could pose significant environmental concern and/or have a significant impact on the results of the EBS.

- 3. Documentation of an EBS. At the completion of the EBS, a report will be prepared which will include the following:
 - a. An Executive Summary briefly stating the areas of real property (or parcels) evaluated and the conclusions of the survey.
 - b. The property identification (e.g., address, assessor parcel number, legal description).
 - c. Any relevant information obtained from a detailed search of Federal Government records pertaining to the property, including available maps.
 - d. Any relevant information obtained from a review of the recorded chain of title documents regarding the real property. The review should address those prior ownerships/uses that could reasonably have contributed to an environmental concern, and, at a minimum, cover the preceding 60 years.

- e. A description of past and current activities, including all past and current DoD and non-DoD uses to the extent such information is reasonably available, on the property and on adjacent properties.
 - f. A description of hazardous substances and petroleum products management practices (to include storage, release, treatment or disposal) at the property and at adjacent properties, to the extent such information is reasonably available.
 - g. Any relevant information obtained from records reviews and visual and physical inspections of adjacent properties.
 - h. Description of ongoing response actions or actions that have been taken at or adjacent to the property.
 - i. Reference to key documents examined (e.g., aerial photographs, spill incident reports, investigation results). (The documents will be made available by DoD upon request.)
4. Analysis of Intended Use. Before the signing of a FOST, an analysis of the intended use of the property, if known, will be conducted and will include:
- a. An evaluation of the environmental suitability of the property for transfer by deed for the intended purpose, if known, including the rationale for the determination of such suitability.
 - b. A listing of specific recommended restrictions on use of the property, if any, to protect human health and the environment or the environmental restoration process. For remediated parcels such restrictions would include those documented in the Record of Decision (ROD) under the National Oil and Hazardous Substances Contingency Plan (NCP) or equivalent decision documents.

NOTE: The covenant required by CERCLA Section 120(h)(3) regarding hazardous substances must be based on either (1) a determination that no remedial action is required or (2) a determination that all remedial action

necessary to protect human health and the environment has been taken. The determination that no remedial action is required or that all remedial action has been taken shall be supported by the appropriate documentation required by the program (e.g., CERCLA, RCRA, UST, DERP, state law) under which the property was evaluated and addressed. Such decision document may include a CERCLA Record of Decision (ROD), No Further Action ROD, No Further Response Action Planned (NFRAP), or other such similar RCRA, UST, DERP, or state law documentation, or other documentation that describes a consensus between the lead regulatory agency and the DoD Component. The intent is to use the processes under existing cleanup authorities and programs, and not create an additional separate process, to determine whether property requires remedial action or can be transferred as is. For property that requires remedial action, whether or not an NPL site and regardless of which cleanup authority is used, the covenant that all remedial action has been taken may only be made after a demonstration to EPA that an approved remedy is installed and operating properly and successfully.

C. Finding of Suitability to Transfer (FOST).

After completion and review of the EBS, the intended use analysis, and any available local community reuse plan, the DoD Component will sign a FOST once a determination has been made that the property is suitable for transfer by deed for the intended purpose, if known, because the requirements of CERCLA Section 120(h)(3) have been met for the property, taking into account the potential risk of future liability. The DoD component will provide a copy of the signed FOST to the regulator.

IV. PROCEDURES AND RESPONSIBILITIES.

- A. Regulatory agencies will be notified at the initiation of the EBS and the FOST. The process of development of these documents will be designed to assure that regulators are provided adequate opportunity to express their views. Regulators will be provided with workable draft documents as they become available, including the EBS and the proposed FOST. Regulatory comments received during the development of these documents will be reviewed and incorporated as appropriate. Any unresolved regulatory comments will be included as attachments to the EBS or the FOST.
- B. The regulatory agencies and public will be notified of the intent to sign a FOST. This will take place at the earliest possible time, but no later than 30 days prior

to a transfer by deed. The notification will be mailed to the regulatory agencies and will include the draft FOST. Either the EBS report or a summary of the findings of the EBS process that pertain to the parcel to be transferred will be made available to the public. Additional supporting documentation will be made available upon request. The DoD Components will address relevant comments from regulatory officials and other appropriate entities that have been received within this 30-day period. After consideration of all relevant comments (unresolved comments will be included as an appendix to the FOST) and signing of the FOST, the DoD Component may proceed to convey the property by deed.

- C. The DoD Components will provide public notice of the signing of the FOST and will retain the signed FOST, including all regulatory comments and responses on the EBS and/or FOST, in the transaction file (and the Administrative Record, where applicable) and will make the FOST available to the public upon request.
- D. Conditions will be included in the transfer deed to:
 - 1. Ensure environmental investigations and remedial and oversight activities will not be disrupted at any time. Such conditions will include, but are not limited to:
 - a. Providing for continued access for DoD (or its designated contractor) and regulatory agencies to monitor the effectiveness of cleanup, perform five-year reviews, and/or take additional remedial or removal actions.
 - b. Prohibiting activities that could disrupt any remediation activities or jeopardize the protectiveness of those remedies such as the following:
 - (1) Surface application of water that could impact the migration of contaminated ground water;
 - (2) Subsurface drilling or use of ground water unless DoD determines that there will be no adverse impacts on the cleanup process; or,
 - (3) Construction that would interfere with, negatively impact, or restrict access for cleanup work.
 - 2. Limit use as required by the FOST.

DoD GUIDANCE ON THE ENVIRONMENTAL REVIEW
PROCESS TO REACH A
FINDING OF SUITABILITY TO TRANSFER (FOST)
FOR PROPERTY WHERE NO RELEASE OR DISPOSAL HAS OCCURRED

I. PURPOSE.

This policy provides guidance to the Department of Defense (DoD) Components on the process to document parcels of real property made available through the Base Realignment and Closure (BRAC) process and which are environmentally suitable for transfer by deed under Section 120(h) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 U.S.C. 9620 (h)). The DoD Components may develop implementation procedures which may contain additional requirements based on their own specific needs and unique requirements but will, at a minimum, include the following documentation and procedures. This guidance applies to property where no release or disposal of hazardous substances or petroleum products has occurred and which is being considered for transfer by deed, whether or not storage of hazardous substances or petroleum products has occurred. Nothing in this policy negates the requirement to comply with the National Environmental Policy Act (NEPA).

II. APPLICABILITY AND SCOPE.

This policy applies to all DoD installations selected for closure or realignment pursuant to the Base Closure and Realignment Act of 1988 (P.L. 100-526) (BRAC 88) or the Defense Base Closure and Realignment Act of 1990 (P.L. 101-510) (BRAC 91, 93, and 95). The policy's scope intends to meet the following objectives:

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- D. Ensure compliance with all applicable environmental cleanup requirements and allow the DoD Component to demonstrate compliance with Section 120(h) of CERCLA before properties are transferred by deed.

- E. Provide for adequate public and regulatory participation without unduly encumbering the DoD Components' authority and mandate to make property available for reuse in a timely manner.
- F. Ensure a sufficient environmental review of the real property being considered for transfer is conducted to avoid unwarranted risks of future liability.

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In the case of real property to which this policy applies, the head of the DoD Component with accountability over the property, or his/her designated representative, shall assess, determine and document when properties where no release or disposal of hazardous substances or petroleum products has occurred are suitable for transfer by deed. This assessment and determination will be based on an Environmental Baseline Survey (EBS) and will be documented in a Finding of Suitability to Transfer (FOST) as described below.

- B. Investigation.

- 1. Environmental Baseline Survey (EBS). An EBS will be prepared encompassing any property to be transferred. The EBS will be based on all existing environmental information related to storage, release, treatment or disposal of hazardous substances or petroleum products on the property to determine or discover the obviousness of the presence or likely presence of a release or threatened release of any hazardous substance or petroleum product. In certain cases additional data, including sampling, if appropriate under the circumstances, may be needed in the EBS to support the FOST determination.

A previously conducted EBS may be updated as necessary and used for making a FOST determination, where appropriate. An EBS also may satisfy other environmental requirements (e.g., to reach a Finding of Suitability to Lease [FOSL] or satisfy the requirements of the Community Environmental Response Facilitation Act [CERFA]).

2. Procedures for Conducting an EBS. The EBS will consider all sources of available information concerning all environmentally significant current and past uses of the real property and shall, at a minimum, consist of the following:
 - a. Detailed search and review of available information and records in the possession of the DoD Components or records made available by the regulatory agencies or other involved Federal agencies. DoD Components are responsible for requesting and making reasonable inquiry into the existence and availability of relevant information and records to include any additional study information (e.g., surveys for radioactive materials, asbestos, radon, lead-based paint, transformers containing PCB, Resource Conservation and Recovery Act Facility Assessments and Investigations [RFA and RFI], Underground Storage Tank Cleanup Program) to determine the environmental condition of the property.
 - b. Review of all reasonably obtainable Federal, State, and local government records for each adjacent facility where there has been a release of any hazardous substance or any petroleum product, and which is likely to cause or contribute to a release or threatened release of any hazardous substance or any petroleum product on the real property.
 - c. Analysis of aerial photographs which are in the possession of the Federal Government or are reasonably obtainable through state or local government agencies that may reflect prior uses of the real property.
 - d. Interviews with current and/or former employees involved in operations on the real property.
 - e. Visual inspections of the real property; any buildings, structures, equipment, pipe, pipeline, or other improvements on the real property; and of properties immediately adjacent to the real property, noting sewer lines, runoff patterns, evidence of environmental impacts (e.g., stained soil, stressed vegetation, dead or ill wildlife)

and other observations which indicate actual or potential release of hazardous substances or petroleum products.

- f. Identification of sources of contamination on the installation and on adjacent properties which could migrate to the real property.
- g. Ongoing response actions and actions that have been taken at adjacent real property.
- h. A physical inspection of property adjacent to the real property, as appropriate, and to the extent permitted by owners or operators of such property.

NOTE:

For the purposes of paragraphs b, e, f, g, & h above, "adjacent properties" are defined as either those properties contiguous to the boundaries of the property being surveyed or other nearby properties. In either case, the survey should be addressed to those portions of the properties relatively near the installation that could pose significant environmental concern and/or have a significant impact on the results of the EBS.

- 3. Documentation of an EBS. At the completion of the EBS, a report will be prepared which will include the following:
 - a. An Executive Summary briefly stating the areas of real property (or parcels) evaluated and the conclusions of the survey.
 - b. The property identification (e.g., address, assessor parcel number, legal description).
 - c. Any relevant information obtained from a detailed search of Federal Government records pertaining to the property, including available maps.
 - d. Any relevant information obtained from a review of the recorded chain of title documents regarding the real property. The review should address those prior ownerships/uses that could reasonably have contributed to an environmental concern, and, at a minimum, cover the preceding 60 years.
 - e. A description of past and current activities, including all past and current DoD and non-

DoD uses to the extent such information is reasonably available, on the property and on adjacent properties.

- f. A description of hazardous substances and petroleum products management practices (to include storage, release or treatment) at the property and at adjacent properties, to the extent such information is reasonably available.
 - g. Any relevant information obtained from records reviews and visual and physical inspections of adjacent properties.
 - h. Description of ongoing response actions or actions that have been taken at adjacent real property.
 - i. Reference to key documents examined (e.g., aerial photographs, spill incident reports, investigation results). (The documents will be made available by DoD upon request.)
4. Analysis of the EBS. Before the signing of a FOST, a listing will be made of specific recommended restrictions on use of the property, if any, to protect human health and the environment.

C. Finding of Suitability to Transfer (FOST).

After completion and review of the EBS, the DoD Component will sign a FOST once a determination is made that the property is suitable for transfer by deed because no hazardous substances or petroleum products were known to have been released or disposed of on the property, taking into account the potential risk of future liability. The DoD Component will provide a copy of the signed FOST to the regulator.

IV. PROCEDURES AND RESPONSIBILITIES

- A. Regulatory agencies will be notified at the initiation of the EBS and the FOST. The process of development of these documents will be designed to assure that regulators are provided adequate opportunity to express their views. Regulators will be provided with workable draft documents as they become available, including the EBS and the proposed FOST. Regulatory comments received during the development of these documents will be reviewed and incorporated as appropriate. Any

unresolved regulatory comments will be included as attachments to the EBS or the FOST.

- B. The regulatory agencies and public will be notified of the intent to sign a FOST. This will take place at the earliest possible time, but no later than 30 days prior to a transfer by deed. The notification will be mailed to the regulatory agencies and will include the draft FOST. Either the EBS report or a summary of the findings of the EBS process that pertain to the parcel to be transferred will be made available to the public. Additional supporting documentation will be made available upon request. The DoD Components will address relevant comments from regulatory officials or other appropriate entities that have been received within this 30-day period. After consideration of all relevant comments (unresolved comments will be included as an appendix to the FOST) and signing of the FOST, the DoD Components may proceed to convey the property by deed.
- C. The DoD Components will provide public notice of the signing of the FOST and will retain the signed FOST, including all regulatory comments and responses on the EBS and/or FOST, in the transaction file (and the Administrative Record, where applicable) and will make the FOST available to the public upon request.
- D. Conditions will be included in the transfer deed to:
1. Ensure that a response action or corrective action found to be necessary after the date of transfer by deed will be conducted by the United States.
 2. Grant the United States access to the property in any case in which a response action or corrective action is found to be necessary at the property after the date of transfer by deed, or such access is necessary to carry out a response action or corrective action on adjoining property.

CNO Guidance on Establishment of Restoration Advisory Boards



DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
WASHINGTON DC 20350-2000

5090
Ser 453C/4U596021
9 Feb 94

From: Chief of Naval Operations
To: Distribution

Subj: ESTABLISHMENT OF RESTORATION ADVISORY BOARDS (RABS)

Ref: (a) Interim Report of the Federal Facilities Environmental
Restoration Dialogue Committee, February 1993 (The
Keystone Dialogue)

Encl: (1) Implementing Guidance for the Establishment of
Restoration Advisory Boards (RABS)

(2) Additional Suggestions for RAB Implementation

1. The purpose of this letter is to disseminate guidance for implementing Restoration Advisory Boards at Navy installations involved in environmental restoration under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) as amended by the Superfund Amendments and Reauthorization Act (SARA).

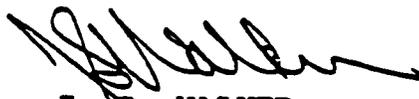
2. Recommendations for improving federal agency decision making in environmental restoration programs by enhancing involvement of other stakeholders are made in reference (a). The Interim Report is a consensus document developed by over 40 members of a committee chartered by the U.S. Environmental Protection Agency (EPA) under the Federal Advisory Committee Act. The Navy is already implementing many of the recommendations from the Keystone Dialogue and Department of Defense's (DoD) Management Guidance for the Defense Environmental Restoration Program (DERP) either through current community relations programs or the Technical Review Committees (TRCs). A key recommendation in the report was that federal agencies establish site specific advisory boards (SSABs). DoD has decided that rather than establishing SSABs, the scope of the TRCs will be broadened and they will be converted to Restoration Advisory Boards (RABs). Many of the reports recommendations for SSABs will be implemented through DoD and Navy policy and guidance for RABs.

3. DoD's DERP policy is to involve the local community in the cleanup effort as early as possible and throughout the Installation Restoration Program (IRP) process by: establishing communication channels with representatives of the community; making information on activities available in a timely manner; providing opportunities for public comment on documents; and at installations where there is sufficient interest, establishing RABs. Navy policy is to convert all of our TRCs to RABs. Enclosure (1) provides detailed Navy requirements and procedures pertaining to the establishment of RABs at Navy installations.

Subj: ESTABLISHMENT OF RESTORATION ADVISORY BOARDS (RABS)

4. Enclosure (2) is provided for informational purposes. Installations may use their discretion in determining whether or not they wish to implement the suggestions provided.

5. The responsibility for conducting community relations, implementing TRCs, and now RABs rests with the installations. Major Claimants will disseminate the policy and enclosures (1) and (2) to all installations and ensure that RABs are established by the end of FY 94. NAVFACENGCOM Engineering Field Divisions and Engineering Field Activities will support these efforts upon request of the installation. Representation by all concerned parties in the environmental restoration program will go a long way towards improving and implementing cleanups. Point of contact is Ms. Patricia Ferree, N453C, at (703) 602-3031.


J. S. WALKER
By direction

Distribution:

CINCLANTFLT N44
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Subj: ESTABLISHMENT OF RESTORATION ADVISORY BOARDS (RABS)

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IMPLEMENTING GUIDANCE FOR ESTABLISHMENT OF
RESTORATION ADVISORY BOARDS AT NAVY INSTALLATIONS

I. BACKGROUND

A. All installations in the Defense Environmental Restoration Program (DERP) which currently have Technical Review Committees (TRCs) will convert them to Restoration Advisory Boards (RABs). The RABs will meet the statutory requirements for Technical Review Committees as required in 10 USC 2705 while providing expanded opportunities for community participation in the environmental restoration process. By increasing the diversity and number of community representatives, RABs will ensure that all stakeholders (interested parties including individual residents that live near the installation; representatives of citizen, environmental, and public interest groups whose members live in the vicinity of the installation; workers involved or affected by installation operations; and, elected and appointed local government officials) have an increased opportunity to actively participate in the timely review of installation restoration documents and plans and to present various points of view for careful consideration. At base closure installations, RABs should facilitate accelerated cleanup and property transfer. The conversion of TRCs to RABs will be accomplished by:

- (1) Expanding existing TRCs to include additional community representatives;
- (2) Establishing Co-Chairs, one from the community members of the RAB and one from DON; and,
- (3) Opening meetings to the public.

B. Commanding Officers (CO) will establish RABS at installations which do not currently have TRCs under the following conditions:

- (1) Determination that a release or threat of a release has been confirmed upon the completion of the preliminary assessment (PA) or site inspection (SI); and,
- (2) Request from a local government that a RAB be formed;
or,
- (3) Presentation of a petition signed by fifty local residents requesting that a RAB be formed; or,
- (4) Determination by the CO that a RAB is needed.

II. PURPOSE

A. The purposes of RABs are to:

(1) Act as a forum for discussion and exchange of information between the Navy, regulatory agencies and the community on environmental restoration topics;

(2) Provide an opportunity for stakeholders to review progress and participate in the decision making process by reviewing and commenting on actions and proposed actions involving releases or threatened releases at the installation;

(3) Meet the requirements of 10 USC 2705(c), Department of Defense (DoD) Environmental Restoration Program, which directs DoD to establish TRCs; and,

(4) Serve as an outgrowth of the TRC concept by providing a more comprehensive forum for discussing environmental cleanup issues and serving as a mechanism for RAB members to give advice as individuals. Because RABs will not be decision making bodies, the Federal Advisory Committee Act (FACA) requirements (See "DoD Federal Advisory Committee Management Program", DoDD 5105.4, September 5, 1989) will not apply.

B. RABs will not make decisions on environmental restoration activities, but will provide information, suggestions, and community input from individual RAB members to be used by the Navy, or the Base Realignment and Closure (BRAC) cleanup team at closing installations, in making decisions on actions and proposed actions involving releases or threatened releases and cleanups.

C. RABs will not take the place of community outreach and participation activities required by law, regulation, or policy. All community relations requirements must still be met.

III. RESPONSIBILITIES

A. Responsibilities of the RAB as a whole are to:

(1) Conduct regular meetings, open to the public, at convenient times and locations.

(2) Keep meeting minutes; make them available to interested parties and a local newspaper.

(3) Develop and use a mailing list of names and addresses of interested parties who wish to receive information on the cleanup program. (This may already be done by the base

Public Affairs Officer (PAO), however, arrangements can be made to enhance the coordination of the community relations efforts of the RAB and the PAO.)

(4) Provide a forum for individual members to give advice and make recommendations on environmental restoration issues to the Navy, or the BRAC Cleanup Team at closing installations, for the installation undergoing the environmental restoration process. RABs will not vote on issues or make recommendations as a body.

(5) Establish a procedure for public participation and responding to questions and comments from the public at RAB meetings.

B. It is the responsibility of each member of a RAB to:

(1) Provide comments on actions and proposed actions involving releases or threatened releases at the installations to the Navy as represented by the Navy Co-Chair.

(2) Review documents.

(3) Identify and review project requirements.

(4) Recommend priorities among sites or projects.

(5) Identify applicable standards and, consistent with Section 121 of CERCLA, propose cleanup levels consistent with planned land use.

(6) Review budget information as requested.

(7) Attend RAB meetings. (If a RAB member can not regularly attend RAB meetings or send an alternate, the member should relinquish their membership.)

(8) Report back to organized groups to which they belong or represent and serve as a conduit for information flow to and from the community.

(9) Serve in a voluntary capacity.

C. It is the responsibility of the Community Co-Chair to:

(1) Ensure that community issues and concerns related to the environmental restoration/cleanup program are brought to the table.

(2) Assist the Navy in communicating technical information to all stakeholders in understandable terms.

- (3) Assist in disseminating information to the public.
- (4) Coordinate with the Navy Co-Chair to prepare and distribute an agenda prior to each RAB meeting.
- (5) Work with the Navy Co-Chair to review and distribute the minutes.

D. It is the responsibility of the Navy Co-Chair to:

- (1) Ensure that the Navy considers and responds to comments from the public through procedures established and announced by the RAB.
- (2) Ensure that community members are given adequate time to present their concerns and comments.
- (3) Coordinate with the Community Co-Chair to prepare and distribute an agenda prior to each RAB meeting.
- (4) Advertise meetings.
- (5) Provide administrative support for the RAB.
- (6) Take minutes at RAB meetings, prepare draft minutes, coordinate review of the draft minutes with the Community Co-Chair and RAB, and publish the minutes of the meeting by placing them in the Information Repository/ Administrative Record and sending a synopsis of the minutes and announcement of their availability to the local newspaper and parties on the mailing list.
- (7) Refer non-environmental restoration issues to appropriate Navy officials for normal processing outside of the RAB.
- (8) Work with the Community Co-Chair to establish a process for public review of documents including submitting comments to the Navy for consideration during the planning and decision making process.
- (9) Publish the process established for public review and comment.
- (10) Provide draft documents, and where necessary summaries and presentations, to the RAB for review. At the same time, these documents should be made available to the public by including them in the Information Repository. An announcement summarizing the document, listing the point of contact, and describing the process for providing comments should be published in a local newspaper to announce to the public that the document is available for their review. The

point of contact and the process for providing comments should be included on each document.

(11) Determine, with TRC input, the expectations and terms of membership for RAB community members; including how long members will serve, conditions under which members will be asked to relinquish membership, and how resignations will be handled and replacements chosen. These requirements and terms should be clearly described and published in fact sheets and local newspapers, where appropriate, so that applicants, new members and the community will clearly understand the respective commitments of the RAB members.

IV. IMPLEMENTATION CONCEPTS

A. Membership of the RAB:

(1) Shall include at least one representative of the installation and cognizant EFD, EPA, and appropriate state and local authorities and members of the local community. Whenever appropriate, natural resources trustees should be invited to have representatives on the RAB. EPA and the state should be encouraged to provide the RAB with representatives who have the authority to make decisions concerning implementation of specific proposals. At Base Realignment and Closure (BRAC) installations, the Navy's BRAC Transition Coordinator (BTC) and BRAC Environmental Coordinator (BEC) will be members of the RAB. BRAC Cleanup Team members from EPA and the State should be encouraged to participate.

(2) Shall include a diverse group of individuals representing a broad cross section of the community including established groups and interested individuals.

B. Selecting Community Members:

(1) Determine the size of the RAB on a case by case basis and establish how many community members (3-12) need to be added to the current TRC to accomplish RAB goals without limiting individuals or groups that would affect the diversity of the RAB. It may be necessary to set a limit on how many community representatives will be invited to join the RAB. All significant community groups and diverse interests should be represented, but the number of members should be kept to a minimum.

(2) Announce responsibilities of RAB membership, selection procedure, and number of community members to be selected. (See sample RAB Fact Sheet and RAB Membership notice.)

(3) Identify potential new members by asking members of the current TRC and/or BRAC Cleanup Team, at closing installations, to make recommendations. Potential members should want the job, be willing to participate on a voluntary basis, and live in the vicinity of the installation.

(4) Obtain nominations:

(a) Re-contact citizens interviewed during the development of the Community Relations Plan (CRP) and ask for recommendations. If the CRP is not yet completed, interviewees can be asked to recommend names of potential candidates during community relations interviews.

(b) Solicit nominations through announcements in newspapers and sent to parties on the mailing list. If this method is used to recruit members, it is important to describe the process which will be used in selection and to advertise the number of positions to be filled. (See sample RAB Membership Application.)

(5) Create a slate of candidates and determine who should be asked to join the RAB. Individuals who represent a cross section of the community should be chosen for RAB membership by the current TRC. If there is no TRC, the installation and state and federal agencies with cognizance over the cleanup should choose the community members to the RAB.

(6) Announce new members upon their selection. Their names and phone numbers should be made available to the community to assure access and communication.

C. Selecting Co-Chairs:

(1) Navy Co-Chair:

(a) Appointed by the installation CO.

(2) Community Co-Chair:

(a) Selected by the community members.

(b) Use a process established by the community members of the RAB.

(b) Have the community members establish the terms and conditions for the Community Co-Chair's service.

D. Restoration Advisory Board meetings:

(1) Open RAB meetings to the public.

(a) Hold meeting in rooms large enough to accommodate the those interested in attending and have access for the handicapped.

(2) Select time and place for meetings to permit public attendance.

(3) Announce meetings in advance through announcements in local newspapers and mailings to parties on the mailing list.

(4) Distribute minutes to RAB members and notices of availability to interested parties on the mailing list.

(5) Have RAB members establish procedures for the conduct of the RAB meetings. The public may participate in RAB meetings in one or more of the following ways, depending on the process determined made by the RAB:

(a) Allow the public to ask questions or make comments at specific times as outlined in the agenda; or,

(b) Allot a time at the end of each meeting for public participation; or,

(c) Follow the RAB meeting by a public meeting; or,

(d) Have the public comment and ask questions in writing.

E. Establishing Sub-committees:

(1) Establish sub-committees, as needed, to investigate technical issues in depth, prepare special reports, produce bulletins, summarize activities, or conduct other tasks. (For example a special sub-committee could be established to work with the Public Affairs Officer of the base on community relations activities such as determining when public meetings should be held, preparing brochures to explain the restoration process, preparing newsletters, and responding to individual queries.)

F. Administrative Support:

(1) Support of RAB requirements is the responsibility of the installation. DERA funds, or BRAC funds at closing installations, may be used for administrative support.

(2) If an installation requests support for their RAB, EFDs may provide the following:

(a) Take minutes, prepare draft and final copies of minutes.

(b) Prepare fact sheets and newsletters.

(c) Make presentations to the RAB, prepare summary documents, and maintain the information repository.

(d) Assist in responding to comments.

(e) Obtain facilities in which to conduct meetings.

**RESTORATION ADVISORY BOARD
FACT SHEET
(Name and Location of Installation)**

RESTORATION ADVISORY BOARD (RAB)

Background

The Interim Report of the Federal Facilities Environmental Restoration Dialogue Committee dated February 1993, is a consensus document developed by over 40 members of a committee chartered by the U.S. Environmental Protection Agency (EPA) under the Federal Advisory Committee Act. Key recommendations from this report are to share information with stakeholders and to establish site specific advisory boards. These recommendations, where applicable, will be implemented throughout DoD and Navy policy and guidance.

DoD's Defense Environmental Restoration Program (DERP) policy is to involve the local community in the DERP program as early as possible and throughout the Installation Restoration Program (IRP) process by: establishing communication channels with representatives of the community; making information on activities available in a timely manner; providing opportunities for public comment on documents; and at installations where there is sufficient interest, establishing Restoration Advisory Boards (RABs). Department of the Navy policy is to convert all Technical Review Committees (TRCs) to RABs.

What is a RAB?

The RAB is a group established for the expressed purpose of allowing individuals the opportunity to give advice to (*Name of installation*) on their restoration program and to act as a focal point for the exchange of information between (*Name of Installation*) and the local community. The RAB is intended to bring together community members who

reflect the diverse interests within the local community, enabling the early and continued two-way flow of information, concerns, values, and needs between the community and the installation. The RAB will work in partnership with the installation on clean-up issues and related matters.

RABs will not make decisions on environmental restoration activities, but will provide information, suggestions, and community input to be used by the DON in making decisions on actions and proposed actions involving releases or threatened releases and cleanups. RABs will not take the place of community outreach and participation activities required by law, regulation, or policy. All community relations requirements must still be met.

How to Establish a RAB?

Installations which currently have TRCs will: 1) expand existing TRCs to include additional community representatives, 2) establish Co-Chairs, one from the community members of the RAB and one from DON, and 3) open meetings to the public.

Installations which do not currently have TRCs will establish RABs under the following conditions; 1) determination that a release or threat of a release has been confirmed upon the completion of the preliminary assessment (PA) or site inspection (SI), 2) request from a local government that a RAB be formed, 3) presentation of a petition signed by fifty local residents requesting that a RAB be formed, or 4) determination by the installation that a RAB is needed.

(Name and Location of Installation)
**RESTORATION ADVISORY BOARD
MEMBERSHIP NOTICE**

The Interim Report of the Federal Facilities Environmental Restoration Dialogue Committee dated February 1993, is a consensus document developed by over 40 members of a committee chartered by the U.S. Environmental Protection Agency (EPA) under the Federal Advisory Committee Act. Key recommendations from this report are to share information with stakeholders and to establish site specific advisory boards. These recommendations, where applicable, will be implemented through DoD and Navy policy and guidance.

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RAB MEMBERSHIP REQMTS

Term - (*As established by RAB or the Navy and regulators*)

Availability to Community - Members should be willing to communicate with local community members and interest groups concerned with specific base issues. Members will serve as a direct and reliable conduit for information flow to and from the community.

Document Review - Members will be expected to comment on documents available for review and to provide timely comments.

Attendance - Members are expected to attend all RAB meetings or send an alternate. If a member fails to attend or send an alternate to two consecutive meetings, the RAB co-chairs may ask the member to relinquish their membership.

Resignation/Removal - Members unable to continue to fully participate shall submit their resignation in writing to either of the RAB co-chairs. If the member is representing a group or organization, that group or organization may nominate a new member.

Residency - To be a RAB member, individual community members or organizations must reside in the vicinity of (*name of installation*).

Responsibilities of a RAB.

The responsibilities of the RAB as a whole are to:

- 1) Conduct regular meetings, open to the public, at convenient times and locations.
- 2) Keep meeting minutes, make them available to interested parties, and publish them in a local newspaper.
- 3) Develop and use a mailing list of names and addresses of interested parties who wish to receive information on the cleanup program.
- 4) Provide a forum for individual members to give advice and make recommendations on environmental restoration issues to the DON. RABs will not vote on issues or make recommendations as a body.
- 5) Establish a procedure for public participation and responding to questions and comments from the public at RAB meetings.

two-way flow of information, concerns, values, and needs between the community and the installation. The RAB will work in partnership with the installation on clean-up issues and related matters.

RAB members will be asked to meet regularly and review and comment on technical documents and plans relating to the ongoing environmental studies and cleanup activities at *(Name of installation)*. Members will be expected to serve as a liaison with the community and be available to meet with community members and groups. Members are expected to serve a *(term to be established by the RAB or Navy and regulators)*.

All RAB meetings will be open to the public. Technical support staff will be available to provide informational support and explanation to RAB members.

To ensure opinions about environmental restoration reflect diverse interests within the local community, RAB membership should include - but is not limited to:

- * TRC members
- * local official/agencies
- * business community
- * school districts
- * residents/community members
- * base employees/residents
- * local environmental groups
- * civic/public interest groups
- * religious community
- * other regulatory agencies
- * labor organizations
- * local homeowners organizations

How to Become a RAB Member?

Community members interested in finding out more about the RAB are invited and encouraged to attend a community meeting *(Name of installation)* will conduct on *(date & time)*. At the meeting, you will learn about the purpose of the RAB, membership

opportunities and member expectations. RAB membership applications will be available at the community meeting. The community meeting will be held at the following address:

(Location & address)

If you have questions about the RAB or are interested in applying for RAB membership, applications can also be obtained by contacting:

(POC, address & phone number)

All membership applications must be received by *(Deadline for Applications)*. Applications will be reviewed and approved by members of the current TRC including regulatory agencies, community members, local government and *(Name of installation)*.

goals?

3. Please indicate if you are interested in being considered for the community co-chairperson position on the RAB by checking the box below:

Yes, I would like to be considered.

4. Are you willing to serve as a member of this RAB for (*term established by RAB or Navy and regulators*)?

Yes. I am willing to serve as requested.

5. By submitting this signed application, you are aware of the time commitment which this appointment will require of you.

6. By submitting this signed application, you willingly agree to work cooperatively with other members of the committee to ensure efficient use of time for addressing community issues related to environmental restoration of the (*Name of installation*).

Applicant Signature

Date

Date

Please return your completed application to:

(*POC name, address, phone #*)

ADDITIONAL SUGGESTIONS FOR RAB IMPLEMENTATION

The California Environmental Protection Agency, Department of Toxic Substances Control, Base Closure and Conversion released "Interim Guidance for Implementing Restoration Advisory Boards" in November of 1993. This guidance for closing installations in California contains many good ideas and suggestions. It has been edited to make it applicable to RABs at all Navy installations (not just closing installations) and is included here for information.

Background

TRCs focus exclusively on the technical review of clean-up program documents and plans and often have only one community member to represent issues of concern to the entire local community. The advent of the RAB significantly broadens community input and participation in the environmental restoration process.

The RAB is intended to bring together members who reflect the diverse interests within the local community, enabling the early and continued two-way flow of information, concerns, values, and needs between the affected community and the Navy. The RAB will ensure that stakeholders have a voice and can actively participate in a timely and thorough manner in the review of installation clean-up documents and plans. Stakeholders will provide input into the decision-making process. The RAB will provide for the expression and careful consideration of divergent points of views. The RAB members will work in partnership with the Navy on clean-up issues and related matters throughout each installation's cleanup.

This document is intended to supplement Navy guidance by providing ideas and suggestions to enable Navy installations to readily develop and implement RABs. It is intended to be flexible so that each installation can adapt their RAB to the individual needs of the local community.

RAB Development

Most Navy installations have already established TRCs to provide interested parties with a forum to discuss and provide input into site cleanup activities as required by 10 USC 2705(c) and Executive Order 12580. The DOD RAB policy calls for existing TRCs or similar groups to be expanded or modified to become RABs rather than creating a separate committee. The RABs will continue to meet the statutory requirements for TRCs while providing expanded opportunities for ongoing community input and participation in base cleanup and, if applicable, base reuse activities.

The RAB is not a replacement for other community outreach and participation activities required by law, regulation, or policy. All existing public involvement requirements must still be completed, including the community relations requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended by the Superfund Amendments and Reauthorization Act (SARA); and public involvement requirements of the Resource Conservation and Recovery Act (RCRA); the community relations requirements of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

Determining Size of RAB

The size of each RAB should be determined on a case by case basis and will likely vary from installation to installation. The RAB should be no larger than is necessary to get the job done but no smaller than is necessary to adequately reflect the diversity of community interests regarding base cleanup and, if applicable, conversion.

Recruiting RAB Members

For an effective RAB to be established quickly, the installation, in coordination with state and other TRC members will need to be proactive in forming and educating the local community about the formation of the RAB, its purpose, and the opportunities for membership. The public outreach effort should be tailored to the individual community at each installation. This is especially important at bases where there has been limited community information or involvement opportunities or where there has been minimal community and media interest in the base.

Based on the level of community response to the above outreach efforts, the Navy, in consultation with TRC members, may decide that additional community outreach is appropriate to further inform the community about RAB formation. This may include holding additional community meetings or workshops, public service announcements on local radio and television stations, additional display adds in local newspapers, wider distribution of the initial RAB fact sheet, and notices on installation and community bulletin boards. Information about the RAB should also be included in all other public information materials distributed by the installation to the community.

Every effort should be made to ensure that all individuals or groups representing the community's interests are informed about the RAB.

Selecting RAB Members

RAB members must be selected in an open and fair manner. As a part of the member selection process, the installation, with input from the TRC, will need to evaluate the current membership of the TRC. Community groups and diverse interests will need to be identified. A target number for community RAB members should be set. Existing community members of the TRC should be strongly considered for RAB membership to preserve continuity and the "institutional history" of the clean-up process to date during RAB start-up. The installation will select RAB members with input from the TRC. It is important to include representative from the community since organized groups and diverse interests may not include the viewpoints and ideas of the average citizen. The RAB will be used as a tool for inclusion of community views.

RAB members should live/work in or near the affected community. The following list of potential interests should be considered for representation on the RAB. This list is intended to be illustrative and not all-inclusive. Each RAB should be developed to reflect the unique mix of interests and concerns within the local community.

- local residents/community members
- local reuse committees
- Technical Assistance Grant (TAG) recipients
- current TRC members
- local officials/agencies
- business community
- school districts
- base employees/residents
- local environmental groups/activities
- civic/public interest organizations
- religious community
- other regulatory agencies
- labor organizations
- local homeowners organizations

The Navy, the State environmental agency, and the U.S. EPA (where applicable), will each be represented on the RAB. While it is anticipated that other members of the installation and regulatory project team will regularly attend and participate in RAB meetings as resources, the majority of RAB members should be from the local community in keeping with the goal of increased public involvement.

Once selected, most RAB members will require some initial orientation to enable them to perform their duties. The installation should consider ways to quickly inform and educate the RAB members to promote the rapid formation of a fully functioning RAB. This may be accomplished at initial RAB meeting or at special orientation sessions and may include the following:

- informal briefings
- briefing booklets, past fact sheets, maps
- site tours
- team building exercises

Technical support staff from state, federal, and local agencies that have involvement with cleanup will be asked to attend RAB meetings to provide information in their areas of expertise and will be available to provide information and explanation to RAB members.

The intent of the RAB concept is to ensure on-going consistent involvement by community members. Therefore, it is anticipated that the RAB will enjoy regular attendance by all members. This will aid in the development and operation of the RAB as a team project in which all members have a clearly-defined role to play, and contribute to the ultimate goal of remediation of the installation.

Electing a Community Co-Chair

This task will be essential to the full implementation of the RAB. The Community Co-Chair should be selected by the community members of the RAB as soon as possible after the community members are selected.

The length of the term to be served by the Community Co-Chair should be decided upon by the individual RAB. One or two year terms should be feasible. This will allow for continuity, but also timely change if necessary. The RAB community membership should also bear the responsibility of terminating a Community Co-Chair that is either ineffective or detrimental to the progress of the RAB. This should be done in the same manner as the initial appointment, by a vote of the RAB community members.

Distribute a Fact Sheet

After the RAB members and Community Co-Chair have been selected, the installation should prepare and distribute a brief fact sheet to announce that the RAB has been formed and publish the names and phone numbers of RAB members and Co-Chairs. The fact sheet could also announce the RAB meeting schedule, publicly thank all community members who applied, and encourage ongoing community attendance and participation at future RAB meetings.

RAB Meeting Preparation

Before the initial RAB meeting, it is recommended that the installation proactively begin the process of informing and educating the community about the purpose of the RAB and

opportunities for participation. This is especially important at bases where a TRC has not been formed or where the community has had limited participation in the TRC. This can be accomplished by completing the following suggested activities:

Fact Sheet

It is recommended that a brief, one-page fact sheet describing the RAB be prepared and distributed prior to the initial RAB meeting. It may be advisable to distribute the fact sheet to the existing community relations mailing list unless a wider distribution is deemed desirable. The fact sheet should describe the purpose of the RAB, the member selection process, and state the expectations for RAB members. Copies of the fact sheet should be made available to the public in the information repositories and at the initial RAB meeting.

Public Notice Display Ad

It is recommended that the installation advertise the initial meeting in one or more newspapers of general circulation serving the affected communities around the installation, as well as the base newspaper. It is suggested that a display ad be published approximately seven (7) days prior to the initial RAB meeting and include the following information:

- time and location of the meeting
- RAB purpose and membership
- announcement that meeting is open to public and describe process for public participation
- name and phone number of contact person for more information

The display ad should be placed in a prominent section of the newspaper likely to be read by the majority of community members. A sample RAB public notice is included for your review.

Agenda

An agenda for the initial meeting should be developed with input from existing TRC members. The agenda should include input from the local community, as appropriate, regarding their concerns and issues. This can be an important first step in moving toward the goal of RAB implementation.

Involving community members in the development of the initial RAB meeting will ease the transition from TRC to RAB by increasing the community's sense of ownership in the RAB.

Successful RABs will require coordination between the Co-Chairs. This will be extremely applicable to agenda development. Each meeting should have a definite purpose. The purpose can range from reviewing and discussing a specific document to technical updates regarding test results. The purpose of the meeting will determine the agenda items, and the speakers. Prior to developing the agenda, input should be received from stakeholders that may somehow be impacted/affected.

Press Release

It is recommended that the installation's public affairs office prepare and distribute a press release to announce the formation and purpose of the RAB and the time and location of the initial meeting. Depending on local media coverage of base environmental issues, it may be appropriate to prepare a more extensive media packet of information to update the local media regarding base clean-up.

Initial RAB Meeting

The initial meeting of the RAB should be conducted by the installation as soon as practicable to ensure the expeditious formation and operation of the RAB.

The focus of the initial meeting should be to introduce the RAB concept to the community. Some of the suggested topics to address include:

- purpose of the RAB
- goal of representing diverse community interests
- difference between the RAB and the TRC
- membership opportunities (if members have not already been chosen)
- member selection process
- member responsibilities and expectations
- selection of the Community Co-Chair
- overview of base clean-up and, if appropriate, conversion activities and plans
- open discussion/question and answer period

The timing and location of the initial meeting should be chosen with the goal of making it convenient for community members to attend and participate. The initial meeting, as with all RAB meeting, should be held in a central location. Input from the community should be strongly considered regarding convenient meeting locations and times.

Minutes

As outlined, the Navy should prepare meeting minutes summarizing the topics discussed at the meeting and future plans. The minutes should be concise summaries of RAB meetings rather than verbatim transcripts to facilitate effective communication with the local communities. Translation of meeting minutes should be provided if a large segment of the local community speaks a language other than English. The draft minutes should be made available for public review in the information repositories within two weeks of the initial meeting. Copies of the minutes should be distributed to existing members of the RAB. The installation may want to consider mailing copies of the minutes to all community members who attend the meetings and to its community relations mailing list.

Provide for Administrative Support

The installation, with EFD support, needs to ensure that adequate administrative support is made available to establish and operate the RAB and conduct ongoing public outreach activities. Needed administrative support will usually include the following:

- meeting rooms located off-base in a central location
- secretarial support to prepare meeting minutes and other routine work processing tasks
- copying/printing for RAB review documents, notices, fact sheets
- mailing/postage
- public notices in local newspapers
- database management for maintenance of RAB mailing lists
- translation/interpretation for outreach materials and RAB meetings where there is a large, non-English speaking population in the local community

Meeting Operation

The Navy Co-Chair and the Community Co-Chair should coordinate the planning of each RAB meeting. Each meeting should have a pre-planned purpose, operating plan, and agenda.

Format

The meeting format of the RAB will vary. The format will be dictated by the purpose of the meeting. Generally, a basic format should include:

- presentation or update by project technical staff
- RAB member discussions
- question/answer/input period for community participants
- list of action items for the RAB members

Subsequent meetings should consider old business prior to discussion of current items.

Response to Comments on Documents

The RAB will regularly review, discuss, and provide comments on a wide variety of draft and final technical documents, status reports, and proposed and final plans within specified timeframes. This information will be made available for public review and comment in the local information repositories. Public comments are to be solicited and considered before documents or plans are finalized.

All documents distributed to the RAB and the public for review and comment should be made available for a minimum of 30 days before comments are due to enable community input. For documents where a review period shorter than 30 days applies to regulatory staff, this same shorter review period would also apply to the review by the RAB and community members. Every effort should be made to provide the RAB and community members with an adequate review period based on the length and complexity of the document. Where necessary, special focus meetings of the RAB may be called to review and comment on key documents.

In order to demonstrate that all comments received on these documents receive the serious consideration called for, the installation should prepare formal written responses to all substantive comments received. Copies of the response to comments should be mailed to individuals who provided comments, to RAB members, and made available for public review in the information repository. For comments answered in the RAB meetings or in the meeting minutes, no additional response is needed.

Meeting Scheduling/Frequency

RAB meetings should be scheduled on a regular basis. The individual RAB members should decide the scheduling and frequency of RAB meetings. The frequency of RAB meetings should be such as to ensure timely and effective communication.

Locations

The RAB meetings should be held in a location agreed upon by the RAB members. In general, this should be a location and time that is convenient to the RAB community members. The development of the RAB concept was meant to ensure and enhance community involvement in the process; providing the community with the opportunity to suggest meeting locations should assure this. Suggested days for community meetings are Tuesday-Thursday, in the evening. A community may be agreeable to a pre-planned Open House on a Saturday.

Special Focus Meetings

When necessary, the RAB may meet for "special focus meetings." These are meetings where a single topic or specific document may be reviewed, discussed, and commented. This may occur when the RAB determines the need for input on specific issues in order to move ahead. Special focus meetings will require increased coordination to ensure that all of the necessary stakeholders are present at the meeting and that their interests are represented.

CNO Guidance on Installation Restoration Program - Community Outreach



DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
WASHINGTON, DC 20350-2000

IN REPLY REFER TO

5090
Ser N453C/4U596023
3 Mar 94

From: Chief of Naval Operations
Subj: INSTALLATION RESTORATION PROGRAM - COMMUNITY OUTREACH
Ref: (a) CNO ltr 5090 Ser 453C/4U596021 of 9 Feb 94
Encl: (1) Interim Report of the FFER Dialogue Committee,
Feb 1993 (The Keystone Dialogue Interim Report)
(2) Community Relations in Superfund: A Handbook, EPA
Jan 1992

1. The purpose of this letter is to stress the importance and value of informing and obtaining input from all potential participants in the ongoing cleanup process at Navy installations. The importance the Navy places on meaningful community involvement cannot be overstated. To strengthen this involvement, Restoration Advisory Boards (RABs) are being implemented at bases with cleanup programs per reference (a).
2. To assist you in understanding the need for continued community relations and increased public involvement in the cleanup process, enclosures (1) and (2) are forwarded for your information. Enclosure (1) was the driving factor for broadening community involvement in the cleanup process at Navy installations. A principal recommendation in the report is the establishment of Site Specific Advisory Boards (SSABs). Rather than creating an additional committee as recommended in the Keystone Dialogue Interim Report, the Department of Defense has decided that increasing the scope of the Technical Review Committees (TRCs) is a more effective method for accomplishing the goals outlined in the report. In order to acknowledge the increased scope of TRCs, they will be called Restoration Advisory Boards.
- 3.. A strong community relations program, in conjunction with RABs, should allow the stakeholders to participate in determining the cleanups required at each installation. Enclosure (2) contains current EPA guidance on community relations. Installations must continue to meet these community relations requirements and the public must be given a greater opportunity to participate in cleanup programs. Their participation optimizes cleanup decisions, enhances working relationships, and

Subj: INSTALLATION RESTORATION PROGRAM - COMMUNITY OUTREACH

strengthens the partnership between all affected stakeholders. The point of contact for this office is Ms. Patricia Ferrebee at (703) 602-3031.


J. S. WALKER
By direction

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Distribution: (con't next page)



DEPARTMENT OF THE NAVY
THE ASSISTANT SECRETARY OF THE NAVY
(INSTALLATIONS AND ENVIRONMENT)
1000 NAVY PENTAGON
WASHINGTON, D.C. 20350-1000

MISC

MAY 26 1995

MEMORANDUM FOR THE CHIEF OF NAVAL OPERATIONS (N4)
THE COMMANDANT OF THE MARINE CORPS (L)

Subj: DON ENVIRONMENTAL POLICY MEMORANDUM 95-01: ENVIRONMENTAL
REQUIREMENTS FOR FEDERAL AGENCY-TO-AGENCY PROPERTY
TRANSFER AT BRAC INSTALLATIONS

Ref: (a) DUSD(ES) memo of 1 June 94, "Finding of Suitability
to Transfer for BRAC Property"
(b) DON Environmental Policy Memorandum 93-03 of
15 September 93, "Procedures for Identification of
Uncontaminated Property and Cleanup of Contaminated
Property at Closing Installations"

Encl: (1) Excerpt: Section III from reference (a)

Background. References (a) and (b) provide guidance on the environmental review required prior to transfer by deed of Base Realignment and Closure (BRAC) properties. This policy memorandum clarifies the environmental requirements which must be met for the transfer of Navy/Marine Corps BRAC property to another federal agency.

Requirements. An Environmental Baseline Survey (EBS) shall be performed in accordance with Section III.B.1-B.3 of reference (a), (see enclosure (1)). The prospective federal agency transferee shall be provided with the notice described in 42 U.S.C. Section 9620(h)(1) [CERCLA Section 120(h)(1)]. The notice will consist of the required summary document and copies of the source documents discussed therein.

Approval. The summary document shall be forwarded to ASN(I&E) as part of the package requesting approval for property transfer. The summary document shall be signed by the person authorized in reference (b) to approve Findings of Suitability to Transfer/Findings of Suitability to Lease (FOST/FOSL) and must include:

a. A brief statement identifying past and current DOD and non-DOD uses of the property, and the proposed use by the Federal agency receiving the property.

b. A statement that an EBS has been performed, the findings of the EBS as to whether any hazardous substances or petroleum products were stored for one year or more, released, treated, or disposed of on the property, and any other significant information in the EBS.

ENCLOSURE (1)

c. Recommended restrictions on use of the property, if any, required to protect human health and the environment, or the environmental restoration process. For remediated parcels, such restrictions would include those documented in the remedial Record of Decision (ROD) or equivalent decision documents.

d. A summary of the requirements of any Federal Facility Agreement (FFA), Federal Facility Site Remediation Agreement (FFSRA), or other enforcement agreement or order relating to the property.

e. A statement of which agency is responsible for any existing or future environmental restoration of the property and whether any other commitments or guarantees have been provided regarding responsibility for any future cleanup liability.

f. A statement of finding that the property is environmentally suitable for transfer to another Federal agency because:

1. No hazardous substances or petroleum products were stored on the property for one year or more, known to have been released, treated, or disposed of;

2. Although storage for one year or more, release, treatment, or disposal occurred, the property is not contaminated because either storage occurred without a release, a release occurred but no response action is required, or a response action has been completed; or

3. The property contains some level of contamination by hazardous substances or petroleum products, but the property can be transferred for the proposed use, with the specified use restrictions, with acceptable risk to human health and the environment and without interference with the environmental restoration process.

Distribution. Please ensure the distribution of this policy to all subordinate commands. The points of contact for this policy in the OASN(I&E) are Mr. Paul Yaroschak, (703)614-1282, for environmental matters, and Ms. Michele Greco, (703)695-2153, for real estate matters.


ROBERT B. PIRIE, JR.

Excerpt from DSD memo of 1 Jun 94, "Finding of Suitability to Transfer for BRAC Property", Section III.B.1-B-3.

III. POLICY.

B. Investigation.

1. Environmental Baseline Survey (EBS). An EBS will be prepared encompassing any property to be transferred. The EBS will be based on all existing environmental information related to storage, release, treatment or disposal of hazardous substances or petroleum products on the property to determine or discover the obviousness of the presence or likely presence of a release or threatened release of any hazardous substance or petroleum product. In certain cases additional data, including sampling, if appropriate under the circumstances, may be needed in the EBS to support the FOST determination.

A previously conducted EBS may be updated as necessary and used for making a FOST determination, where appropriate. An EBS also may satisfy other environmental requirements (e.g., to reach a Finding of Suitability to Lease (FOST) or satisfy the requirements of the Community Environmental Response Facilitation Act (CERFA)).

2. Procedures for Conducting an EBS. The EBS will consider all sources of available information concerning all environmentally significant current and past uses of the real property and shall, at a minimum, consist of the following:
 - a. Detailed search and review of available information and records in the possession of the DOD Components or records made available by the regulatory agencies or other involved Federal agencies. DOD Components are responsible for requesting and making reasonable inquiry into the existence and availability of relevant information and records to include any additional study information (e.g., surveys for radioactive materials, asbestos, radon, lead-based paint, transformers containing PCB, Resource Conservation and Recovery Act Facility Assessments and Investigations (RFA and RFI), Underground Storage Tank Cleanup Program) to determine the environmental condition of the property.

ENCLOSURE(1)

- b. Review of all reasonably obtainable Federal, State, and local government records for each adjacent facility where there has been a release of any hazardous substance or any petroleum product, and which is likely to cause or contribute to a release or threatened release of any hazardous substance or any petroleum product on the real property.
- c. Analysis of aerial photographs which are in the possession of the Federal Government or are reasonably obtainable through state or local government agencies that may reflect prior use of the real property.
- d. Interviews with current and/or former employees involved in operations on the real property.
- e. Visual inspections of the real property; any buildings, structures, equipment, pipe, pipeline, or other improvements on the real property; and of properties immediately adjacent to the real property, noting sewer lines, runoff patterns, evidence of environmental impacts (e.g., stained soil, stressed vegetation, dead or ill wildlife) and other observations which indicated actual or potential release of hazardous substances or petroleum products.
- f. Identification of sources of contamination on the installation and on adjacent properties which could migrate to the real property.
- g. Ongoing response actions and actions that have been taken at, or adjacent to, the real property.
- h. A physical inspection of property adjacent to the real property, as appropriate, and to the extent permitted by owners or operators of such property.

NOTE: For the purposes of paragraphs b, e, f, g, & h above, "adjacent properties" are defined as either those properties contiguous to the boundaries of the property being surveyed or other nearby properties. In either case, the survey should be addressed to those portions of the priorities relatively near the installations that could pose significant environmental concern and/or have a significant impact on the results of the EBS.

- 3. Documentation of an EBS. At the completion of the EBS, a report will be prepared which will include the following:
 - a. An Executive Summary briefly stating the areas of real property (or parcels) evaluated and the conclusions of the survey.

- b. Review of all reasonably obtainable Federal, State, and local government records for each adjacent facility where there has been a release of any hazardous substance or any petroleum product, and which is likely to cause or contribute to a release or threatened release of any hazardous substance or any petroleum product on the real property.
- c. Analysis of aerial photographs which are in the possession of the Federal Government or are reasonably obtainable through state or local government agencies that may reflect prior use of the real property.
- d. Interviews with current and/or former employees involved in operations on the real property.
- e. Visual inspections of the real property; any buildings, structures, equipment, pipe, pipeline, or other improvements on the real property; and of properties immediately adjacent to the real property, noting sewer lines, runoff patterns, evidence of environmental impacts (e.g., stained soil, stressed vegetation, dead or ill wildlife) and other observations which indicated actual or potential release of hazardous substances or petroleum products.
- f. Identification of sources of contamination on the installation and on adjacent properties which could migrate to the real property.
- g. Ongoing response actions and actions that have been taken at, or adjacent to, the real property.
- h. A physical inspection of property adjacent to the real property, as appropriate, and to the extent permitted by owners or operators of such property.

NOTE: For the purposes of paragraphs b, e, f, g, & h above, "adjacent properties" are defined as either those properties contiguous to the boundaries of the property being surveyed or other nearby properties. In either case, the survey should be addressed to those portions of the priorities relatively near the installations that could pose significant environmental concern and/or have a significant impact on the results of the EBS.

3. Documentation of an EBS. At the completion of the EBS, a report will be prepared which will include the following:
 - a. An Executive Summary briefly stating the areas of real property (or parcels) evaluated and the conclusions of the survey.

- b. The property identification (e.g., address, assessor parcel number, legal description)
- c. Any relevant information obtained from a detailed search of Federal Government records pertaining to the property, including available maps.
- d. Any relevant information obtained from a review of the recorded chain of title documents regarding the real property. The review should address those prior ownerships/uses that could reasonably have contributed to an environmental concern, and, at a minimum, cover the preceding 60 years.
- e. A description of past and current activities, including all past and current DOD and non-DOD uses to the extent such information is reasonably available, on the property and on adjacent properties.
- f. A description of hazardous substances and petroleum products management practices (to include storage, release, treatment or disposal) at the property and at adjacent properties, to the extent such information is reasonably available.
- g. Any relevant information obtained from records reviews and visual and physical inspections of adjacent properties.
- h. Description of ongoing response actions or actions that have been taken at or adjacent to the property.
- i.. Reference to key documents examined (e.g., aerial photographs, spill incident reports, investigation results). (The documents will be made available by DOD upon request.)