Annapolis Naval Station
Annapolis, Maryland

Engineering Field Division/Activity: EFACHES

Major Claimant: CNO

Size: 276 Acres

Funding to Date: $1,138,000

Estimated Funding to Complete: $8,254,000

Base Mission: Supports the U.S. Naval Academy and performs other duties as assigned

Contaminants: Paint, pesticides, POLs, PCBs, solvents, heavy metals

Number of Sites:

CERCLA:	1
RCRA Corrective Action:	0
RCRA UST:	0
Total Sites:	1

Relative Risk Ranking of Sites:

High:	1	Not Evaluated:	0
Medium:	0	Response Complete:	0
Low:	0	Total Sites:	1

PROGRESS AND PLANS

CERCLA	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
PA	1							
SI	1							
RI/FS					1			
RD								1
RA								1
IRA								
RC								1
Cumulative Response Complete								100%

Annapolis Naval Surface Warfare Center Detachment, Bay Head Annex
Annapolis, Maryland

Engineering Field Division/Activity: EFACHES

Major Claimant: COMNAVSEASYSCOM

Size: 24 Acres

Funding to Date: $286,000

Estimated Funding to Complete: $0

Base Mission: Conducts burn testing of materials used aboard Naval ships

Contaminants: Heavy metals

Number of Sites:

CERCLA:	1
RCRA Corrective Action:	0
RCRA UST:	0
Total Sites:	1

Relative Risk Ranking of Sites:

High:	0	Not Evaluated:	0
Medium:	0	Response Complete:	1
Low:	0	Total Sites:	1

PROGRESS AND PLANS

CERCLA	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
PA	1							
SI	1							
RI/FS								
RD								
RA								
IRA								
RC	1							
Cumulative Response Complete	100%							

ANNAPOLIS U.S. NAVAL ACADEMY
ANNAPOLIS, MARYLAND

Engineering Field Division/Activity: EFACHES

Major Claimant: CNO

Size: 1,747 Acres

Funding to Date: $656,000

Estimated Funding to Complete: $2,374,000

Base Mission: Provides educational, social, physical and military training for the Navy Midshipmen

Contaminants: Heavy metals, solvents, paint, POLs, ash

Number of Sites:

CERCLA:	1
RCRA Corrective Action:	6
RCRA UST:	1
Total Sites:	8

Relative Risk Ranking of Sites:

High:	2	Not Evaluated:	0
Medium:	0	Response Complete:	5
Low:	1	Total Sites:	8

PROGRESS AND PLANS

CERCLA	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
PA								1
SI								
RI/FS								
RD								
RA								
IRA								
RC								1
Cumulative Response Complete								100%

RCRA CA	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
RFA	6							
RFI	1		2					
CMS	1			2				
DES				2				
CMI					1			1
IRA							1(1)	
RC	4				1			1
Cumulative Response Complete	67%				83%			100%

UST	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
ISC	1							
INV								
CAP	1							
DES								
IMP		1						
IRA	1(1)							
RC		1						
Cumulative Response Complete		100%						

Bainbridge Naval Training Center
Bainbridge, Maryland

Engineering Field Division/Activity: EFACHES

Major Claimant: CNET

Size: 1,250 Acres

Funding to Date: $11,687,000

Estimated Funding to Complete: $538,000

Base Mission: Closed since 1976; provided military training in firefighting, nuclear power (classroom only), radioman school

Contaminants: Solvents, pesticides, paint, POLs, sludge, chlorinated solvents, asbestos

Number of Sites:

CERCLA:	3
RCRA Corrective Action:	0
RCRA UST:	1
Total Sites:	4

Relative Risk Ranking of Sites:

High:	2	Not Evaluated:	0
Medium:	0	Response Complete:	2
Low:	0	Total Sites:	4

PROGRESS AND PLANS

CERCLA	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
PA	3							
SI	2							
RI/FS			2					
RD				1				
RA						1		
IRA	1(2)	1(2)	2(2)					
RC		1	1			1		
Cumulative Response Complete		33%	67%			100%		

UST	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
ISC	1							
INV		1						
CAP								
DES								
IMP								
IRA								
RC		1						
Cumulative Response Complete		100%						

Baltimore Naval Reserve Center
Baltimore, Maryland

Engineering Field Division/Activity: EFACHES

Major Claimant: COMNAVRESFOR

Size: 4 Acres

Funding to Date: $63,000

Estimated Funding to Complete: $75,000

Base Mission: Maintains, trains and mobilizes 20 assigned Reserve units attached to the Readiness Center; COMNAVDIST WASHINGTON representative for casualty assistance calls for Baltimore port ship visit coordination

Contaminants: POLs

Number of Sites:

CERCLA:	0
RCRA Corrective Action:	0
RCRA UST:	1
Total Sites:	1

Relative Risk Ranking of Sites:

High:	0	Not Evaluated:	1
Medium:	0	Response Complete:	0
Low:	0	Total Sites:	1

PROGRESS AND PLANS

UST	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
ISC	1							
INV								
CAP								
DES								
IMP								1
IRA	1(1)		1(1)					
RC								1
Cumulative Response Complete								100%

Bethesda Naval Medical Command National Capitol Region
Bethesda, Maryland

Engineering Field Division/Activity: EFACHES

Major Claimant: BUMED

Size: 243 Acres

Funding to Date: $809,000

Estimated Funding to Complete: $0

Base Mission: Provides health care services throughout the assigned geographical and mission-identified areas of responsibility and acts as the central authority for cooperation with military and civilian authorities for public health, disasters, and other emergencies

Contaminants: Pesticides, solvents, waste oils, laboratory wastes, radioactive wastes

Number of Sites:

CERCLA:	6
RCRA Corrective Action:	0
RCRA UST:	0
Total Sites:	6

Relative Risk Ranking of Sites:

High:	0	Not Evaluated:	0
Medium:	0	Response Complete:	6
Low:	0	Total Sites:	6

PROGRESS AND PLANS

CERCLA	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
PA	6							
SI	5							
RI/FS								
RD								
RA								
IRA								
RC	6							
Cumulative Response Complete	100%							

CARDEROCK NAVAL SURFACE WARFARE CENTER
CARDEROCK, MARYLAND

Engineering Field Division/Activity: EFACHES

Major Claimant: COMNAVSEASYSCOM

Size: 184 Acres

Funding to Date: $4,349,000

Estimated Funding to Complete: $13,894,000

Base Mission: Performs Research, Development, Testing and Evaluation (RDT&E) in Naval architecture, Marine engineering, ship concepts, vehicle technology and survivability under the effect of weapons and other similar projects

Contaminants: Heavy metals, pesticides, POLs, PCBs

Number of Sites:

CERCLA:	9
RCRA Corrective Action:	0
RCRA UST:	0
Total Sites:	9

Relative Risk Ranking of Sites:

High:	4	**Not Evaluated:**	0
Medium:	1	**Response Complete:**	2
Low:	2	**Total Sites:**	9

PROGRESS AND PLANS

CERCLA	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
PA	8							
SI	9							
RI/FS							1	6
RD								7
RA								7
IRA	1(2)	1(2)						
RC	2							7
Cumulative Response Complete	22%							100%

Cheltenham Naval Computer and Telecommunications Center
Cheltenham, Maryland

Engineering Field Division/Activity: EFACHES

Major Claimant: COMNAVCOMTELCOM

Size: 240 Acres

Funding to Date: $247,000

Estimated Funding to Complete: $782,000

Base Mission: Manages, operates and maintains facilities of the Defense Communications System

Contaminants: Refuse, heavy metals

Number of Sites:

CERCLA:	3
RCRA Corrective Action:	0
RCRA UST:	0
Total Sites:	3

Relative Risk Ranking of Sites:

High:	2	Not Evaluated:	0
Medium:	0	Response Complete:	1
Low:	0	Total Sites:	3

PROGRESS AND PLANS

CERCLA	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
PA	1							
SI					2			
RI/FS								2
RD								
RA								
IRA			1(1)	1(1)				
RC	1							2
Cumulative Response Complete	33%							100%

CHESAPEAKE BAY DETACHMENT NAVAL RESEARCH LABORATORY
CHESAPEAKE BAY, MARYLAND

Engineering Field Division/Activity: EFACHES

Major Claimant: CNR

Size: 174 Acres

Funding to Date: (Incorporated into Naval Research Laboratory, Washington D.C. funding)

Estimated Funding to Complete: (Incorporated into Naval Research Laboratory, Washington D.C. funding)

Base Mission: Testing and developing of radar, radio, optical, and fire control equipment

Contaminants: Non-chlorinated solvents, base, refuse

Number of Sites:

CERCLA:	8
RCRA Corrective Action:	0
RCRA UST:	0
Total Sites:	8

Relative Risk Ranking of Sites:

High:	0	Not Evaluated:	0
Medium:	0	Response Complete:	8
Low:	0	Total Sites:	8

PROGRESS AND PLANS

CERCLA	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
PA	8							
SI								
RI/FS								
RD								
RA								
IRA								
RC	8							
Cumulative Response Complete	100%							

INDIAN HEAD NAVAL EXPLOSIVE ORDNANCE DISPOSAL TECHNOLOGY CENTER
INDIAN HEAD, MARYLAND

Engineering Field Division/Activity: EFACHES

Major Claimant: COMNAVSEASYSCOM

Size: 1,100 Acres

Funding to Date: $1,130,000

Estimated Funding to Complete: $6,584,000

Base Mission: Supports research, development, and production of rocket and torpedo propellants and explosives

Contaminants: Explosive chemicals, heavy metals, ash, inert material, scrap metal, propellant, ordnance compounds, refuse

Number of Sites:

CERCLA:	8
RCRA Corrective Action:	9
RCRA UST:	0
Total Sites:	17

Relative Risk Ranking of Sites:

High:	4	Not Evaluated:	1
Medium:	4	Response Complete:	8
Low:	0	Total Sites:	17

PROGRESS AND PLANS

CERCLA	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
PA	8							
SI								
RI/FS								
RD								
RA								
IRA								
RC	8							
Cumulative Response Complete	100%							

RCRA CA	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
RFA	9							
RFI						6		3
CMS					1	5		3
DES							2	7
CMI								9
IRA								
RC								9
Cumulative Response Complete								100%

INDIAN HEAD NAVAL SURFACE WARFARE CENTER
INDIAN HEAD, MARYLAND

Engineering Field Division/Activity: EFACHES

Major Claimant: COMNAVSEASYSCOM

Size: 3,423 Acres

Funding to Date: $5,365,000

Estimated Funding to Complete: $57,949,000

Base Mission: Conducts research, development and production of rocket and torpedo propellants and explosives

Contaminants: Heavy metals (mercury, silver), low-level radiation, industrial wastewater, solvents, ordnance compounds, acid, chlorinated and non-chlorinated solvents

Number of Sites:		Relative Risk Ranking of Sites:			
CERCLA:	48	High:	15	Not Evaluated:	3
RCRA Corrective Action:	0	Medium:	10	Response Complete:	4
RCRA UST:	0	Low:	16	Total Sites:	48
Total Sites:	48				

NPL

EXECUTIVE SUMMARY

Indian Head Naval Surface Warfare Center (NSWC) is about 35 miles south of Washington, D.C. NSWC lies on a peninsula formed by the Potomac River and its tributary, Mattawoman Creek. The Stump Neck Annex of NSWC lies on a non-contiguous parcel of land across the Mattawoman Creek. The town of Indian Head is in the immediate vicinity of NSWC. The immediate land use around the Stump Neck Annex is primarily rural, residential and public use, including General Smallwood State Park.

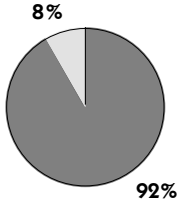
The primary mission of NSWC is the research, development and production of propellants for use in rocket motors and torpedoes. Because of the nature of its commodity, NSWC purchases, produces and handles complex chemicals. Wastes from ordnance operations have included waste propellants, explosives, acids, paints, solvents and metals. In addition, waste from non-ordnance operations include oils, pesticides, degreasers, acids, industrial wastewater and the chemical additive PCB. The primary contaminants of concern are lead, silver and mercury. The Navy has changed its operational processes to prevent further contamination.

NSWC was listed on the National Priority List (NPL) in FY95, with a Hazard Ranking System (HRS) Score of 50.00. Mercury contamination of surface waters is a concern. The Stump Neck Annex is not included in the NPL.

Due to NSWC's location along the Potomac River and its tributaries, the Mattawoman and Chicamuxen Creeks, contaminants in the shallow groundwater or surface runoff can enter these waterways. The surrounding marshlands provide ecological habitats, and the waters provide spawning and nursery area for several species of fish. These waterways are also used for recreational fishing and eventually empty into the Chesapeake Bay. Surficial groundwater is not used for drinking. Drinking and industrial processing water is derived from wells at a minimum of 200 to 400 feet deep. Due to the underlying geology, these deep aquifers are protected from contaminants by a number of zones of low permeability materials.

A Technical Review Committee (TRC) was formed in 1993. A Restoration Advisory Board (RAB) was established in January 1995. The community is actively involved in the 14 member RAB and meets quarterly. A Community Relations Plan (CRP) was updated in March 1995. An information repository is established at the Charles County Public Library, La Plata Branch and at the Indian Head NSWC General Library. The administrative record was established in 1994 (inclusive back to 1979) and is maintained at Engineering Field Activity Chesapeake (EFA CHES).

Forty-four sites are in a study phase. Four sites are considered Response Complete (RC) (Sites 40, 41, 51 and 52). Removal actions (removal of contaminated soil) were completed at Sites 5 and 8 in FY95. Interim Remedial Actions (IRAs) are underway at Sites 56 (waste removal - soil contaminated with heavy metals) and 57 (groundwater treatment of chlorinated solvents). The expected completion for these IRAs are FY97 and FY99, respectively. Both actions are expected to decrease the contaminants on-site and migration potential.



Current Status Of Sites

Studies Underway	44
Cleanups Underway	0
Response Complete	4
TOTALS	48

INDIAN HEAD NSWC
RELEVANT ISSUES

ENVIRONMENTAL RISK

HYDROGEOLOGY - NSWC is composed of two, non-contiguous parcels of land. Indian Head Peninsula is bounded on the west by the Potomac River, east by Mattawoman Creek and north by the town of Indian Head. Stump Neck Annex is on a peninsula bounded by the Mattawoman and Chicamuxen Creeks, both tributaries to the Potomac River. The Potomac and tributaries are probably hydraulic discharge points for unconfined groundwater present in surficial deposits. Thus, contaminants in the shallow groundwater and surface drainage can potentially migrate to the Potomac River, Mattawoman, or Chicamuxen creeks. The Potomac River and its tributaries are an estuary and subject to tidal action. Surficial groundwater is not used. Deeper production aquifers exist between 200 and 400 feet below ground surface. Potential contamination of off-site wells is significantly less due to distance and the cone of depression formed by the on-base wells. These deep aquifers are somewhat protected by impermeable clay zones. Precipitation averages 47 inches per year, with 10 year probable minimum and maximum of 35 and 56 inches of rain per year, respectively. The mean annual precipitation of snow, sleet and hail is 19 inches.

NATURAL RESOURCES - About 50% of the base is considered open field and shrub, 40% forest and 10% wetlands, including a 25-acre tidal swamp and waterfowl sanctuary. The installation has 314 acres of marshland and tidal flats that provide protective ecological habitat. The Potomac River in the vicinity of NSWC is a spawning and nursery area for stripped bass, white perch, herring and shad, and is the upstream limit of the nursery area for estuarine-dependent species that spawn in the Atlantic Ocean. The Potomac River and tributaries are used for recreational fishing. Over 80 species of birds, 22 species of mammals, 15 species of reptiles and 14 species of amphibians are common or abundant on the base. The Southern Bald Eagle, an endangered species, is indigenous to the area, but is considered an infrequent visitor to NSWC. The Rainbow Snake found at NSWC is recognized by Maryland as a threatened and endangered species.

RISK - Fifteen of the 48 sites on NSWC are ranked "High" relative risk in the DOD risk ranking system. Eleven of the sites are contaminated with silver, lead, mercury, or other heavy metals. Two of the sites are scrap and dump yards, containing chlorinated solvents, heavy metals and inert material. In general, contaminants at these sites could impact ecological sediment, soil, groundwater, surface water and human workers. Mercury contamination migration from four of the sites is of concern; however, a 1991 study by U.S. Fish and Wildlife of mercury levels in fish from the Mattawoman Creek concluded no abnormal amount of mercury in the fish. Of the remaining sites, ten are ranked "Medium," and 16 are ranked "Low" relative risk. The remaining three have not been evaluated, but will be when sufficient data is available.

RESTORATION PROJECTS - Excavated mercury contaminated soil during FY95 from Site 8 was placed in the soil cover of an explosive berm. Excavated silver contaminated soil from Site 5 was placed in a borrow pit. At both sites the soil was capped with clay and topsoil and revegetated.

REGULATORY ISSUES

NATIONAL PRIORITY LIST - NSWC was listed on the National Priorities List (NPL) on 29 September 1995 with a Hazard Ranking System (HRS) Score of 50.00. The Stump Neck Annex is not included on the NPL. Mercury contamination at three sites is of concern. The main concern is mercury contamination found at Site 8, which includes a stream and pond downstream. Any mercury can ultimately be discharged to the Mattawoman Creek, affecting tidal marsh fish and fowl downstream. Waste removal of soils at this site was conducted in FY81 and FY95.

PARTNERING - An Engineering Evaluation/Cost Analysis (EE/CA) was performed on Site 56. The State of Maryland provided technical input. The EPA was not involved and this is viewed as a pro-active approach. No contractor was used during the preparation of the EE/CA.

COMMUNITY INVOLVEMENT

RESTORATION ADVISORY BOARD - A Technical Review Committee (TRC) was formed in 1993 and met quarterly. The TRC was converted to a Restoration Advisory Board (RAB) in January 1995. The RAB has 14 members and meets quarterly. The community is actively involved in the RAB, accounting for about seven of the board members.

COMMUNITY RELATIONS PLAN - The Community Relations Plan (CRP) was updated March 1995.

INFORMATION REPOSITORY - An information repository is established at the Charles County Public Library, La Plata Branch and at the Indian Head NSWC General Library. The administrative record was established in 1994 (inclusive back to 1979) and is maintained at Engineering Field Activity Chesapeake (EFA CHES). Copies of Administrative Record documents are maintained for public access at the Information Repositories.

INDIAN HEAD NSWC
HISTORICAL PROGRESS

FY81

Site 8 - Completed Interim Remedial Action (IRA) (waste removal - soil w/ heavy metals).

FY83

Sites 1-29 - Completed Preliminary Assessment (PA).

FY85

Sites 5, 8 and 12 - Completed Site Inspection (SI).

FY92

Sites 39-55 - Completed the PA phase.
Site 42 - Completed the SI phase.
Sites 51 and 52 - Listed as Response Complete (RC).

FY93

Site 5 - Completed an IRA (waste removal - soil w/ heavy metals).

FY94

Sites 39-41, 43-50 and 53-55 - Completed the SI phase.
Site 56 - An IRA (waste removal - soil w/ heavy metals) is underway. Expected completion in FY97.
Sites 40 and 41 - Listed as RC.

PROGRESS DURING FISCAL YEAR 1995

FY95

Sites 5 and 8 - Completed 2nd IRA (waste removal - soil w/ heavy metals).
Site 5 - Remedial Investigation/Feasibility Study (RI/FS) is underway, expected completion in FY02.
Site 8 - RI/FS is underway and expected completion is in FY97.
Site 57 - An IRA groundwater treatment - chlorinated solvent is underway and expected completion is in FY 99.

PLANS FOR FISCAL YEAR 1996

FY96

Sites 39, 42, 44, 46, 47, 49 and 53-55 - RI/FS is underway. Expected completion FY99.
Sites 12 and 56 - RI/FS is underway. Expected completion FY00.
Sites 43, 45, 48 and 50 - RI/FS is underway. Expected completion FY02.

INDIAN HEAD NSWC
PROGRESS AND PLANS

CERCLA	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
PA	46							
SI	18					1		25
RI/FS				1		9	2	31
RD							9	32
RA								41
IRA	2(2)	2(2)		1(1)		1(1)		
RC	4			1		1		42
Cumulative Response Complete	8%			10%		12%		100%

Patuxent River Naval Air Station
Lexington Park, Maryland

Engineering Field Division/Activity:	EFACHES
Major Claimant:	COMNAVAIRSYSCOM
Size:	7,120 Acres
Funding to Date:	$10,889,000
Estimated Funding to Complete:	$154,231,000
Base Mission:	Maintains and operates facilities in support of testing and evaluating Naval aircraft systems
Contaminants:	Heavy metals, inorganic and organic compounds, pesticides, POLs, solvents

Number of Sites:		**Relative Risk Ranking of Sites:**			
CERCLA:	51	**High:**	28	**Not Evaluated:**	2
RCRA Corrective Action:	0	**Medium:**	21	**Response Complete:**	1
RCRA UST:	6	**Low:**	5	**Total Sites:**	57
Total Sites:	57				

NPL

EXECUTIVE SUMMARY

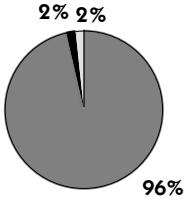
The Patuxent River Naval Air Station (NAS) is located in St. Mary's County, Maryland, approximately 65 miles southeast of Washington, D.C. The station is situated on a broad headland at the confluence of the Patuxent River and Chesapeake Bay. The unincorporated community of Lexington Park lies immediately to the southwest of the station. Basic operations are the testing and evaluation of aircraft weapons systems, fixed-wing antisubmarine aircraft and experimental and production fixed-wing attack, fighter and other aircraft; intermediate aircraft maintenance; operation, maintenance and improvement of existing facilities, grounds and utility plants and systems; and procurement and distribution of fuel, oil, chemicals and other required supplies. Typical air station operations that contributed to contaminated sites of the facility include machine shops, foundry, coatings and paint shops, paint stripping, plating shops, power plants, wastewater treatment plants, fire fighting, landfill disposal and storage of supplies, materials, fuels and limited ordnance. Current operations include pollution prevention technologies to prevent further contamination. Primary contaminants of concern are pesticides, solvents, the chemical additive PCB and metals that have contaminated soil, groundwater, sediment and surface water. Groundwater contamination at the landfills and high concentrations of pesticides in the soil and sediment at the Pest Control Shop caused NAS to be placed on the National Priorities List (NPL) in 1994.

St. Mary's County is rural in character and sparsely populated. Land use patterns in St. Mary's County are largely residential, agricultural and undeveloped open space. There are several small streams and ponds located on NAS. There is a fairly extensive storm sewer system that is composed of 18 drainage basins with discharge points on the Patuxent River, the Chesapeake Bay and various ponds and small lakes. The storm water collection system consists of reinforced concrete storm sewers receiving surface water and groundwater seepage from a network of shallow roadside ditches, natural streams, culverts, subdrains, storm sewers and laterals. Groundwater beneath NAS occurs in three principle zones: the upper-most water table aquifer and two confined aquifers. One of the confined aquifers is a major source of public water supply for southern Maryland; the other aquifer is the principle source of potable and industrial water for NAS.

A Technical Review Committee (TRC) was formed in FY90. For greater community involvement, the TRC was converted to a Restoration Advisory Board (RAB) in September 1994 and meets quarterly. The RAB has several active members composed of Navy employees, state and federal regulators and local citizens. A Community Relations Plan (CRP) was first published in FY91 and an Information Repository has been established at the local library.

Currently, 55 sites are in a study phase of which 51 are CERCLA sites. One CERCLA site is in a Site Inspection (SI) phase and ten sites are in a Remedial Investigation/Feasibility Study (RI/FS) phase. One RCRA Underground Storage Tank (UST) site is in the Corrective Action Plan (CAP) phase and a Corrective Measures Implementation (CMI) is underway at one UST site. Two Interim Remedial Actions (IRAs) are underway at two UST sites. The remaining 43 sites under study are awaiting funding to complete the study phase. The response is complete at one UST site.

A major success in the cleanup program at NAS Patuxent River involves the completion of three removal actions. At Site 1, Fishing Point Landfill, Shoreline Erosion Project was required due to landfill eroding into the Patuxent River and the Chesapeake Bay. The shoreline was recaptured with beach fill and a series of breakwaters was installed to dissipate the wave action. At Site 17, Pest Control Shop and Site 28, Transformer Storage Area, a removal action to remove contaminated soil was done.



Current Status Of Sites

Studies Underway	55
Cleanups Underway	1
Response Complete	1
TOTALS	57

PATUXENT RIVER NAS
RELEVANT ISSUES

ENVIRONMENTAL RISK

HYDROGEOLOGY - Geographically, NAS is located within the Coastal Plain province, a seaward sloping, moderately dissected to flat plain. In the area of NAS, the Patuxent River is actually an estuary system. The station is underlain by a thick sequence of sand, clay and gravel. Sediments, which overlie hard, dense crystalline rocks, are about 2,500 feet thick. There are several small streams and ponds located on the base. Contaminant migration pathways at NAS include surface runoff and groundwater movement to the Patuxent River, the Chesapeake Bay, and small streams and ponds. The vast majority of the sites are within the lowlands area of NAS, which contains a fairly well developed storm water drainage system. The potential for pollution migration offsite via surface water depends largely on the proximity of the waste disposal site to a stream channel and the amount of runoff generated per storm event. Groundwater beneath NAS occurs in three principle zones. The uppermost zone is the water table aquifer, whose elevation varies from a high of approximately 80 feet above mean sea level in the southwest portion of the base to zero feet along the coastal areas. Flow in the water table aquifer is generally from the southwest to the northeast. Groundwater also occurs in two confined aquifers, which are separated from the water table aquifer by thick accumulations of fairly impermeable silts, clays and marls. The uppermost confined aquifer is a major source of public water supply for southern Maryland; the other aquifer is the principle source of potable and industrial water for NAS. Of the three major aquifers beneath NAS, the water table aquifer is most susceptible to contamination since most surface soils at NAS are fairly permeable. This condition provides a potential pathway for leachate originating from various NAS waste disposal sites to migrate downward until it intersects the water table aquifer. Because potable water is obtained from the deep confined aquifers, there is minimal potential for waste disposal sites to contaminate NAS or surrounding community water supplies. Because of the thick sequence of clays and silt in the Chesapeake group, there is very little potential that contaminants will migrate vertically. Additionally, the thick clays and marls that separate the aquifers from one another will also act as an effective barrier to vertical migration of contaminants.

NATURAL RESOURCES - NAS has a draft Wildlife Management Plan that identifies typical species. A Forest Management Plan was developed in 1981. Food plots ranging in size from one-tenth to two acres are maintained for wildlife. Twenty-one areas on the station have been designated for hunting on a seasonal basis. NAS ponds and creeks, as well as the Patuxent River and Chesapeake Bay, support a wide variety of aquatic animals and plants. Five man-made ponds on station are used for recreational fishing. Saltwater fishing takes place along the northern shore of NAS. Oyster beds are located in Harper and Parsons Creeks and are worked in winter months. The Wetland Management Plan, as outlined in the draft Wildlife Management Plan calls for the maintenance of existing wetlands and the creation of new ones. Two endangered species exist in the vicinity of NAS. These are the shortnose sturgeon and the bald eagle These species should not be affected by the sites identified at NAS. The State of Maryland has designated some species that occur in the area as rare over a broad range and may become endangered. These species are the great blue heron, red-shouldered hawk, osprey and the eastern bluebird.

RISK - For the DOD Relative Risk Ranking System, 54 of the 57 sites have been ranked. Twenty-eight of these sites were ranked as high primarily due to known groundwater and soil contamination. Migration pathways have been identified and include nearby wetlands and ecological resources.

The Agency for Toxic Substance and Disease Register (ATSDR) performed a public health assessment for the installation in September 1995.

RESTORATION PROJECTS - At Site 1, Fishing Point Landfill, the Shoreline Erosion Project, stabilized and recaptured shoreline and installed a breakwater system to dissipate wave action. This restored the shoreline while also reducing the potential for contaminant migration.

REGULATORY ISSUES

NATIONAL PRIORITIES LIST - NAS was listed on the National Priority List (NPL) on 31 May 1994 with a Hazard Ranking System (HRS) score of 36.87. Contamination was detected in the groundwater at the Fishing Point Landfill, Site 1 and the Current and Former Sanitary Landfill, Site 11. High concentrations of pesticides were found in the soil and sediment of the Pest Control Shop, Site 17.

LEGAL AGREEMENTS - A Federal Facility Agreement (FFA) has not been signed yet but is awaiting direction from CNO/NAVFAC. The Site Management Plan (SMP) is being updated to include all of the IR sites.

COMMUNITY INVOLVEMENT

RESTORATION ADVISORY BOARD - A Technical Review Committee (TRC) was formed in FY90; it meets quarterly. The first Restoration Advisory Board (RAB) meeting was 26 October 1994. The issues discussed were the components of the Installation Restoration Program (IRP), the purpose of the RAB and the Engineering Evaluation/Cost Analysis (EE/CA) for Sites 6, 17 and 24.

COMMUNITY RELATIONS PLAN - A Community Relations Plan (CRP) was completed in April 1991. NAS had one public meeting for the proposed CRP/Record of Decision (ROD) requirement, for Site 11, Former Sanitary Landfill in September 1995.

INFORMATION REPOSITORY - An Administrative Record (the official file) was established in FY95 and is maintained by the Navy. The information in the Administrative Record was placed in two Information Repositories, established in FY95, for public access. They are located at the Lexington Park Public Library and the Public Affairs Office on the NAS. The Information Repositories are updated regularly by the Navy.

Patuxent River NAS
HISTORICAL PROGRESS

FY84

Sites 1-31 - An Initial Assessment Study (IAS), equivalent to a Preliminary Assessment (PA), was completed. It identified 31 sites at NAS. Fourteen sites (Sites 1, 2, 4, 6-8, 11, 15, 17, 23-25, 28 and 29) were recommended for further investigation. The remainder of the sites were recommended for no further action.

FY85

Sites 1, 2, 4, 6, 11, 17, 23, 24, 28 and 29 - The Remedial Investigation/ Feasibility Study (RI/FS) activities were initiated. Both shallow and deep monitoring wells were installed; soil borings were taken; and environmental sampling (water, soil, sediment and fish) and hydrogeologic testing was conducted.
Sites 7 and 8 - A Confirmation Study (CS), equivalent to a Site Investigation (SI), was completed.

FY86

Site 9 - An Interim Remedial Action (IRA) (drum removal) was completed.

FY87

UST 2 - Initial Site Characterization (ISC) and a Corrective Action Plan (CAP) were completed in FY87. The CAP recommended no further action at the site and the site has been closed.

FY88

SWMUs - A RCRA Facility Assessment (RFA) was conducted. One hundred sites were identified as possible Solid Waste Management Units (SWMUs). Some of these sites are being investigated under RCRA Closure plans. However, none of the Defense Environmental Restoration Account (DERA) funded sites are being covered under the RCRA Corrective Action (CA) program. All DERA funded sites are being handled under CERCLA or the RCRA Underground Storage Tank (UST) program.

FY89

UST 1 - An ISC was completed.

FY91

Sites 1, 2, 4, 6, 11, 15, 17, 23-25, 28 and 29 - A Confirmation Study (CS) was completed in FY91. Sites 15 and 25 were recommended for no further action. Sites 6-9 were recommended for interim remedial or removal actions. Sites 1, 2, 4, 6, 11, 17, 23, 24, 28 and 29 were recommended for a Remedial Investigation (RI). Sites 7 and 8 were later moved to the UST program and are now part of UST 1.
Site 10 - An IRA for drums and ordnance removal and ordnance sweep to remove remaining live ordnance was completed
Site 17 - An IRA (pesticide-contaminated soil removal) was completed.
Site 28 - An IRA (PCB-contaminated soil removal) was completed.
UST 3 - The ISC and a CAP were completed. Implementation of the Corrective Measures Plan (CMP), which includes groundwater treatment, was initiated and is expected to continue until FY96.

FY92

A draft RI report was completed in February 1992 and submitted to the State of Maryland and EPA for review. The State requested that additional field work be conducted.
USTs 4 and 5 - The ISCs were completed.

FY93

Site 34 - Site was identified during a geophysical survey and was added to the program. A PA was completed in FY93.
UST 1 - Groundwater treatment was initiated as an interim measure.
UST 4 - A CAP was completed. Implementation of the CMP, which includes groundwater treatment, was initiated and is expected to continue until FY96.
UST 6 - An ISC was completed.

FY94

Site 1 - An IRA (shoreline stabilization) was completed.
Sites 9 and 34 - An SI was completed in April 1994. Both sites were recommended for an RI.
Sites 35 and 43-46 - A PA was completed.
UST 5 - A CAP was completed in November 1993; soil removal was initiated in August 1994.

PROGRESS DURING FISCAL YEAR 1995

FY95

Sites 35 and 47-52 - PAs were completed.
USTs 1 and 5 - An IRA is underway and expected to be completed in FY96.

UST 3 - Implementation of Corrective Measures began and is expected to be completed FY96.

PLANS FOR FISCAL YEARS 1996 AND 1997

FY96

Sites 3, 31, 35-39 and 47 - SIs are expected to start.
Sites 6 and 17 - Design for IRA is expected to start.
UST 1 - Implementation of the Corrective Measure Design is expected to be completed and an Interim measures to be completed.
UST 5 - Soil Removal action is expected to be completed.
UST 6 - Corrective Action Plan expected to be completed.

FY97

Sites 1, 2, 4-6, 9, 11, 12, 17, 23, 24, 27-29 and 34 - An RI/FS is scheduled to be completed.
Site 31 - An SI is expected to be completed**.**
Sites 6, 11, 17 and 24 - Scheduled IRAs are expected to be completed.
UST 4 - Implementation of the Corrective Measure is expected to be completed.
UST 6 - Implementation of the Corrective Measures and two Interim Actions to be completed.

PATUXENT RIVER NAS
PROGRESS AND PLANS

CERCLA	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
PA	44	7						
SI	15			1	1	3	6	21
RI/FS				15			2	31
RD						5	5	38
RA							4	46
IRA	5(6)			4(4)				
RC	1						1	49
Cumulative Response Complete	2%						4%	100%
UST	**FY94 and before**	**FY95**	**FY96**	**FY97**	**FY98**	**FY99**	**FY00**	**FY01 and after**
ISC	6							
INV								
CAP	4		1					1
DES			1					
IMP			2	2				2
IRA	1(1)		2(2)	1(2)				
RC				3				3
Cumulative Response Complete				50%				100%

POMONKEY TEST RANGE NAVAL RESEARCH LABORATORY
POMONKEY, MARYLAND

Engineering Field Division/Activity: EFACHES

Major Claimant: CNR

Size: 20 Acres

Funding to Date: $0

Estimated Funding to Complete: $26,000

Base Mission: Tracks and analyzes satellite telemetry data

Contaminants: Paint

Number of Sites:

CERCLA:	1
RCRA Corrective Action:	0
RCRA UST:	0
Total Sites:	1

Relative Risk Ranking of Sites:

High:	1	Not Evaluated:	0
Medium:	0	Response Complete:	0
Low:	0	Total Sites:	1

PROGRESS AND PLANS

CERCLA	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
PA	1							
SI						1		
RI/FS								
RD								
RA								
IRA								
RC						1		
Cumulative Response Complete						100%		

Solomons Naval Recreation Center
Solomons, Maryland

Engineering Field Division/Activity: EFACHES

Major Claimant: COMSPAWARSYSCOM

Size: 300 Acres

Funding to Date: $325,000

Estimated Funding to Complete: $6,161,000

Base Mission: Provides recreational services to military and civilian personnel

Contaminants: Acid, base, heavy metals

Number of Sites:

CERCLA:	3
RCRA Corrective Action:	0
RCRA UST:	0
Total Sites:	3

Relative Risk Ranking of Sites:

High:	2	Not Evaluated:	0
Medium:	0	Response Complete:	1
Low:	0	Total Sites:	3

PROGRESS AND PLANS

CERCLA	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
PA	1							
SI	3							
RI/FS								2
RD								2
RA								2
IRA								
RC	1							2
Cumulative Response Complete	33%							100%

St. Inigoes Naval Command Control and Ocean Surveillance Center In-Service Engineering East Coast Detachment

St. Ingoes, Maryland

Engineering Field Division/Activity: EFACHES

Major Claimant: COMSPAWARSYSCOM

Size: 852 Acres

Funding to Date: $50,000

Estimated Funding to Complete: $0

Base Mission: Provides electronics material support of systems and equipment

Contaminants: None

Number of Sites:

CERCLA:	2
RCRA Corrective Action:	0
RCRA UST:	0
Total Sites:	2

Relative Risk Ranking of Sites:

High:	0	Not Evaluated:	0
Medium:	0	Response Complete:	2
Low:	0	Total Sites:	2

BRAC III

PROGRESS AND PLANS

CERCLA	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
PA	2							
SI								
RI/FS								
RD								
RA								
IRA								
RC	2							
Cumulative Response Complete	100%							

Waldorf Naval Research Laboratory
Waldorf, Maryland

Engineering Field Division/Activity: EFACHES

Major Claimant: CNR

Size: 15 Acres

Funding to Date: $945,000

Estimated Funding to Complete: $200,000

Base Mission: Conducts microwave space research; stores equipment and supplies

Contaminants: Heavy metals, paint, solvents

Number of Sites:

CERCLA:	1
RCRA Corrective Action:	0
RCRA UST:	0
Total Sites:	1

Relative Risk Ranking of Sites:

High:	0	Not Evaluated:	0
Medium:	1	Response Complete:	0
Low:	0	Total Sites:	1

PROGRESS AND PLANS

CERCLA	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
PA	1							
SI	1							
RI/FS								1
RD								
RA								
IRA		1(1)						
RC								1
Cumulative Response Complete								100%

WHITE OAK NAVAL SURFACE WARFARE CENTER
WHITE OAK, MARYLAND

Engineering Field Division/Activity: EFACHES

Major Claimant: COMNAVSEASYSCOM

Size: 733 Acres

Funding to Date: $2,584,000

Estimated Funding to Complete: $20,584,000

Base Mission: Principal Research, Development, Test and Evaluation center (RDT&E) for ordnance technology concepts and development

Contaminants: Laboratory chemicals, explosive compounds, solvents, waste oil, PCBs, heavy metals, volatile and semi-volatile organic compounds

Number of Sites:		Relative Risk Ranking of Sites:			
CERCLA:	14	High:	5	Not Evaluated:	1
RCRA Corrective Action:	1	Medium:	2	Response Complete:	7
RCRA UST:	0	Low:	0	Total Sites:	15
Total Sites:	15				

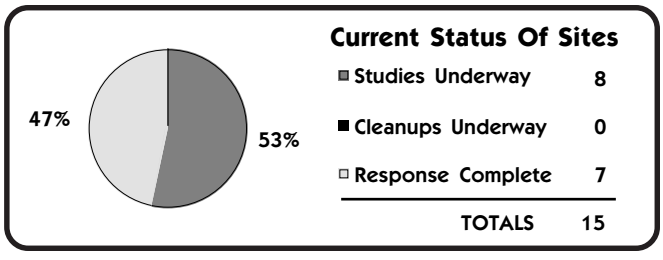
BRAC IV

EXECUTIVE SUMMARY

White Oak Naval Surface Warfare Center (NSWC) is located on a 732 acre site approximately five miles north of Washington D.C. in Silver Spring, Maryland and is situated in both Montgomery and Prince George counties. NSWC was established on 1 September 1974 by merger of the White Oak Naval Ordnance Laboratory (NOL) and the Dahlgren Naval Weapons Laboratory in Virginia. The facility was recommended for closure by the BRAC IV commission in 1995. The functions performed at White Oak will be absorbed by Panama City Coastal Systems Station, Florida and Carderock's Indian Head and Dahlgren Divisions in Maryland. The facility is slated to cease operations on January 1997 and to permanently close on July 1997.

NSWC White Oak functioned as the principle Navy research, development, test and evaluation center for ordnance technology, concepts and systems. White Oak maintained the primary in-house research and development capabilities for Navy and Marine Corps strategic systems. Operations consisted of Naval mine and multimedia weapons systems, directed energy weapons, fuse development, small craft armament and ordnance technology. Tenants at NSWC White Oak are the Navy Tactical Support Activity, The Patent Counsel, the Navy Medical Command, NSWC Indian Head Detachment, NSWC Carderock Detachment and Dahlgren Detachment.

Environmental issues warranting investigation and remedial action were created primarily from past disposal procedures that led to chemical contamination. These practices included the landfilling of oils, the chemical additive PCBs, solvents, paint residue, miscellaneous chemicals (including mercury) and the disposal of production wastewater in dry wells. Also contributing to the environmental degradation at the Base were the burning of explosive ordnances, sludge composting and a radium spill. The primary contaminants of concern are volatile organic compounds, the chemical additive PCBs, cadmium, chromium, lead, nickel and ordnance compounds (RDX, TNT). Potential contaminant migration at White Oak is most likely to be coupled with direct surface runoff or shallow groundwater discharge to surface waters.



A Technical Review Committee (TRC) was formed in 1989 and was converted to a Restoration Advisory Board (RAB) in October 1995. An Information Repository available to the public was established at the White Oak Library in White Oak, Maryland. A Community Relations Plan (CRP) was published in 1991.

CERCLA driven environmental studies have identified 14 sites on White Oak NSWC. Of these 14, seven required no further study or action after the Preliminary Assessment (PA) phase in 1984. The remaining seven sites proceeded into the Site Inspection (SI) phase that was completed in 1987. Contamination was found at all seven sites and they were recommended for an in-depth investigation in a Remedial Investigation/Feasibility Study (RI/FS) phase. The Apple Orchard Landfill, Site 2, was found to have the chemical additive PCBs in the surface soil that presented an immediate risk to those accessing the site. A fence was promptly installed to restrict access. The remaining six sites were found to have the potential for exposure to the contaminants.

During a RCRA Facility Assessment (RFA) conducted in FY89, 110 Solid Waste Management Units (SWMUs) were identified which included the 14 sites from the PA phase under CERCLA. Thirty-eight SWMUs were determined to require further investigation. There is one Underground Storage Tank (UST) site currently under RCRA investigation and is funded by the Defense Environmental Restoration Account (DERA).

The RI/FS recommended source removal for five sites (Sites 4, 7, 8, 9 and 11) and encapsulation for two sites (Sites 2 and 3). A public comment period and meeting were held in September 1994 to review the proposed remediation technologies recommended. A Remedial Design (RD) began for six of the sites (Sites 2, 3, 4, 8, 9 and 11) and is expected to be complete in FY97. The recommended remedial technologies for these sites were presented in the Final Proposal Plan published in September 1994.

WHITE OAK NSWC RELEVANT ISSUES

ENVIRONMENTAL RISK

HYDROGEOLOGY - All of the NSWC White Oak property lies within the drainage basin of the Paint Branch Stream, a 12 mile long tributary to the Northeast Branch of the Anacostia River. The Paint Branch Stream is the largest perennial stream in the immediate vicinity of NSWC White Oak. The soils, except for stream-bed soils, tend to be moderately to excessively well drained and moderately to severely eroded. NSWC lies on the soil profile boundary between crystalline bedrock of Piedmont and Coastal Plain sediments. Together they support an unconfined groundwater body several hundred feet thick. Coastal Plain sediments are only a few tens of feet thick and in many places have been entirely eroded. The Piedmont bedrock is the Wissahickon formation metamorphic gneiss; however, the upper 50 to 70 feet of the Wissahickon formation has been highly weathered to a clayey saprolite material. The Wissahickon gneiss and saprolite together account for at least 50 percent of the exposed formations. Most groundwater circulation at NSWC will generally occur within the upper 100 feet, moving from areas of rainfall infiltration on higher ground toward discharge areas supporting perennial stream flows at lower elevations. The flow gradients decrease near stream channels because groundwater migration pathways do not discharge directly to the nearest perennial stream, but circulate more deeply and slowly to discharge south or southeast of the property.

Potential contaminant migration at NSWC White Oak is most likely to be coupled with direct surface runoff or shallow groundwater discharge to surface waters. Contaminants moving along deeper groundwater flowpaths would become more attenuated by the processes of dispersion, adsorption on clays and chemical degradation. All soils in the area tend to be acidic (pH values range from 4.0 to 6.0) and are therefore corrosive to metals. The average annual precipitation is roughly 44 inches and snowfall accumulations of more than ten inches are rare.

NATURAL RESOURCES - Paint Branch and its tributaries are rated as Class III surface water by the State of Maryland (1980). Waters of this classification are natural trout waters having the potential for or being suitable for the growth and propagation of trout and capable of supporting natural trout populations and their associated food organisms. There is a small population of white-tailed deer that remain on NSWC property because there is little suitable habitat in the surrounding area. There are no known federally listed endangered or threatened species of animals or plants at NSWC White Oak.

RISK - A Human Health Risk Assessment and an Ecological Risk Assessment have been completed. Based on the human health risk assessment of the Remedial Investigation (RI), remediation was recommended for all seven of the investigated sites (Sites 2, 3, 4, 7, 8, 9 and 11). The RI at the Apple Orchard Landfill, Site 2, found the chemical additive PCBs in the surface soil that presented an immediate risk to those accessing the site. A fence was promptly installed to restrict access. The remaining six sites were found to have the potential for exposure to the contaminants and therefore needed further investigation. The Remedial Investigation/Feasibility Study (RI/FS) recommended source removal for five sites (Sites 4, 7, 8, 9 and 11) and encapsulation for two sites (Sites 2 and 3). A public comment period and meeting were held in September 1994 to review the proposed remediation technologies recommended.

The DOD Relative Risk System has been completed for Sites 2, 3, 4, 7, 8, 9 and 11. High risk is documented for soil at Sites 2 and 7 due to presence of nearby workers. High risk is also reported for groundwater at sites 8, 9 and 11 because of potential migration pathways to the Paint Branch stream.

REGULATORY ISSUES

LEGAL AGREEMENTS - There are no reported Federal Facility Agreements (FFAs) or Federal Facility Site Remediation Agreements (FFSRAs) in place at NSWC. A RCRA Part B Permit was applied for in FY92. The permit has not been issued to date. An agreement was negotiated between NSWC and EPA that resulted in the closure of the NSWC sewage treatment plant in July 1982. A compliance agreement was negotiated between NSWC and the State of Maryland in 1982 to convert the boiler plant from fuel oil to natural gas that reduced particulate emissions.

COMMUNITY INVOLVEMENT

RESTORATION ADVISORY BOARD - A Technical Review Committee (TRC) was formed in 1989. The committee included representatives from the Hillendale Citizens Organization, Prince George's County, Montgomery County, The State of Maryland, EPA Region III, the Base Commander, the Base Environmental Officer and the Naval Facilities Engineering Command Chesapeake Activity (EFACHES) Remedial Project Manager. The TRC was converted to a Restoration Advisory Board (RAB) in October 1995. The RAB is very active, meets monthly and is involved in all remedial decisions. The support and interaction gained through community involvement and regulatory interface has enhanced the cleanup process at NSWC.

COMMUNITY RELATIONS PLAN - A Community Relations Plan (CRP) was completed in October 1991. A public meeting to discuss sites was held 7 July 1994. Site tours are offered on request. In FY95 there were approximately four tours provided to the public at various sites.

INFORMATION REPOSITORY - An Information Repository available to the public was established at the White Oak Library in White Oak, Maryland. An Administrative Record was set up in 1994 and is maintained at the EFACHES and a copy is at the Public Affairs Office at NSWC White Oak.

BASE REALIGNMENT AND CLOSURE

BRAC - NSWC White Oak was recommended for closure by the Base Realignment and Closure (BRAC) IV commission in 1995. The functions performed at White Oak will be absorbed by Panama City Coastal Systems Station in Florida and Carderock's Indian Head and Dahlgren Divisions in Maryland. The facility is slated to cease operations in January 1997 and to permanently close in July 1997.

BRAC CLEANUP TEAM - To assist site closure and expedite land transfer, a BRAC Cleanup Team (BCT) was formed on 14 December 1995. Team members meet regularly and include: The EPA Region III, the State of Maryland and the NSWC White Oak Base Environmental Coordinator (BEC).

DOCUMENTS - A BRAC Cleanup Plan (BCP) is being prepared and will be completed in November 1996. A BRAC Environmental Baseline Survey (EBS) will be completed in April 1996.

LEASE/TRANSFER - Preparation is underway to conduct a Finding Of Suitability to Transfer (FOST).

REUSE - A BRAC Reuse Plan is being developed to lease 710 of the 732 acres at NSWC to the Food and Drug Administration (FDA), Army and Air Force.

FAST-TRACK INITIATIVES - Sites 8, 9 and 11 have undergone Remedial Design for a soil removal and are on a fast-track to be cleaned.

WHITE OAK NSWC
HISTORICAL PROGRESS

FY84

Sites 1-14 - An Initial Assessment Study (IAS) similar to a Preliminary Assessment (PA), was completed which identified 14 potentially contaminated sites. Seven sites (Sites 1, 5, 6, 10, 12, 13 and 14) were determined not to present a threat to human health or the environment and No Further Action (NFA) was recommended. Seven sites (Sites 2-4, 7-9 and 11) were recommended for further investigation.

FY85

Sites 1, 5-6, 10 and 12-14 - NFA was determined for these sites. Site status may change with BRAC evaluation.

FY87

Sites 2-4, 7-9 and 11 - A Verification Step study, similar to a Site Inspection (SI), was completed in April 1987. The report recommends additional groundwater monitoring and collecting additional sediment and surface water samples.

FY89

SWMUs 1-110 - The RCRA Facility Assessment was completed. Thirty-eight SWMUs were determined to require further investigation.
Sites 2-4, 7-9 and 11 - Phase I of the RI was completed.

FY93

Sites 2-4, 7-9 and 11 - The Decision Documents for the remedial actions to be used were completed.
Sites 2-4, 7-9 and 11 - The Remedial Investigation/ Feasibility Study (RI/FS) was completed. The FS recommends source removal for five sites (Sites 4, 7-9 and 11) and encapsulation for the two remaining sites (Sites 2 and 3).
Site 2 - A Interim Remedial Action (IRA) was completed to install a fence around the site to restrict access.

FY94

Sites 2-4, 8-9 and 11 - The Remedial Design (RD) phase began.

PROGRESS DURING FISCAL YEAR 1995

FY95

Sites 2-4, 8-9 and 11 - The RD phase was underway. For Sites 2 and 3, landfill caps were being designed. For Sites 8, 9 and 11, excavation and soil removals were designed.

PLANS FOR FISCAL YEARS 1996 AND 1997

FY96

Sites 2-4 - An RD will be completed.

FY97

Sites 8, 9 and 11 - An RD will be completed.
Sites 2-4, 8-9 and 11 - The Remedial Action (RA) phases will start, although plans may be revised due to the recent BRAC status of the base.

WHITE OAK NSWC
PROGRESS AND PLANS

CERCLA	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
PA	14							
SI	7							
RI/FS	7							
RD			3	3				1
RA								7
IRA	1(1)							
RC	7							7
Cumulative Response Complete	50%							100%
RCRA CA	**FY94 and before**	**FY95**	**FY96**	**FY97**	**FY98**	**FY99**	**FY00**	**FY01 and after**
RFA	1							
RFI								1
CMS								1
DES								1
CMI								1
IRA								
RC								1
Cumulative Response Complete								100%