

# DAVISVILLE NAVAL CONSTRUCTION BATTALION CENTER

## DAVISVILLE, RHODE ISLAND



<b>Engineering Field Division/Activity:</b>	NORTHDIV
<b>Major Claimant:</b>	COMNAVFACENGCOM
<b>Size:</b>	1,294 Acres
<b>Funding to Date:</b>	\$25,931,000
<b>Estimated Funding to Complete:</b>	\$21,071,000
<b>Base Mission:</b>	Provided mobilization support to Naval Construction Forces
<b>Contaminants:</b>	Heavy metals (lead), PCBs, pesticides (dichlorodiphenyl trichloroethane), POLs, volatile organic compounds

<b>Number of Sites:</b>		<b>Relative Risk Ranking of Sites:</b>			
<b>CERCLA:</b>	16	<b>High:</b>	8	<b>Not Evaluated:</b>	0
<b>RCRA Corrective Action:</b>	0	<b>Medium:</b>	8	<b>Response Complete:</b>	5
<b>RCRA UST:</b>	8	<b>Low:</b>	3	<b>Total Sites:</b>	24
<b>Total Sites:</b>	24				



### EXECUTIVE SUMMARY

The Davisville Naval Construction Battalion Center (NCBC) is 18 miles south of Providence in North Kingstown, Washington County, Rhode Island. It was a military installation from World War II until its operational closure in 1994. The area is now primarily residential. Operations that contributed to contamination include shops such as carpentry, painting, plumbing, power plant maintenance, vehicle maintenance, pier operations, equipment maintenance and ordnance operations. Site types of concern include landfills, storage and disposal areas, transformer storage areas, spill areas, Underground Storage Tanks (USTs) and fire fighting training areas.

NCBC was placed on the National Priorities List (NPL) because Site 9 (Allen Harbor Landfill) and Site 7 (Calf Pasture Disposal Area), threaten Allen Harbor and Narragansett Bay. Both sites were used for the disposal of solid and liquid wastes without any method of containment other than burial. The proximity of Site 9 to Allen Harbor makes the landfill a potential source for the heavy metal contamination detected in the shoreline and sediments. The waters off Site 7 provide an important shellfish resource in Narragansett Bay. A Federal Facility Agreement (FFA) was signed by EPA Region I, the State of Rhode Island and the Navy in 1992.

NCBC consisted of three geographic areas. The Main Center, which includes Sites 7 and 9, is located on Narragansett Bay. The West Davisville Storage Area is located three miles west of the Main Center. Camp Fogarty, a former training center, is located four miles west of the Main Center. Municipal water supply wells for the town of North Kingstown are located within a three mile radius of NCBC.

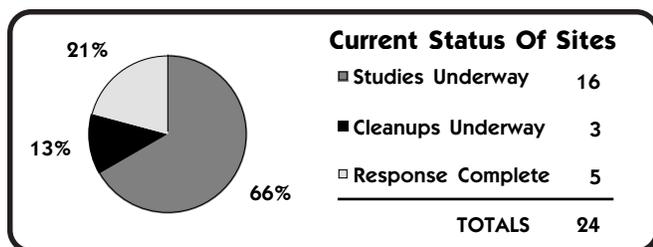
The Community Relations Plan (CRP) was completed in May 1989. An Administrative Record was established in 1989 and an Information Repository is located at a local library. A Technical Review Committee (TRC), established in April 1988, was converted to a Restoration Advisory Board (RAB) in December 1993. The RAB has 21 members who meet bi-monthly.

At the end of FY95, ten of the 16 CERCLA sites at NCBC were in the Study Phase, three were in the Cleanup Phase and two were Response Complete (RC). Five of the eight UST sites were in the Study Phase and three were RC. Remedial Investigations (RI) were completed at Sites 3, 7, 9 and Study Area 1. In FY95, a Corrective Action Plan (CAP) was prepared for seven of the 56 tanks that were removed in FY92 from USTs 1-7. Investigations are underway to prepare a CAP for seven of the 27 tanks that were removed in FY95. Also in FY95, the Remedial Action (RA) for removal of material contaminated with the chemical additive PCB at Site 14 was completed. A Record of Decision (ROD) for No Further Action (NFA) at Sites 5 and 8 was signed and a non-time critical removal action at Study Area 4 was initiated.

All field investigations will be complete in FY96. Feasibility Studies (FSs) are underway for Sites 6, 9, 10, 11 and 13. A basewide groundwater study will also be completed. An FS for Site 7 will begin after completion of the RI. Removal of underground tanks and piping will be completed at Site 2, along with cleaning of the battery room. Asphalt material will be removed from Site 4. Also in FY96, Proposed Remedial Action Plans (PRAPs) and RODs for Sites 6, 9, 10, 11 and 13 will be prepared. RAs at Sites 2, 12, 13 and Study Area 4 will be completed.

In July 1991, the Base Realignment and Closure (BRAC II) Commission recommended closure of Davisville NCBC. Construction battalion activities were transferred to NCBC Gulfport, Mississippi and NCBC Port Hueneme, California in April 1994. Camp Fogarty (347 acres) was transferred to the Army in December 1993. It is currently assigned to the Rhode Island National Guard. Portions of West Davisville (70 acres) were leased to Rhode Island Port Authority in November 1993 and 21 buildings will be leased in January 1996.

The BRAC Cleanup Team (BCT), formed in FY94, has helped resolve issues related to the Ecological Risk Assessment and Remedial Investigation/Feasibility Study (RI/FS) reports. The BCT also renegotiated a new FFA schedule. A BRAC Cleanup Plan (BCP) was updated in February 1995. The reuse plan was completed in January 1994. Future uses will be primarily industrial and some recreational. In FY96, Phase II of the Environmental Baseline Survey (EBS) to characterize all parcels will be completed. Fast Track Initiatives have expedited cleanups. Removal actions at four sites were completed in advance of the PRAP and the ROD. Overlapping phases when sufficient information is available to safely begin the next phase has saved time. Final draft FS preparation and review periods were shortened by including revised text on draft comments.



## DAVISVILLE NCBC RELEVANT ISSUES

### ENVIRONMENTAL RISK



**HYDROGEOLOGY** - Two sites at NCBC Davisville are within 1,000 feet of one another. Site 9 (Allen Harbor Landfill) is located adjacent to Allen Harbor and Site 7 (Calf Pasture Point Disposal Area). Both sites threaten Allen Harbor and Narragansett Bay. Municipal supply wells for the town of North Kingstown, which serves approximately 27,000 persons, are located within three miles of hazardous substances on the sites. Groundwater is shallow (2-4 feet) in some areas and soils permeable, conditions that facilitate movement of contaminants into groundwater. Both Allen Harbor Landfill and Calf Pasture Point Disposal Area were used for the disposal of a variety of solid and liquid wastes without any method of containment other than burial. The proximity of Site 9 to the surface water of Allen Harbor makes the landfill a potential source for the heavy metal contamination detected in the shoreline and sediments of Allen Harbor. In addition, the waters off Site 7 provide an important shellfish resource in Narragansett Bay. The chief chemicals of concern are lead, mercury, carbon tetrachloride and the chemical additive PCB.



**NATURAL RESOURCES** - Allen Harbor is a small inlet from Narragansett Bay. The harbor was closed to shellfishing in 1984 by the Rhode Island Department of Environmental Management (RIDEM). The waters off Calf Pasture Point provide an important shellfish resource. Both saltwater and fresh water wetlands are located on NCBC. No rare, threatened, or endangered species have been observed on the center, but some are occasionally seen in the area. There is a nesting colony of Common Terns on the east side of the Quonset Point NAS airfield.

NCBC has two historical sites eligible for the National Register of Historic Places that include warehouses and residential headquarters.



**RISK** - In FY94, an Ecological Risk Assessment was done in conjunction with an on-going Remedial Investigation/Feasibility Study (RI/FS) under EPA guidelines. Eight of the 24 sites at NCBC received a high ranking under the DOD Relative Risk Ranking System. All high rankings were attributed to either soil or groundwater contamination. Contaminants include petroleum products, volatile organic compounds, the chemical additive PCBs and solvents. Potential receptors are human and ecological. Remedial Action (RA) will soon be underway at Site 9. Sites 6, 10 and 11 are No Further Action (NFA) sites. Site 4 will undergo asphalt removal in FY96. The Agency for Toxic Substances and Disease Registry (ATSDR) completed a Public Health Assessment in October 1995. Concern was expressed about shellfish taken from near shore areas surrounding the landfill.

### REGULATORY ISSUES



**NATIONAL PRIORITIES LIST** - In November 1989, NCBC Davisville was added to the National Priorities List (NPL) with a Hazard Ranking System (HRS) score of 34.52. RAs are being conducted under CERCLA while compliance actions are governed by Federal and Rhode Island state laws.



**LEGAL AGREEMENTS** - A Federal Facility Agreement (FFA) was signed in March 1992 by the EPA Region I, the State of Rhode Island and the Navy. The Base Realignment and Closure (BRAC) Cleanup Plan (BCP) will be used in lieu of a Site Management Plan (SMP).



**PARTNERING** - The University of Rhode Island received a grant of \$1.3 million from DOD to establish an environmental education and training facility at NCBC. The intent of the training facility is to educate students and train former defense workers in environmental cleanup. Increased communication with EPA and the State of Rhode Island Department of Environmental Management (RIDEM) has improved the decision making process. The facility will be located in buildings recently leased to Rhode Island Economic Development Corporation.

### COMMUNITY INVOLVEMENT



**RESTORATION ADVISORY BOARD** - A Technical Review Committee (TRC) was established in April 1988 and converted to a Restoration Advisory Board (RAB) in December 1993. The RAB has 21 members who meet bi-monthly or as necessary. Meeting agenda items are addressed in an open discussion format. In addition, community members of the RAB will be receiving Technical Assistance Grants (TAGs) through EPA to provide continued support to the RAB. Represented on the RAB are the Rhode Island Port Authority (RIPA), City of North Kingstown, Narragansett Indian Tribe, US Fish and Wildlife Service, US Public Health Service, Narragansett Bay Project and the Rhode Island Resource, Conservation and Development Area.



**COMMUNITY RELATIONS PLAN** - The Community Relations Plan (CRP) was completed in May 1989. An update CRP will be issued in March 1996.



**INFORMATION REPOSITORY** - An Administrative Record was established in 1989 and an Information Repository was set up in a local library in May 1989. Copies of Administrative Record documents are maintained in the Information Repository for public access.

### BASE REALIGNMENT AND CLOSURE



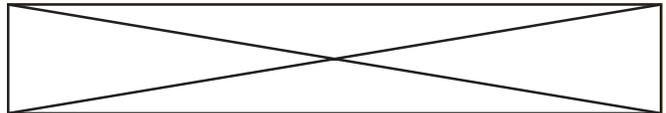
**BRAC** - In July 1991, the Base Realignment And Closure (BRAC) Commission recommended closure of NCBC. The official closure date was April 1994. Construction battalion training and mobilization activities were transferred to Naval Construction Battalion Center, Gulfport, Mississippi and to Naval Construction Battalion Center, Port Hueneme, California in April 1994. Camp Fogarty (347 acres) was transferred to the Army in December 1993. Portions of West Davisville (70 acres) were leased to Rhode Island Port Authority in November 1993 and 21 buildings will be leased in January 1996.



**BRAC CLEANUP TEAM** - The BRAC Cleanup Team (BCT) was formed in December 1993 and meets regularly to discuss current and future cleanup initiatives. The BCT has helped resolve issues related to the Ecological Risk Assessment and several RI/FS reports. The BCT also renegotiated a new FFA schedule. The BCT has representatives from Naval Facilities Engineering Command's Northern Division (NORTHDIV), EPA Region I and the Rhode Island Department of Environmental Management (RIDEM).



**DOCUMENTS** - The BCP was completed in February 1994 and is updated annually. A Phase I Environmental Baseline Survey (EBS) has been completed and a Phase II EBS is underway.



**LEASE/TRANSFER** - There are 1,284 acres available for disposal. Currently, 80 acres are leased. There are 518 acres environmentally available for transfer, of which 374 have been transferred.



**REUSE** - Future uses will be mainly industrial with some recreational use of certain areas. The Reuse Plan was completed in January 1994. The plan was approved by the North Kingstown Town Council and the RIPA Board of Directors.



**FAST TRACK INITIATIVES** - Fast Track Initiatives have expedited cleanups. For example, removal actions at four sites were completed in advance of the Proposed Remedial Action Plan (PRAP) and the Record of Decision (ROD). Also, overlapping phases when sufficient information is available to safely begin the next phase has saved time. Final draft feasibility study preparation and review periods have been eliminated by expanding response to comments on drafts to include proposed revised text.

## DAVISVILLE NCBC HISTORICAL PROGRESS

### FY80

NCBC Davisville was issued a RCRA Generator Facility Permit that identified 13 Solid Waste Management Units (SWMUs) (nine landfills, two storage areas, one waste oil tank storage area and an injection well). Ten of the RCRA SWMUs are the same as 10 CERCLA sites: Sites 2, 3, 6, 7, 8, 9, 10, 11, 13 and 15. The remaining three SWMUs are not currently Defense Environmental Restoration Account (DERA) funded.

### FY84

**Sites 1-14** - An Initial Assessment Study (IAS), equivalent to a Preliminary Assessment (PA), identified fourteen potentially contaminated sites. The IAS recommended Sites 5, 7 and 9 for further investigation in a Confirmation Study (CS). Sites 12 and 14 were recommended for limited investigation. Sites 1-4, 6, 8, 10, 11 and 13 were found not to pose a threat to human health or the environment and were not recommended for further investigation. However, all sites except Site 1 were investigated further in the CS.

### FY87

**Sites 2-14** - The CS, equivalent to a Site Inspection (SI), was completed. No further action was recommended for Sites 4 and 5. Sites 2, 3, 6, 7, 9 and 10-14 were recommended for further investigation.

### FY92

**Sites 2, 3, 5-11 and 13** - A Phase I Remedial Investigation/Feasibility Study (RI/FS) that began in 1988 was completed. Concurrent with this Phase I RI/FS, a Federal Facility Agreement (FFA) was signed between the Department of the Navy, the State of Rhode Island and the EPA.

**Sites 1, 4 and 15** - The FFA identified these three sites as Study Areas. Study Area 15 was used to store containerized waste petroleum products and solvents and was added by agreement of the parties concerned.

**Sites 2, 3 and 5-14** - The FFA identified these twelve sites as Areas of Concern (AOC).

**USTs 1-7** - Fifty-six tanks were removed. Sampling following tank removals indicated seven areas that required further investigation to determine if remediation is necessary. An Initial Site Characterization (ISC) was completed.

### FY93

**Sites 12 and 14** - The RI/FS was completed. Asphalt and concrete were removed as an Interim Remedial Action (IRA). A Record of Decision (ROD) for removal of the remaining contaminated concrete was prepared. This will be the Final Remedial Action (FRA) for these sites. The Phase I FS consisted of an Initial Screening of Alternatives. Based on the results of Phase I and a Risk Assessment Technical Memorandum, there was enough information to support a ROD.

**Site 16** - A removal action was completed. The extent of the contamination was determined through sampling. The creosote-contaminated soil was removed and taken to a hazardous waste landfill. Additional sampling and analysis were done to confirm cleanup levels were achieved. This was the FRA at this site.

### FY94

**Site 12** - A revised Remedial Design (RD) was completed.

**Site 5** - Phase II RI/FS was completed.

**Site 8** - Recommended for no further action.

**Sites 1 and 15** - A Site Investigation (SI) was completed.

## PROGRESS DURING FISCAL YEAR 1995

### FY95

**All Sites** - Completed basewide groundwater contour map.

**USTs 1-7** - Prepared a CAP for seven of the 56 tanks that were removed in FY92. Investigations have been underway to prepare a CAP for seven of the 27 tanks that were removed in FY95.

**Site 14** - Completed RA for removal of material contaminated with the chemical additive PCB.

**Sites 5 and 8** - Signed ROD for No Further Action.

**Sites 3, 7, 9 and Study Area 1** - Completed RIs.

**Study Area 4** - Initiated the process for a non-time critical removal action.

## PLANS FOR FISCAL YEARS 1996 AND 1997

### FY96

**All Sites** - Will complete Phase II of the EBS to characterize all parcels. Work plans will be completed. Field work will be performed on 88 EBS Phase II review items. Complete all field investigations in FY96. Complete basewide groundwater study.

**Site 9 (Allen Harbor Landfill)** - The draft FS was submitted in January 1996. A ROD is planned for September 1996.

**Site 2** - Removal of underground tanks and piping will be completed along with cleaning of the battery room.

**Site 4** - Asphalt material will be removed.

**Sites 2, 3, 6, 7, 10, 11 and 13** - FSs will be completed.

**Sites 6, 9-11 and 13** - Prepare Proposed Remedial Action Plans (PRAPs) and RODs.

**Sites 2, 12-13 and Study Area 4** - Complete the Remedial Actions (RAs).

### FY97

**Site 3** - The RI for off-site source characterization should be completed. Additional investigation at Site 3 will be required to characterize an off-site source in an area under cognizance of the Army Corps of Engineers as a Formerly Used Defense Site (FUDS).

**Sites 6, 10, 11 and 13** - The NFA ROD should be completed.

**Site 7** - The ROD for auxiliary groundwater should be completed.

**Sites 7 and 9** - RA should be completed.

## DAVISVILLE NCBC PROGRESS AND PLANS

<b>CERCLA</b>	<b>FY94 and before</b>	<b>FY95</b>	<b>FY96</b>	<b>FY97</b>	<b>FY98</b>	<b>FY99</b>	<b>FY00</b>	<b>FY01 and after</b>
<b>PA</b>	16							
<b>SI</b>	15							
<b>RI/FS</b>	2		1	12				
<b>RD</b>	1		1	13				
<b>RA</b>	1	1	1		10	3		
<b>IRA</b>	1(1)		3(3)	1(1)				
<b>RC</b>	1	1	1		8			5
<b>Cumulative Response Complete</b>	6%	12%	19%		69%			100%
<b>UST</b>	<b>FY94 and before</b>	<b>FY95</b>	<b>FY96</b>	<b>FY97</b>	<b>FY98</b>	<b>FY99</b>	<b>FY00</b>	<b>FY01 and after</b>
<b>ISC</b>	7	1						
<b>INV</b>								
<b>CAP</b>		7		1				
<b>DES</b>		2	2	1				
<b>IMP</b>			2	1	1	1		
<b>IRA</b>								
<b>RC</b>		3	2		1	2		
<b>Cumulative Response Complete</b>		38%	62%		75%	100%		

# NEWPORT NAVAL EDUCATION AND TRAINING CENTER NEWPORT, RHODE ISLAND



<b>Engineering Field Division/Activity:</b>	NORTHDIV
<b>Major Claimant:</b>	CNET
<b>Size:</b>	1,400 Acres
<b>Funding to Date:</b>	\$26,745,000
<b>Estimated Funding to Complete:</b>	\$61,299,000
<b>Base Mission:</b>	Training center and provides logistics support
<b>Contaminants:</b>	Base-neutral and acid extractable organics, PCBs, volatile organic compounds

<b>Number of Sites:</b>	<b>Relative Risk Ranking of Sites:</b>			<b>NPL</b>		
<b>CERCLA:</b>	19	<b>High:</b>	11		<b>Not Evaluated:</b>	1
<b>RCRA Corrective Action:</b>	0	<b>Medium:</b>	4		<b>Response Complete:</b>	7
<b>RCRA UST:</b>	4	<b>Low:</b>	0		<b>Total Sites:</b>	23
<b>Total Sites:</b>	23					

## EXECUTIVE SUMMARY

Newport Naval Education and Training Center (NETC) is located 60 miles south of Boston, Massachusetts and 25 miles southeast of Providence, Rhode Island. The installation is spread along six miles of the western shoreline of Aquidneck Island, north of Newport, Newport County, Rhode Island. Newport NETC facilities are also on Gould Island, west of Aquidneck Island. NETC currently covers 1,439 acres; prior to 1973, it covered 2,692 acres. The excess acres were turned over to the General Services Administration (GSA) in 1973. NETC was used as a refueling depot beginning in the early 1900's. Refueling facilities were expanded during World War II (WWII), as the base had a much larger role then as the home port for many warships. After WWII, the installation was restructured to support research, development and specialized training. Currently, NETC provides education and training to naval officers. Past operations included boiler plant maintenance, pest control, stormwater collection, sewage collection and treatment, bilge water disposal, hazardous waste disposal, fueling operations, waste oil recovery, sludge disposal, ordnance operations and materials storage. Landfills contain contaminants that could potentially affect nearshore sediments as well as groundwater and surface water. The Navy has changed its operational processes to prevent further contamination. The primary contaminants of concern are the chemical additive PCB, copper, tetra-ethyl lead and ethyl benzene. A Federal Facility Agreement (FFA) was signed in 1992 with the EPA which provides a schedule and plan for site cleanup.

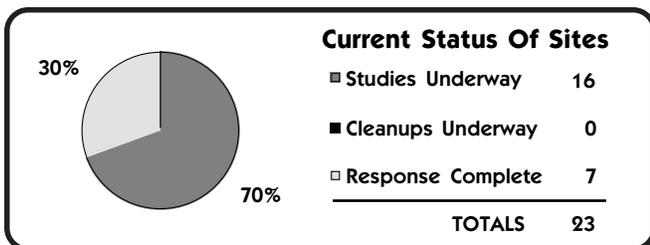
Newport NETC is situated along the shoreline of Aquidneck Island, and surface runoff quickly finds its way into Narragansett Bay. All of the streams which receive drainage from areas of NETC also discharge directly into the bay. The groundwater moves in a westward direction and discharges into the bay. None of the streams or ponds within the boundaries of Newport NETC are used for potable water. The potable water supply for NETC is purchased from the City of Newport which utilizes a series of reservoirs. Groundwater at NETC, including Gould

Island, is generally within a depth of 10 feet. The groundwater in areas close to the bay is often within just 2 or 3 feet of the surface. This shallow depth, coupled with the facts that the average annual precipitation is 43 inches and that the soils are moderately permeable, makes contamination of the groundwater possible. There are no wells within the boundaries of NETC, with the exception of Gould Island, but numerous wells exist in close proximity. These are domestic wells, but they are upgradient from NETC and are not threatened by the activity.

A Technical Review Committee (TRC) was formed in April 1988, and was converted to a Restoration Advisory Board (RAB) in FY95. The first formal RAB meeting will be held early in FY96. Information Repositories were set up in June 1990 at public libraries in Newport, Middletown, and Portsmouth, Rhode Island. An Administrative Record was established in December 1991.

At the end of FY95, 16 sites were in the study phase and four removal actions were completed. Site 13 has a Record of Decision (ROD) for groundwater and pump and treat is active. A ROD has been completed for Site 1 and a cap is under construction at the landfill. A treatability study for the use of cement for fixating Toxic Characteristics Leaching Procedure (TCLP), lead solids, excavated from the landfill at Site 2, was completed in FY95 with indications of feasibility for the procedure. A second treatability study for the destruction of petroleum contamination in the soil by using an innovative technology, white rot fungus, was initiated. Also in FY95, used sandblast grit was removed at Site 19. The grit from Site 19 and the treated soil from Site 2 is being used as fill material under the cap at Site 1 for cost savings. Off shore Ecological Risk Assessments (ERA) are underway at Sites 1 and 19. ERA will begin at Site 9 in FY96. An onshore Study Area Screening Evaluation (SASE), which includes an ERA, will begin at Site 19 in FY96.

There are eight Formerly Used Defense Sites (FUDS) at NETC Newport; Sites 2, 3, 5, 6, 14-16 and 18. The Navy is conducting a Remedial Investigation/Feasibility Study (RI/FS) at Site 2 (Melville North Landfill) and the Army Corps of Engineers will be conducting further investigation for the other FUDS sites (Sites 3, 5, 6, 14-16 and 18). These seven FUDS sites are Response Complete (RC) in the Navy's program due to transfer to the FUDS program.



## NEWPORT NETC RELEVANT ISSUES

### ENVIRONMENTAL RISK



**HYDROGEOLOGY** - Newport NETC is situated along the shoreline of Aquidneck Island, and surface runoff quickly finds its way into Narragansett Bay. All of the streams which receive drainage from areas of NETC also discharge directly into the bay. None of the streams or ponds within the boundaries of NETC, present or past areas, are used for potable water. The potable water supply for NETC is purchased from the City of Newport. The upper portion of the bay, in the vicinity of Providence, is much more industrialized than the lower portions of the bay where NETC is located and is likely to be more contaminated. The Melville Fishing Area occurs just off-site.

Groundwater at NETC, including Gould Island, is generally within a depth of ten feet. The groundwater in areas close to the bay is often within just two or three feet of the surface. This shallow depth, coupled with the facts that the average annual precipitation is 43 inches and that the soils are moderately permeable, makes contamination of the groundwater possible. The groundwater moves in a westward direction and discharges into Narragansett Bay. The groundwater is not being utilized at NETC, although during World War II, wells supplied the potable water on Gould Island. NETC receives its potable water from the city of Newport which utilizes a series of reservoirs. There are no wells within the boundaries of NETC, with the exception of Gould Island, but numerous wells exist in close proximity. These are domestic wells, but they are upgradient from NETC and are not threatened by the activity.

One possible off-site source of environmental contamination is an unofficial landfill on Portsmouth town property which is located adjacent to NETC in the Melville North area. This landfill receives mostly municipal refuse type wastes. The groundwater in the area could be adversely affected by potential contaminants disposed of at this site. The groundwater in the area of the landfill is migrating towards NETC. According to a 1986 report, sediments collected from Narragansett Bay just off the shoreline of McAllister Point Landfill contain lead, copper and nickel. Surface water and groundwater flow from the landfill into the bay, which is used for boating and fishing. Because the bay is an inlet to the Atlantic Ocean, it is influenced by tides. One tank farm is 300 feet from a coastal wetland.



**NATURAL RESOURCES** - There are no visible signs of stress to the bay biota along the NETC shoreline. There is a "dead zone" in the bay adjacent to Derektor Shipyard where no biota can be observed. It is unknown if this is the result of contamination or lack of oxygen produced by poor water circulation. The entire shoreline of NETC is closed to commercial shellfishing. However, much of the remainder of the bay is open to shellfishing. The materials within the landfills and other potential contamination sites on the base may cause chronic or acute effects on area biota. Possible receptors include shellfish, plankton and mummichog/cunner fish. The shellfish have life histories which include filter feeding and burrowing in the sediments. This tends to accumulate contaminants in the body tissues. Shellfish in the bay having these characteristics include quahogs, soft shelled clams, oysters and blue mussels. All of these organisms are heavily harvested and consumed by humans. The plankters most affected by potential contaminants would be the early life stages of fish and shellfish. The eggs and larvae are non-mobile and remain suspended in the water column. In this stage of development, sensitive tissues and membranes are not protected as in adults and leaves them susceptible to contaminants. There is a commercial mussel farm (Blue-Gold Sea Farm) located on the northern border of the NETC waterfront. Mussels from this farm are commercially harvested and shipped throughout the United States for human consumption.



**RISK** - A Baseline Human Health Risk Assessment for Sites 1, 2, 9, 12 and 13 was completed in November 1991. An offshore Ecological Risk Assessment for Site 1 was also completed in November 1992.

Under the DOD Relative Risk Ranking System, 11 sites and one Under-ground Storage Tank (UST) site Newport NETC received a high relative risk ranking. These sites include two landfills, two tank farms, a fire fighting training area, an electroplating shop and a shipbuilding area. Groundwater and

sediments are the primary media affected by the landfills. Receptors are human and ecological. Landfill wastes include solvents, paints and the chemical additive PCB. The tank farms were storage areas for various fuels. Primary media affected is groundwater. The fire fighting area has free product and metals contamination. Affected media are groundwater, soils and sediment. Migration is towards the bay due to tidal flushing. The bay is a recreational area.

The electroplating shop had waste discharged directly to the ocean through discharge pipes. The shipyard area had large quantities of oils, paints and solvents released into the soils. Metals and the chemical additive PCB have been detected in sediments. Potential receptors include ecological and humans through the ingestion of shellfish. To reduce risk, a RCRA Subtitle C cap will be placed over Site 1, including shore protection. Hot spot soil removals are planned for Site 2. Since NETC is on the National Priorities List (NPL), the Agency for Toxic Substances and Disease Registry (ATSDR) completed a Public Health Assessment in June 1993.

### REGULATORY ISSUES



**NATIONAL PRIORITIES LIST** - NETC Newport was proposed for the National Priorities List (NPL) in July 1989. In November 1989, NETC was listed on the NPL with a Hazard Ranking System (HRS) score of 32.25. EPA combined data from two sites, Site 1 (McAllister Point Landfill) and Site 7 (Tank Farm #1) to determine the HRS score. Since the sites are not contiguous, the Navy recommended revising the score to assess each site individually, but no rescoring was done. Contaminants of concern from these two sites were the chemical additive PCB, copper, and the fuel components tetra-ethyl lead and ethyl benzene. Migration routes of concern were groundwater and surface water.



**LEGAL AGREEMENTS** - Concurrent with Phase I of the Remedial Investigation/Feasibility Study (RI/FS), a Federal Facility Agreement (FFA) was signed between the Department of the Navy (DON), State of Rhode Island and EPA Region 1 on 23 March 1992. The FFA identified a total of 18 sites, six Study Areas (SAs 4, 7, 8, 10, 11 and 17), and four Areas of Concern (AOCs 1, 9, 12 and 13). Newport NETC was issued a RCRA Hazardous and Solid Waste Amendments (HSWA) permit in 1986. This permit includes a schedule for cleanup of Solid Waste Management Units (SWMUs) under the RCRA Corrective Action process.



**PARTNERING** - In FY94, the Navy partnered with the University of Rhode Island School of Oceanography to conduct estuarine Ecological Risk Assessments in Narragansett Bay. Ecological Risk Assessments began at Sites 1, 9 and 19 with the assistance of the university.

The installation was involved in two partnering sessions. The Navy, Trustees and regulatory agencies shortened document turn around time by clarifying lines of communication and incorporating meetings into the document review process. Consensus statements on issue resolution were produced by the participants. Another partnering session involved the Navy and the contractors who are performing the studies and cleanups.

The installation held a formal partnering session with EPA Region I and the Rhode Island Department of Environmental Management (RIDEM) 30-31 August 1995.

### COMMUNITY INVOLVEMENT



**RESTORATION ADVISORY BOARD** - A Technical Review Committee (TRC) was formed and meetings have been held periodically since April 1988. The TRC was converted to a Restoration Advisory Board (RAB) in FY95. The RAB will have their first meeting in February 1996.



**COMMUNITY RELATIONS PLAN** - A Community Relations Plan (CRP) was completed in July 1990. An update of the CRP will be completed in the spring of 1996.

## NEWPORT NETC



**INFORMATION REPOSITORY** - Three Information Repositories were set up in June 1990 at the Newport Public Library, Newport, Rhode Island, at the Middletown Public Library, Middletown, Rhode Island, and at the Portsmouth Public Library, Portsmouth,

Rhode Island. An Administrative Record was established in December 1991. Copies of some of the Administrative Record documents are contained in the Information Repositories.

## HISTORICAL PROGRESS

## FY83

**Sites 1-18** - An Initial Assessment Study (IAS), equivalent to a Preliminary Assessment (PA), was completed in 1983 and identified 18 potentially contaminated sites at Newport NETC. Sites 1, 2, 5-7, 10-15, 17 and 18 were recommended for further studies. No Further Action (NFA) was recommended for Sites 4, 8 and 9; however, these sites were brought back into the program during the Remedial Investigation/Feasibility Study (RI/FS) phase. Sites 3 and 16 are not discussed in the IAS because they were determined to be outside the scope of the Naval Assessment and Control of Installation Pollutants (NACIP) program.

## FY86

**Sites 1, 2, 7, 12, 14 and 17** - A Confirmation Study (CS), equivalent to a Site Inspection (SI), was completed. Additional work was recommended for five sites. NFA was recommended for Site 17, however, the site was brought back into the program during the RI/FS phase.  
**Sites 1, 2, 7, 10-14 and 17** - Newport NETC was issued a Hazardous and Solid Waste Amendments (HSWA) permit and identified nine Solid Waste Management Units (SWMUs). The closure plans for these SWMUs are being handled through the RCRA Corrective Action Plan (CAP) and will include remediation of soil contamination. The groundwater contamination for the SWMUs will be addressed under CERCLA.

## FY91

**Sites 1, 2, 9, 12 and 13** - A Phase I RI/FS which began in 1989 was completed. Even though Site 2 was determined outside the property boundaries of Newport NETC and classified as a Formerly Used Defense Site (FUDS), the Department of the Navy decided to include this site in the Phase I RI/FS. Additional work was recommended for all sites.

## FY92

**Sites 2, 3, 5, 6, 14-16 and 18** - The Federal Facility Agreement (FFA) determined these sites to be outside the property boundaries of NETC Newport and they were classified as FUDS.  
**Sites 1, 2, 9, 12 and 13** - A Phase II RI/FS began.  
**Sites 4, 7, 8, 10, 11 and 17** - These sites were included in the RI/FS in 1992.  
**Sites 4, 8 and 17** - A Study Area Screening Evaluation (SASE) work plan, analogous to a mini-RI/FS, was completed.  
**Sites 7, 10 and 11** - The Defense Logistic Agency (DLA) continued study at these tank farms, with periodic reports submitted to NETC. No other studies are ongoing or planned for these sites.  
**Site 13** - An Interim Record of Decision (IROD) for Site 13 (Tanks 53 and 56) Tank Farm #5 was signed in September 1992. The remedy consists of groundwater extraction, treatment using coagulation/filtration and ultraviolet (UV) oxidation and Long Term Monitoring (LTM). The remedy will prevent migration of contaminants.

## FY93

**Site 1** - A Phase II Remedial Investigation (RI) was completed. A Record of Decision (ROD) specifying the Remedial Action (RA) for McAllister Point Landfill was signed in September 1993. The RA consists of securing and isolating the landfill contents utilizing a multilayer cap in combination with fencing, surface controls, deed restriction and LTM. This is the final action for Operable Unit (OU) 1.  
**Site 2** - A removal action, consisting of the removal of petroleum contaminated soil, was completed.

## FY94

**Site 1** - The Remedial Design (RD) to cap the landfill was completed.  
**Site 2** - The RD was completed for additional hot spot removals at the landfill.  
**UST 2** - Tank removal was completed and free product recovery began in September 1994 and is still underway.

## PROGRESS DURING FISCAL YEAR 1995

## FY95

**Site 1** - Began construction of the cap for the landfill.  
**Site 2** - A treatability study for the use of cement for fixating Toxic Characteristics Leaching Procedure (TCLP) lead solids excavated from the landfill was completed with indications of feasibility for the procedure. A second treatability study for the destruction of petroleum contamination in the soil by using an innovative technology, white rot fungus, has been initiated.

**Site 19** - Removal of used sandblast grit was completed. The grit was then used as fill material under the cap at Site 1.  
**UST 3** - Began removal of tank contents.  
**USTs 3 and 4** - Completed RIs.  
**Site 17** - A Study Area Screening Evaluation for the electroplating shop will occur.

## PLANS FOR FISCAL YEARS 1996 AND 1997

## FY96

**Site 1** - Construction of the RCRA cap will be suspended over the winter of FY96 with the implementation of an erosion control and protection shutdown plan. The cap is expected to be completed in the summer of 1996. The Fate and Transport Model, used for predicting the pathway of any contaminants migrating from the landfill through the groundwater, will be evaluated during the Feasibility Study (FS) to assess the need for RA regarding the groundwater and near shore sediments.  
**Sites 1 and 9** - The FY95 funding rescission postponed the following Newport NETC projects: FS for Site 9 (Old Fire Fighting Training Area), and the Landfill Management of Migration Plan for Site 1 (McAllister Point Landfill) OU 2. FY97 funding will be applied toward Site 1 and/or, OU 2 design, if required.  
**Sites 1, 9 and 19** - The Ecological Risk Assessment is expected to be completed.

**Site 2** - A removal action to remove petroleum contaminated soil hot spots will be conducted.  
**Sites 2 and 9** - The RI is expected to start.  
**Sites 2, 12 and 13** - RIs will be started.  
**Site 19** - Begin Study Area Screening Evaluation.

## FY97

**Sites 2, 12 and 13** - The FS is expected to start.

## NEWPORT NETC PROGRESS AND PLANS

<b>CERCLA</b>	<b>FY94 and before</b>	<b>FY95</b>	<b>FY96</b>	<b>FY97</b>	<b>FY98</b>	<b>FY99</b>	<b>FY00</b>	<b>FY01 and after</b>
PA	19							
SI	6							
RI/FS				3	2	2		5
RD					2	4	1	5
RA						1	2	9
IRA		1(2)	3(3)					1(1)
RC	7					1	2	9
<b>Cumulative Response Complete</b>	37%					42%	53%	100%
<b>UST</b>	<b>FY94 and before</b>	<b>FY95</b>	<b>FY96</b>	<b>FY97</b>	<b>FY98</b>	<b>FY99</b>	<b>FY00</b>	<b>FY01 and after</b>
ISC	2	2						
INV								
CAP			4					
DES				3				
IMP						2	1	
IRA		1(2)		1(2)				
RC			1			1	1	1
<b>Cumulative Response Complete</b>			25%			50%	75%	100%