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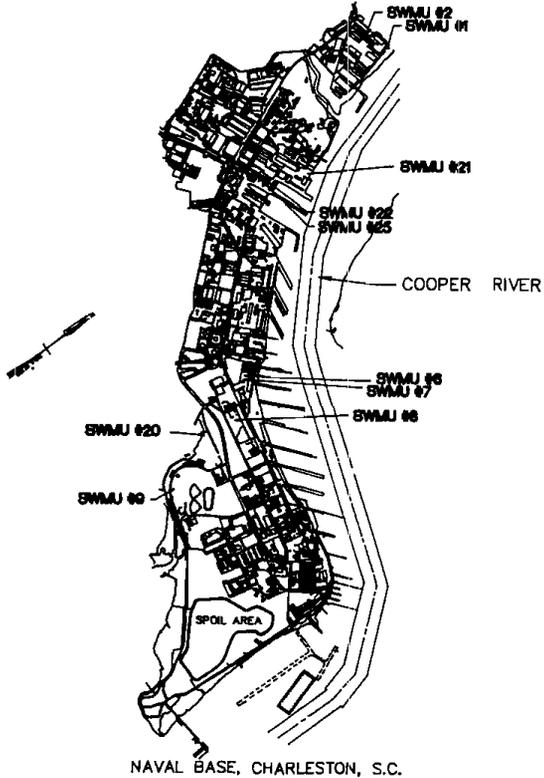
INSTALLATION RESTORATION PROGRAM AN ENVIRONMENTAL UPDATED ON
RESOURCE CONSERVATION AND RECOVERY ACT FACILITY INVESTIGATION CNC
CHARLESTON SC
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QUESTIONS?

The Public Affairs Office is available to answer questions or comments by calling (803) 743-3940. Information on the IRP is also available at public repositories which have been established at two convenient locations.

Dorchester Regional Library Monday-Thursday 10 a.m. - 8 p.m.
6325 Dorchester Road Friday & Saturday 10 a.m. - 6 p.m.
North Charleston, SC 29418 (803) 552-6466

Industrial Relations Office Monday-Friday 8 a.m. - 5 p.m.
Charleston Naval Shipyard closed weekends
Building 76 (803) 743-3800
Charleston, S.C. 29408-6100 No pass required; off base location



Public Affairs Office
Naval Base, Charleston
Charleston, SC 29408

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THE INSTALLATION RESTORATION PROGRAM

NAVAL BASE CHARLESTON

AN ENVIRONMENTAL UPDATE ON THE RCRA FACILITY INVESTIGATION

AUGUST 1993



INTRODUCTION

Naval Base, Charleston is addressing similar challenges facing other military bases and private companies. Environmental regulations require all DOD facilities to review past disposal practices to determine if any contamination has been released into the environment or if the potential exists for a release. The Navy meets those requirements through the **Installation Restoration Program (IRP)** and by complying with local, state, and federal environmental laws. This fact sheet provides information on current regulations, project status, and site descriptions.

REGULATIONS

In 1980, Congress passed the **Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)**. This law set up a "Superfund" for clean up of hazardous waste sites nationwide, placing the responsibility for these sites with the Environmental Protection Agency (EPA). When first implemented, CERCLA did not apply to federal facilities. Therefore, DOD established the IRP which paralleled CERCLA requirements. The Navy has been actively engaged in restoration activities since 1980 and has taken an aggressive approach to resolving environmental issues. In 1986, Congress amended CERCLA with the **Superfund Amendments and Reauthorization Act (SARA)**, requiring for the first time that DOD and other federal facilities meet CERCLA standards. Accordingly, the terminology and procedures for the IRP were changed to match those given in the **National Contingency Plan (NCP)**. The NCP is the basic requirement that implements the statutory requirements of CERCLA.

In 1976, Congress passed the **Resource Conservation and Recovery Act (RCRA)** which established a national strategy for the management of ongoing solid and hazardous waste operations. RCRA was amended by the **Hazardous and Solid Waste Amendments (HSWA) of 1984**. Under HSWA, Section 3004(u) requires corrective action be included as a permit condition for past releases of hazardous waste or constituents from any solid waste management unit (SWMU). A SWMU, according to *the Federal Register*, is "any discernable waste management unit from which hazardous constituents may migrate, irrespective of whether that unit was intended for the management of hazardous wastes." The RCRA corrective action process is virtually equivalent to a CERCLA response action. As required by law, Naval Base, Charleston holds a RCRA hazardous waste permit and consequently is regulated under the RCRA corrective action program.

STATUS

As a condition of its RCRA permit, Naval Base, Charleston conducted a **RCRA Facility Assessment (RFA)** in 1987 to identify and characterize all active and inactive SWMUs. A **RCRA Facility Investigation (RFI)** is planned to evaluate the SWMUs known, suspected, or presumed to have releases of hazardous substances. Of the 36 SWMUs identified, 27 will be investigated during the RFI. EPA should not require further action on the remaining SWMUs. Naval Base, Charleston continues to inspect facilities for any additional SWMUs which may be included in the IRP, if necessary.

A **Corrective Action Management Plan (CAMP)** has been prepared to outline the strategy for verifying and characterizing suspected releases of hazardous substances. The CAMP subdivides the SWMUs into five groups that will be investigated in a phased approach. Work on Groups I and II will begin in September 1993. When samples have been gathered and evaluated at all sites, a determination will be made on the necessity of further investigation or corrective measures. Additional fact sheets will provide up-to-date information on the findings.

WORK SITES

The following section describes sites included in Groups I and II. Information on other SWMUs at Naval Base, Charleston will be published in later fact sheets.

SWMU 1, DRMO Staging Area. The Defense Reutilization and Marketing Office (DRMO), Charleston has stored property since 1974 in an area located in the northeastern corner of the base near the Cooper River. Some of the products stored in this area were classified as wastes.

SWMU 2, Lead Contamination Area. This site is located west of SWMU 1 and consists of a salvage bin, scrap area, and paved surface. From the mid-1960s until 1984, it was used to store recovered lead from lead-acid submarine batteries. Electrodes and associated internal metallic components were removed from the battery jars in the Battery Electrolyte Treatment Area (SWMU 5).

SWMU 6, Public Works Storage Yard. The Public Works Storage Yard, also known as the "old corral area," is a fenced open area where containerized wastes were stored prior to shipment offsite. Among the wastes stored at the site were hazardous wastes generated from vehicle maintenance, building maintenance, and pest control operations.

Polychlorinated Biphenyls (PCB) Transformer Storage Area includes Building 3902, a concrete slab outside the building and the surrounding areas. It was used for transformer storage and associated electrical equipment between 1970 and 1976.

SWMU 8, Oil Sludge Pit. From 1944 to 1971, disposal of oil sludge, produced by industrial activities, occurred in three unlined pits near the warehouse administrative building. Heavy rains occasionally caused the pits to overflow, creating oil spills in low areas next to the pits. The area has now been converted into a parking lot.

SWMU 9, Closed Landfill. Many solid wastes generated at the Naval Base, Charleston between the 1930s and 1973 were deposited at SWMU 9. Some of the items reportedly dumped at the landfill include asbestos, acids, PCBs, waste oils, waste solvents, paint sludges, mercury, metal sludge, acid neutralization sludge, inorganic, and organic chemicals. Liquid wastes were placed in drums before disposal, and combustible wastes were burned daily.

SWMU 20, Waste Disposal Area. The waste disposal area, next to the solid waste transfer station, has been in operation since 1985. The unit is located on a portion of the SWMU 9 landfill. Solid wastes deposited at the site include cardboard boxes, wood, concrete blocks, tree stumps, sandblasting residues, and a small number of vehicle batteries. The batteries are the sole concern at this site.

SWMU 21, Old Paint Storage Area. This site is located inside the Controlled Industrial Area near the Cooper River waterfront. The SWMU was used for temporary storage of containerized paint wastes from repair operations or brought in by returning ships. Sandblasting operations also occurred in this area.

SWMU 22, Old Plating Shop Waste Treatment System. SWMU 22 is also located within the Controlled Industrial Area. The unit was constructed in 1972 to process wastewater from the metal plating shop and continued until the new systems were built.

SWMU 25, Building 44, Old Plating Operation. The old plating operation is in the northern portion of Building 44. Phased out of operation in 1983, the unit still contains all equipment from the plating process. When plating operations ceased, all vats and tanks were emptied and drained.



**NAVAL BASE
CHARLESTON, SOUTH CAROLINA**

**INSTALLATION RESTORATION PROGRAM
FACT SHEET**

August 1993



■ Introduction

This fact sheet was developed to inform interested citizens about the Installation Restoration Program (IRP) being conducted at Naval Base, Charleston. The IRP is an ongoing environmental program of investigation and cleanup being conducted at military installations nationwide to address areas of potential contamination from past spills and waste disposal practices. The Navy has been actively engaged in restoration activities since 1980 and has taken an aggressive approach to resolving environmental issues. Fact sheets will be distributed throughout the investigation to keep the community informed of the program's progress.

■ Background

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 created the environmental trust called "Superfund" which provides a means to investigate and clean up abandoned hazardous waste sites. In 1986, CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA), which added provisions for federal facilities. The IRP is the Department of Defense program which addresses contamination from past spills and waste disposal practices at DOD facilities in accordance with CERCLA and SARA.

■ Who's conducting the program?

The Navy is conducting the IRP at Naval Base, Charleston. To manage the programs, the Naval Base works with the Southern Division, Naval Facilities Engineering Command headquartered in Charleston. The Navy also works in cooperation with the U.S. Environmental Protection Agency (EPA), the Department of Health and Environmental Control (DHEC), the federal and state regulatory agencies, respectively.

■ Base profile

Naval Base, Charleston encompasses more than 20,586 acres of land, making it the Navy's third largest homeport. The south complex, the current focus of investigation, encompasses approximately 2800 acres and is located on the south bank of the Cooper River. The primary mission of the U.S. Navy in Charleston is to support the war fighting capability of the U.S. Atlantic Fleet. The nature of the base's mission has required the use, storage, and disposal of hazardous materials, such as paints, solvents, waste oil, and fuel. Years ago, little was known about the long-term effects of hazardous materials, and their use was not regulated. Past handling practices of these wastes created conditions that are unacceptable by today's standards.

■ The IRP

The IRP is conducted in stages, though some stages may be combined for efficiency or to reduce cost. Information from each stage provides the basis for the next stage or actions. Each area of the base being addressed by the IRP will go through all stages unless it is determined that no further action is needed. Decisions are made on a case-by-case basis by the Navy and the regulatory agencies.

■ The Resource Conservation and Recovery Act

The investigation process established in the Resource Conservation and Recovery Act (RCRA) is very similar to the IRP process. RCRA established guidelines and standards for hazardous waste generation, transportation, treatment, storage, and disposal. Corrective action is required as a permit condition for past releases of hazardous waste or constituents from any solid waste management unit (SWMU). A SWMU, according to *The Federal Register*, is "any discernable waste management unit from which hazardous constituents may migrate, irrespective of whether that unit was intended for the management of hazardous wastes." As required by law, Naval Base, Charleston holds a RCRA hazardous waste permit and consequently is regulated under the RCRA corrective action program.

■ Stages of the IRP

The following chart shows the progression of stages in the IRP, following the RCRA corrective action process.

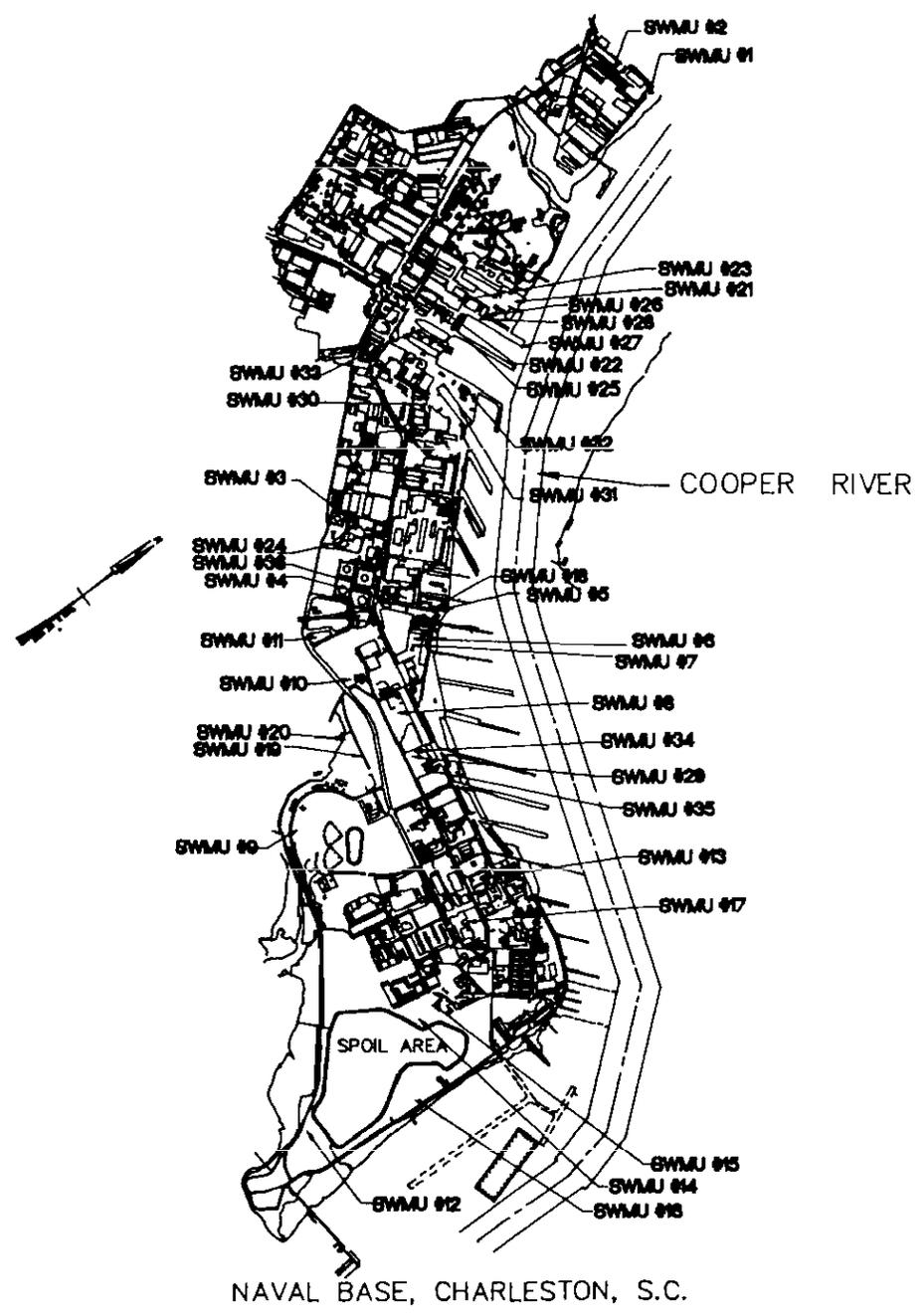
Stage	Title	Action
1	RCRA Facility Assessment (RFA)	Identifies potential or actual contamination releases through a records review and visual examination of every SWMU.
2	RCRA Facility Investigation (RFI)	Confirms contamination and determines its nature. Examines the extent of contamination.
3	Corrective Measures Study (CMS)	Develops and evaluates corrective measures alternatives.
4	Corrective Measures Implementation (CMI)	Designs, constructs, and operates maintenance and monitoring of corrective measures.
5	Interim Measures (IM)	Implements actions to stabilize, control, or limit further releases. IM can be conducted at any time.

After stage 3, public input is solicited on the proposed plan of cleanup alternatives. An alternative is then agreed upon by the Navy and regulatory agencies.

■ Status of the program

Currently, 36 SWMUs have been identified at Naval Base, Charleston. The IRP will focus on 27 of those sites. No further action is proposed for the remaining sites. An RFI work plan has been developed to evaluate the nature and extent of potential contamination at the 27 SWMUs. Naval Base, Charleston continues to review facilities for any additional SWMUs which may be included in the IRP, if necessary.

■ Identified SWMUs



■ Repository locations

REPOSITORY LOCATIONS		
Dorchester Regional Library 6325 Dorchester Road North Charleston, SC 29418	Monday-Thursday Friday-Saturday (803) 552-6466	10 a.m.- 8 p.m. 10 a.m.- 6 p.m.
Industrial Relations Office Charleston Naval Shipyard Building 76 Charleston, SC 29408-6100	Monday-Friday closed weekends (803) 743-3800 (No pass required; off base location)	8 a.m.- 5 p.m.

■ Technical Review Committee

In addition, a Technical Review Committee (TRC) has been established which is made up of private citizens, military personnel, and regulatory representatives. The committee meets periodically to discuss the IRP and developments in the program.

■ Questions?

The Naval Base, Charleston Public Affairs Officer (PAO) is the official contact person for the IRP. Questions, comments, and suggestions may be directed to the PAO. The Public Affairs Office also manages the IRP mailing list. Fact sheets like this one will be distributed to everyone on the mailing list. Anyone interested in being on the list or in need of the contact person may call the Public Affairs Office.

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(803) 743-3940

■ SWMU Description Chart

SWMU No.	Name	Period of Operation	Types of Material Handled or Disposed
1	Defense Reutilization and Marketing Office Staging Area	1974 to present	Excess government materials and chemicals including Freon and used drums
2	Lead Contamination Area	1960s - 1984	Lead removed from lead-acid submarine batteries
3	Pesticide Mixing Area	Prior to 1971	Pesticide rinse
4	Pesticide Storage Building	1980 - 1985	Insecticides and rodenticides
5	Battery Electrolyte Treatment Area	1984 - 1986	Internal battery components
6	Public Works Storage Yard	Prior to 1987	Containerized hazardous wastes
7	PCB Transformer Storage Area	1970 - 1976	Transformer and associated electrical equipment storage
8	Oil Sludge Pit	1944 - 1974	Oil sludge produced by industrial activities
9	Closed Landfill	1930 - 1973	Sanitary wastes and various inorganic and organic chemicals, including asbestos, PCBs, mercury, metal sludge, acid neutralization sludge, and office wastes/rubbish
10	Hazardous Waste Storage Facility	1985 to present	Temporary storage prior to offsite disposal
11	Caustic Pond	1940s - 1970s	Calcium hydroxide
12	Old Fire Fighting Training Area	1966 - 1971	Oil, gasoline, and alcohol
13	Current Fire Fighting Training Area	1973 to present	No. 2 diesel fuel and gasoline.
14	Chemical Disposal Area	Prior to 1972 - 1977	Warfare decontaminating agents; DANC-DS-2 and DANC-N4
15	Incinerator	Presently in operation	Paper
16	Paint Storage Bunker	1987	Paint and paint thinner
17	Oil Spill Area	1987	No. 5 heating oil
18	PCB Spill Area	1987	Insulating fluid, PCB
19	Solid Waste Transfer Station	1985 to Present	Nonhazardous solid waste
20	Waste Disposal Area	1985 to present	Cardboard boxes, wood, concrete blocks, tree stumps, sandblasting residues, and vehicle batteries

21	Old Paint Storage Area	1980 - 1986	Containerized paint wastes
22	Old Plating Shop Waste Treatment System	Prior to 1982	Wastewater from metal plating operations
23	New Plating Shop Wastewater Treatment System	1982 to present	Wastewater containing lead, chromium, cadmium, acids, and alkalies
24	Waste Oil Reclamation Facility	1979 to present	Waste oils
25	Old Plating Operation	Prior to 1983	Waste from plating operations
26	Waste Storage Area, Building 64-40, Pier C	1990	Drums of seam filler, lead waste, adhesive waste, alcohol rags, and trichloroethane rags
27	Waste Storage Area, East End, Pier C	1990	Unused paints, enamel thinners and fire retardants
28	Waste Paint Storage Area, West End, Pier C	1990	One-time waste accumulation area used for storing paint wastes
29	Building X-10	1990	Waste from submarine maintenance and repair
30	Satellite Accumulation Area, Building 13	1990	Laboratory waste
31	Waste Paint Storage Area, Dry Dock No. 5	1990	Paint and paint thinner
32	Waste Paint Storage Area, Building 195	1990	Waste paints
33	Waste Paint Storage Area, West End Dry Dock No. 2	1990	Waste paints
34	Morale, Welfare and Recreation, Building X-10	1990	55-gallon containers of paint
35	Building X-12	1990	One-time waste accumulation area, waste paint
36	Building 68, Battery Shop	1940s to present	Sulfuric acid, sodium bicarbonate, detergents, lacquers, adhesives, penetrating oil, kerosene, and hydraulic fluid

■ Community involvement in the IRP

The community can play an important role in the IRP. A Community Relations Plan (CRP) has been developed which outlines how the Navy and the regulatory agencies disseminate information and promote public participation in the program. The plan was developed by talking with local citizens and contains many of their comments and suggestions. The CRP is a public document found in the Information Repositories established to make IRP documents available to the public. Two repositories are set up at the locations listed on the following page.