

GAO

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COAST GUARD

Additional Efforts Needed to Clean Up Hazardous Waste Sites



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Resources, Community, and
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July 6, 1990

The Honorable Walter B. Jones
Chairman, Committee on Merchant Marine and Fisheries
House of Representatives

The Honorable W. J. Tauzin
Chairman, Subcommittee on Coast Guard and Navigation
Committee on Merchant Marine and Fisheries
House of Representatives

The Honorable Robert W. Davis
Ranking Minority Member
Committee on Merchant Marine and Fisheries
House of Representatives

The Honorable Don Young
Member, Subcommittee on Coast Guard and Navigation
Committee on Merchant Marine and Fisheries
House of Representatives

This responds to your request that we update information on the Coast Guard's progress in carrying out its environmental responsibilities under the Resource Conservation and Recovery Act of 1976 (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), commonly referred to as the Superfund Act. In 1986 and 1987, we issued two reports on the slow progress of federal agencies, including the Coast Guard, in meeting these environmental responsibilities.¹ As agreed with your offices, this report describes the status and cost of the Coast Guard's efforts to comply with (1) CERCLA and RCRA to identify, evaluate, and clean up its hazardous waste locations where past contamination occurred and (2) RCRA environmental requirements for hazardous waste currently being generated at Coast Guard facilities. We testified on the preliminary results of our work before the Subcommittee on Coast Guard and Navigation, House Committee on Merchant Marine and Fisheries, on November 1, 1989.²

¹Hazardous Waste: Federal Cleanup Efforts Under CERCLA and RCRA (GAO/RCED-86-76, May 6, 1986) and Hazardous Waste: Federal Cleanup Efforts Under CERCLA and RCRA (GAO/RCED-87-153, July 24, 1987).

²The Coast Guard's Cleanup of Hazardous Waste Sites (GAO/T-RCED-90-06, Nov. 1, 1989).

Executive Order 12088, issued on October 13, 1978, requires each federal agency to ensure that all necessary actions are taken for the prevention, control, and abatement of environmental pollution at its facilities. Under this order, the Coast Guard is responsible for requesting adequate funding for pollution controls and for developing solutions to environmental problems. To comply with this order, in 1985, the Coast Guard instructed its field commands to report information on environmental violations and the related costs of correcting the violations, including cleanup and litigation costs, to its headquarters program office.

The Congress, expressing concern about the Coast Guard's efforts to clean up hazardous waste contamination at its facilities and to respond to other environmental compliance requirements, recently enacted legislation to establish a new environmental program in the Coast Guard.³ The program will have a new budgetary account to fund "in-house" environmental activities and will require annual progress reports to the Congress on the implementation of the program. The program is designed to provide increased emphasis and visibility for an expanded agency effort to clean up its hazardous waste sites and to comply with environmental laws.

Progress in Cleaning Up Past Hazardous Waste Contamination

The Coast Guard has made progress, since our 1987 report, in identifying and investigating potential hazardous waste locations, but most of its cleanup work still remains to be done. The Coast Guard estimates that its hazardous waste cleanup effort will take decades to complete and will cost millions of dollars.

Since we issued our 1987 report, 39 additional potential hazardous waste locations have been identified, bringing the total to 67. Of these 67 locations, the Coast Guard determined that 27 did not require cleanup. While minor cleanup at 4 locations was completed, bringing the total locations cleaned up to 14, the number of locations still requiring cleanup increased from 15 to 20. In addition, six potential hazardous waste locations still need to be investigated. Although the Coast Guard plans to complete its remaining investigations during fiscal years 1990-1991 and to complete minor cleanups by 1993, the agency estimates that cleanup efforts at four major locations could take up to 30 years to complete. Total estimated costs to clean up the four major cleanup locations—Air Station Traverse City, Michigan; Air Station Brooklyn, New

³Coast Guard Authorization Act of 1989 (P.L. 101-225), Dec. 12, 1989.

Coast Guard instructions require that environmental violations and the related costs of correcting violations are reported to the headquarters' program office, but the field commands are not reporting most of this information. The headquarters' environmental section chief told us that, in his opinion, the information is generally not being provided because field staff are either not aware of the reporting requirement or do not have the time to comply with it. In addition, a 1987 Coast Guard reorganization, which occurred after the issuance of its reporting instructions, shifted the environmental functions from the field commands that had been responsible for reporting the information to another field command level. As a result, the Coast Guard is unable to assess its actual environmental compliance costs and is hindered in its ability to estimate long-term funding needs for compliance with environmental laws.

At our request, the Coast Guard surveyed its field commands to determine the number of RCRA environmental inspections and violations cited at its facilities. The survey showed that, of 37 Coast Guard facilities inspected during a recent 3-1/2 year period, almost half were cited for a total of approximately 125 RCRA violations. Agency officials told us that the most frequent violations were storing wastes for longer than the authorized period of time (usually 90 days) and not maintaining the records that RCRA requires.

As of August 1989, according to the Coast Guard, it had corrected most of the violations, and 29 violations remained to be corrected. Most of the remaining 29 uncorrected violations are at 2 locations where major hazardous waste cleanup efforts are needed—Elizabeth City and Kodiak. The Coast Guard believes that the violations are serious. For example, violations in a land disposal facility's groundwater monitoring system could result in releases of hazardous wastes to the environment. (See app. II.)

In our November 1989 testimony and in subsequent discussions with Coast Guard officials, we expressed concern that the Coast Guard did not have needed information to effectively evaluate its environmental program and to request appropriate budgetary funding. Coast Guard headquarters officials noted that they planned to reissue the environmental reporting instructions to the field commands and to reemphasize the importance of reporting environmental violations and related costs. Subsequently, on May 29, 1990, the Coast Guard headquarters' program office issued a notice instructing its field commands to report information concerning environmental violations.

To determine the status and cost of the Coast Guard's efforts to clean up its hazardous waste locations and to comply with current environmental regulations, we interviewed officials at Coast Guard headquarters in Washington, D.C. We also contacted a Coast Guard official in Alameda, California, Environmental Protection Agency (EPA) officials, and Kodiak Electric Association officials and attorneys regarding cleanup of polychlorinated biphenyl (PCB) at the Kodiak facility. In addition, we reviewed relevant reports and documents, including those of the Department of Transportation and its Inspector General, pertaining to the Coast Guard's environmental compliance activities. Information on environmental inspections and violations was derived from a Coast Guard survey of its facilities done at our request. We conducted our work from May 1989 through May 1990 in accordance with generally accepted government auditing standards.

As arranged with your offices, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days after the date of this letter. At that time, we will send copies to the Secretary of Transportation, the Commandant of the Coast Guard, and other interested parties. This work was conducted under the direction of Kenneth M. Mead, Director of Transportation Issues, who may be reached at (202) 275-1000 if you or your staff have any questions. Other major contributors to this report are listed in appendix III.



J. Dexter Peach
Assistant Comptroller General

Contents

Abbreviations

AC&I	Acquisition, Construction, and Improvements
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EPA	Environmental Protection Agency
LORAN	Long-range aid to navigation
OE	Operating Expense
RCRA	Resource Conservation and Recovery Act

other minor cleanups. In addition, OE funds are used for the administrative and operational phases of investigating and monitoring major cleanup locations and to pay the Coast Guard's share of the investigation costs for third-party hazardous waste sites.

The Coast Guard uses AC&I funds primarily for investigating and cleaning up its long-term and high-cost major hazardous waste locations such as those at Elizabeth City, North Carolina and Kodiak, Alaska. Such projects usually require a significant period of time (as much as 20 to 30 years) to complete cleanup efforts.

Status of Activities

Since our July 1987 report, the Coast Guard has identified many additional potential hazardous waste locations. Agency officials believe that they have identified all of their hazardous waste locations but acknowledge that a few additional minor locations could still be identified. In any case, agency officials do not expect to discover any locations needing major cleanup not currently under investigation.

The following table summarizes the Coast Guard's progress in identifying, investigating, and cleaning up its hazardous waste locations since the date of our last report.

Table I.1: Summary of Coast Guard's Potential Hazardous Waste Locations Identified, Investigated, and Cleaned Up

Cleanup activities	1987 report^a	As of April 1990
Potential hazardous waste locations identified	28	67
Investigation needed	3	6
Locations investigated	25	61
No cleanup required	0	27
Cleanup completed	10	14
Cleanup required	15	20

^aAs reported by the Coast Guard in September 1986

As table I.1 shows, since our earlier report, the number of potential hazardous waste locations identified and investigated has more than doubled, and the number of locations still requiring cleanup has increased. The Coast Guard expects to complete all investigations during fiscal years 1990-1991 and to complete minor cleanup actions at 15 of 20 locations that require cleanup by 1993. The Coast Guard has not yet estimated the cleanup date for one other minor location.

expense, and a lawsuit on this issue led to a settlement agreement. The Coast Guard's cleanup efforts started in 1984, and cleanup and monitoring activities are expected to continue until the year 2005. The agency has already been appropriated about \$7 million through fiscal year 1989 and estimates that cleanup costs will total about \$20 million.

Brooklyn Air Station

The second major cleanup location, the Brooklyn Air Station, has groundwater contamination caused by leaking aviation fuel that was discovered in the early 1980s. In addition, contaminated soil has been excavated. The Coast Guard's cleanup efforts started in 1983, and cleanup and monitoring activities are expected to continue until the year 2000. Costs to date have totaled about \$500,000, but total estimated cleanup costs are still unknown. Further investigation of possible groundwater cleanup similar to that at Air Station Traverse City is presently being explored by the Coast Guard.

Elizabeth City Support Center

The third major cleanup location, the Elizabeth City Support Center, has two hazardous waste sites that were identified in 1985. The major problem at these sites is groundwater contamination caused by a leaking hazardous waste lagoon and by leaking storage tanks and a fuel spill at a fuel farm. The investigation of these sites has been underway for over 2 years. According to the Coast Guard, there have been several unanticipated delays in starting the cleanup effort at Elizabeth City. These delays include changes in the requirements by EPA and the state of North Carolina as to the extent of cleanup needed, the need to hire a new assessment contractor, increased state requirements for assessment and RCRA permits, and slow turnarounds from commercial laboratories testing groundwater contamination.

The Coast Guard plans to begin cleaning up the groundwater in fiscal year 1991 and expects that the cleanup and monitoring will require about 25 years to complete. Its appropriated funds used for investigation and cleanup activities through fiscal year 1989 have totaled about \$5.8 million, and it estimates that total cleanup costs will range from \$10 million to \$30 million.

Kodiak Support Center

The fourth major cleanup location, the Kodiak Support Center, has 19 potential hazardous waste sites that were identified between 1980 and

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**Twenty-Seven Potential
Hazardous Waste
Locations Investigated and
Found to Need No Cleanup
Action:**

Point Spencer Dump, Alaska
Base Yerba Buena Island, Calif.
Station Ft MacArthur, Calif.
LORAN Station Middletown, Calif.
Support Center Alameda, Calif.
Support Center San Pedro, Calif.
Base Mayport, Fla.
Station Key West, Fla.
Station St. Petersburg, Fla.
Support Center New Orleans, La.
Base South Portland, Maine
Base Woods Hole, Mass.
South Weymouth Buoy Depot, Mass.
Station Charlevoix, Mich.
Station Munising, Mich.
Group Duluth, Minn.
Support Center New York, N.Y.
Aids to Navigation Team Saugerties, N.Y.
Station Fort Macon, N.C.
Aids to Navigation Team Coos Bay, Oreg.
Base Astoria, Oreg.
Marine Safety Station Portland, Oreg.
Air Station Borinquen, P.R. (Formerly Ramey AFB)
Depot Corpus Christi, Tex.
Support Center Portsmouth, Va.
Support Center Seattle, Wash.
Base Milwaukee, Wis.

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Table I.3: Twenty Locations That Require Cleanup

Locations	Total estimated cost	Estimated completion date
Support Center Kodiak, Alaska	\$10,000,000 to 50,000,000	2020
Base Miami Beach, Fla	350,000	Unknown
Air Station Traverse City, Mich.	20,000,000	2005
White Shoal LT ^a , Mich	100,000	1991
Spectacle Reef LT ^a , Mich	50,000	1993
Station Portage, Mich.	38,000	1990
Station Saginaw, Mich	52,000	1990
Station Manistee, Mich	34,000	1990
St Martins Island LT ^a , Mich ^b	70,000	1993
Summer Island LT ^a , Mich	30,000	1993
Granite Island LT ^a , Mich.	30,000	1993
Poverty Island LT ^a , Mich.	30,000	1993
Crisp Point LT ^a , Mich	57,000	1993
Thunder Bay Island LT ^a , Mich	105,000	1993
Middle Island LT ^a , Mich	50,000	1993
Station Ft Totten, N Y.	Unknown	1990 to 1991
Air Station Brooklyn, N Y	Unknown	2000
Support Center Elizabeth City N C	10,000,000 to 30,000,000	2015
Station Ashtabula, Ohio	130,000	1990
Base Galveston, Tex.	20,000	1990

^aAids to navigation such as a navigational light or a lighthouse

^b This location also contains a site that was cleaned up (see table I 2)

Source: U S Coast Guard

Third-Party Sites

In addition to investigating and cleaning up its own hazardous waste locations, the Coast Guard is also responsible for paying its portion of the investigation and cleanup costs for sites that are primarily public and private landfills used by it and other parties (third-party sites). Individual costs for the Coast Guard's share of third-party sites are based on the amount and toxicity of hazardous waste which the Coast Guard sent to the site. Either EPA or the state identify all potentially responsible parties (anyone with any connection to the site) and request information on what hazardous waste material each party sent to the site. Once individual contributions to the site are known, a percentage of the total volume is determined and a dollar figure assigned to each party—that party's share of the cost to investigate and cleanup the site.

Funding of Hazardous Waste Cleanup Locations

The Coast Guard believes that its past and current appropriated funding levels for hazardous waste cleanup activities and compliance with environmental laws, which averaged about \$6.8 million annually for fiscal years 1988 through 1990, have been and remain adequate for its present stage of work—mainly investigating potential hazardous waste locations, investigating and cleaning up major locations, and cleaning up minor locations. While the agency recognizes a need to increase future funding for cleaning up major hazardous waste locations, it will be unable to more precisely project the total long-term funding needed until it completes investigations at all hazardous waste locations.

During fiscal years 1988 through 1990, the Coast Guard's appropriated AC&I funds for cleanup activities averaged about \$3.4 million annually and its appropriated OE funds also averaged about \$3.4 million annually. The Coast Guard believes that such funding levels are adequate for its present stages of investigation and cleanup work. During 2 of the past 3 fiscal years, the Coast Guard did not spend all of the AC&I hazardous waste cleanup funds that it planned to and reprogrammed the funds for other uses. For example, because of the unanticipated delays experienced by the Coast Guard in starting its cleanup effort at Elizabeth City, about \$4.7 million of the \$5.3 million of AC&I funds appropriated in fiscal years 1987 and 1988 was reprogrammed from hazardous waste cleanup to ship repairs.

Although the Coast Guard believes that its future funding levels will need to be increased to clean up the major locations, it does not yet know what levels of long-term funding will be needed because it is still investigating major cleanup locations. According to Coast Guard officials, in the future, Department of Defense funds may also be available for investigating and cleaning up some of the Coast Guard's hazardous waste sites that were formerly Defense-owned properties. Defense funding would depend on the Coast Guard and Defense agreeing that both parties had contributed to the contamination at these sites.

To respond to the problem of hazardous waste contamination at present and former Coast Guard facilities, in December 1989, the Coast Guard Authorization Act of 1989 was enacted to establish an environmental compliance and cleanup program and a new budgetary account to fund the agency's environmental activities, including its environmental compliance activities that are discussed in appendix II. The act was designed to emphasize the need to respond to the problem of hazardous waste

Compliance With Environmental Requirements at Coast Guard Facilities Currently Generating Hazardous Waste

The Coast Guard's field commands are not reporting information to the headquarters' program office, as required, on environmental violations at its facilities that currently handle hazardous waste and the related costs of correcting the violations. The absence of this information hinders the Coast Guard's ability to evaluate the effectiveness of its environmental compliance program, to estimate its long-term funding needs, and to provide meaningful progress reports to the Congress as required by P.L. 101-225.

A Coast Guard survey, done at our request, showed that of the agency's 172 facilities that currently handle hazardous waste, almost half of the 37 facilities inspected were cited for violating hazardous waste regulations. While the Coast Guard has corrected most of the violations, the majority of the uncorrected violations are concentrated at two locations where major cleanup actions are needed.

Background

Under RCRA regulations, the Coast Guard is responsible for the safe management and control of hazardous wastes currently being generated at its facilities. The Coast Guard operates hundreds of facilities, many of which handle hazardous waste materials. The primary types of hazardous waste that Coast Guard facilities handle include used batteries and spent solvents and paints.

As shown in Figure II.1, most (about 76 percent) of the agency's 172 facilities that have been identified as handling hazardous waste are small quantity generators that handle small amounts—less than 2,200 pounds per month, or the equivalent of about five full 55-gallon drums. The Coast Guard also has generators that handle hazardous waste amounts greater than 2,200 pounds per month and treatment, storage, and disposal facilities that can accumulate hazardous waste for more than 90 days. Two of the Coast Guard's largest handlers—the support centers in Elizabeth City, North Carolina and Kodiak, Alaska—are treatment, storage, and disposal facilities that are scheduled for major cleanup work.

agency's regulations concerning hazardous waste management. For instance, several aboveground fuel storage tanks did not have fuel overfill protection devices to detect and prevent problems with toxic and hazardous waste storage.

In its Semiannual Report to Congress for the period ending September 30, 1989, the Department of Transportation Inspector General noted that in the past it had reported on the Coast Guard's problems relating to the removal of hazardous waste materials from its facilities. The Inspector General also pointed out that ongoing work has shown that the Coast Guard will not be in compliance with state and local requirements for managing and monitoring underground fuel storage tanks. The report further stated that the agency's abatement plan for underground leaking storage tanks is incomplete because it does not include all the projects that need to be done and all the costs associated with implementing the plan. The report explained that if the Coast Guard did not implement an effective underground storage tank program, Coast Guard facilities will be placed in noncompliance with EPA's release detection requirements that took effect in December 1989.

Inspections and Violations at Coast Guard Facilities That Currently Handle Hazardous Waste

Coast Guard instructions require that environmental violations at its facilities be reported to headquarters; however, headquarters does not have complete data on violations cited at its facilities because the Coast Guard's field commands have not always provided it. The information presented below is from a recent Coast Guard headquarters' survey of its facilities that was done at our request.

Figure II.2 shows that of the Coast Guard's 172 facilities that handle hazardous waste, about 22 percent (37) were inspected from January 1, 1986, through June 1, 1989, by either EPA or the states in which the facilities were located. Treatment, storage, and disposal facilities were the most frequently inspected, and small quantity hazardous waste generators were the least frequently inspected.

More Complete Information Needed for Estimating Compliance Program Funding Requirements

Under Executive Order 12088, the Coast Guard and other federal agencies are responsible for ensuring that their facilities comply with environmental pollution control laws and for ensuring that sufficient funds for compliance are requested in the agency budget. Under this order, the Coast Guard is responsible for cooperating with EPA, state, and local agencies in meeting its pollution control responsibilities and submitting pollution control plans to the Office of Management and Budget through EPA.

To comply with the requirements of the executive order, in 1985, the Coast Guard instructed its district commanders to report information on environmental violations and the related costs of noncompliance to its headquarters program office. Reports are required immediately after being cited for a violation, on an annual basis, and after completing corrective actions. This data was to be used to evaluate program effectiveness and to request appropriate budgetary funding to cover costs incurred because of noncompliance with environmental laws. In addition, the field commands are required to provide an annual report to the Coast Guard headquarters summarizing the total costs incurred each year from correcting violations. After completing corrective actions, the field commands are required to provide headquarters with a description of the actions taken to remedy the violation, the proposed action to be taken to prevent similar violations in the future, and an accounting of all costs incurred.

Despite these reporting requirements, complete information on violations and the costs incurred in correcting them was unavailable at the headquarters' environmental office that manages these activities because field offices are not reporting most of the data on environmental violations and related costs. The headquarters' environmental section chief told us that, in his opinion, this information is generally not being provided for a variety of reasons, including field staff who are unaware of the reporting requirement, inadequate staff time to comply with the requirement, and staffing turnover. In addition, he explained that after the reporting instructions were issued, a 1987 Coast Guard reorganization that transferred the agency's environmental functions from district commands, which had been responsible for reporting the information, to maintenance and logistics commands and shore maintenance detachments, may have caused confusion concerning the reporting requirement. The official said that the insufficiency of this information may have affected the Coast Guard's budget requests for environmental compliance. He added that having this information may help the agency obtain needed funding in the future.

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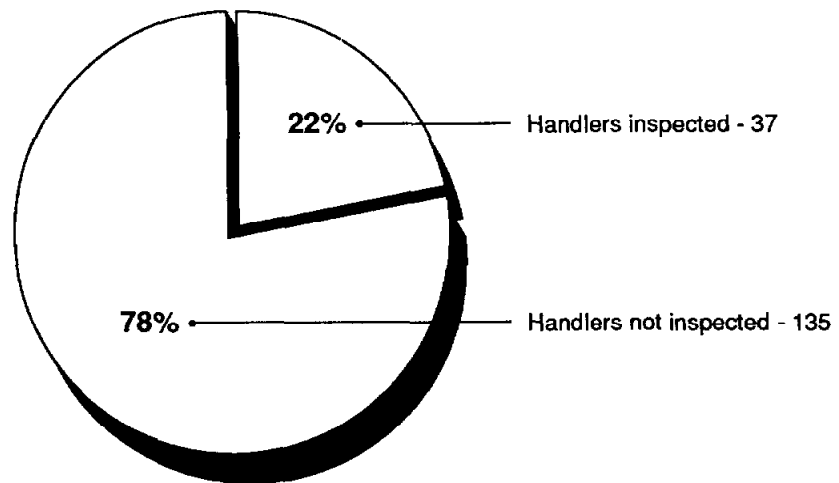
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**Appendix II
Compliance With Environmental
Requirements at Coast Guard Facilities
Currently Generating Hazardous Waste**

On May 29, 1990, the Coast Guard headquarters' program office issued a notice to the field commands instructing them to report information on environmental violations. Because of inadequate reporting and responses from field commands to headquarters' requests for this information in the past, we believe reemphasis of this reporting requirement is necessary. The Coast Guard should take follow-up action to ensure that this program information is properly reported because it is vital for evaluating the program, estimating funding needs, and providing meaningful progress reports to the Congress as required by P.L. 101-225.

**Appendix II
Compliance With Environmental
Requirements at Coast Guard Facilities
Currently Generating Hazardous Waste**

**Figure II.2: Coast Guard Hazardous
Waste Handlers Inspected**



Note Inspected during the period 1/1/86 to 6/1/89

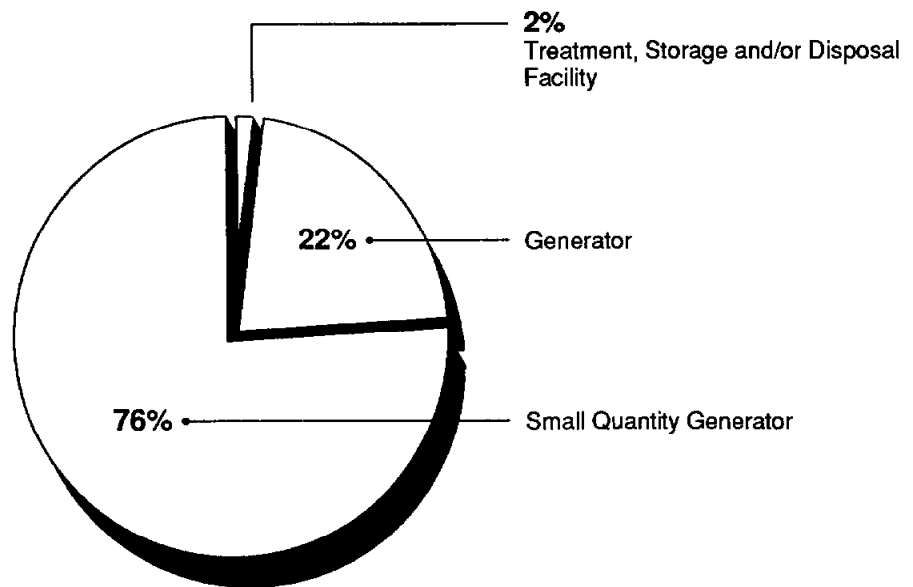
Source U S Coast Guard

About half of the Coast Guard facilities inspected (17 of 37), were cited for a total of approximately 125 RCRA violations. According to Coast Guard officials, the specific types of environmental violations ranged widely. The violations included improper record keeping, storage, disposal, and labeling; not testing wastes to confirm or deny classification as hazardous waste; and the absence of contingency plans designed to minimize hazards from fires, explosions, or any unplanned release of hazardous waste. Agency officials told us that the two most frequent types of violations were storing wastes for longer than the authorized period of time (usually 90 days) and not maintaining the records that RCRA requires.

According to the Coast Guard, most of the violations have been corrected and 29 violations, or about 23 percent of the total, remained uncorrected at four facilities as of August 1989. Twenty-four of the 29 uncorrected violations are at two locations where major cleanup efforts for past contamination are needed—Elizabeth City, North Carolina and Kodiak, Alaska. The Coast Guard believes that the majority of the uncorrected violations, some of which have been uncorrected for more than 1 year, are probably the type that the EPA considers serious—for example, a land disposal facility with violations of requirements for groundwater monitoring.

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Compliance With Environmental
Requirements at Coast Guard Facilities
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Figure II.1: Categories of Coast Guard
Hazardous Waste Handlers



Source: U.S. Coast Guard

Coast Guard facilities handling hazardous wastes are subject to environmental inspections by either EPA or a state agency to determine if they comply with RCRA regulations on record keeping and reporting, contingency planning, personnel training, and other activities. The RCRA requirements for treatment, storage, and disposal facilities are more extensive than the requirements for other hazardous waste handlers. For example, treatment, storage, and disposal facilities must take appropriate steps to ensure that hazardous wastes are contained within their facilities and do not seep or leak into underground water supplies or outside the boundaries of their facilities.

In its December 1989 Financial Integrity Act Report to the President, the Secretary of Transportation listed two Coast Guard material weaknesses associated with safety and environmental issues that pose a danger or threat to human life, the environment, or both. The agency's first material weakness was noncompliance with State and Federal laws relating to underground fuel storage facilities, and its second was noncompliance with regulations concerning aboveground fuel storage tanks. The Secretary's report noted that various Coast Guard facilities' staff were not knowledgeable or familiar with EPA and other state/local regulations on underground storage tank inventory procedures for leak detection. The report also noted that various Coast Guard facilities did not follow the

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contamination at Coast Guard facilities across the country and to environmental compliance activities. The legislation also requires the Secretary of Transportation to submit an annual report to the Congress describing the Coast Guard's progress in implementing the program.

The new Coast Guard program and budgetary account will be established in fiscal year 1991 and no-year appropriated funds placed in the account will remain available until expended. This contrasts to the 5-year AC&I funding method now in use for the Coast Guard's environmental hazardous waste cleanup activities. To carry out its environmental compliance and restoration activities for fiscal year 1991, the Coast Guard has requested appropriation funding of \$7 million for the new budgetary account and \$4 million for the OE account. Currently, these activities are funded through either the AC&I or OE budgetary accounts. Under recently introduced legislation (H.R. 4609), the Coast Guard Authorization Act of 1989 (P.L. 101-225) would be amended to provide \$15 million for the Coast Guard's in-house environmental activities for fiscal year 1991.

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As shown in table I.4, the Coast Guard is responsible for a portion of the investigation and cleanup costs at 20 third-party sites. These sites are still in the investigation phase.

Table I.4: Coast Guard's Twenty Third-Party Sites

Federal sites (19)	Location
Yaworski Lagoon	Canterbury, Conn
Dubose Oil	Escambia County, Fla
Petroleum Products, Inc	Hollywood, Fla
Sydney Mine	Hillsborough County, Fla
Yellow Water Road	Baldwin, Fla
Marine Shale Processors	Amelia, La
Union Chemical	South Hope, Maine
Spectron	Elkton, Md.
Aerovox Site	Boston, Mass
Cannon Engineering ^a	Mass and N.H.
Charles George	Tyngsboro, Mass.
Liquid Disposal Inc	Utica, Mich
Disposal Systems Inc (Owned by Dubose Oil)	Biloxi, Miss.
Glenwood Landing	Glenwood Landing, N.Y
Shore Realty Site	N.Y.
Macon Site	Richmond, N.C
Commercial Oil Services	Oregon, Ohio
North Smithfield	North Smithfield, R.I.
Western Processing	Kent County, Wash.
State Sites (1)	
Oak Grove	Paris, Tenn

^aThe Coast Guard considers this third-party action that involves two states as one federal site
Source: U.S. Coast Guard

In the past 2 fiscal years, the Coast Guard's share of the investigative and administrative costs for third-party sites totaled about \$2 million, and agency officials are uncertain of future costs. The headquarters' environmental section chief told us that the agency had neither estimated the total costs for third-party sites, nor had it estimated when cleanup could be completed because the extent of contamination is still being investigated. The official acknowledged that in some cases, such as groundwater contamination, the cleanup and monitoring could take up to 30 years to complete.

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**Table I.2: Fourteen Locations That Have
Been Cleaned Up**

Locations	Estimated costs
Station Michigan City, Ind	\$15,000
Crisfield, Md.	Unknown
Aberdeen Proving Ground, Md.	Unknown
Elk River/Back Creek, Md	Unknown
St Martins Island LT ^a , Mich	25,000
Manitou Island LT ^a , Mich.	25,000
Station Grand Haven, Mich	10,000
Station Ludington, Mich	25,000
Station Alex Bay, N Y	5,000
Station Oswego, N.Y.	3,000
Station Marblehead, Ohio	5,000
Station Erie, Pa	30,000
LaPointe LT ^a , Wis.	3,000
Station Sheboygan, Wis	45,000

^aAids to navigation such as a navigational light or a lighthouse

1989. The Coast Guard is currently investigating six sites where hazardous wastes—primarily solvents and petroleum products—were disposed of or leaked into the ground. This investigation has been underway for about 2 years. The agency plans to start cleanup actions in fiscal year 1990 or 1991 and believes that cleanup and monitoring will take about 30 years to complete. It estimates that appropriated funds for fiscal years 1987 through 1989 will total about \$2 million and that total cleanup costs will range from about \$10 million to \$50 million.

The total estimated cleanup costs shown above include cleaning up the PCB contamination at the Kodiak facility. Although the Coast Guard sold the facility's electrical distribution system—including poles, cables, and transformers—to the Kodiak Electric Association in November 1984, the land and structures containing the electrical equipment remain the property of the Coast Guard. In June 1985, EPA found PCB contamination at the facility. According to the headquarters' environmental section chief, the Coast Guard currently estimates costs of about \$1 million to remove PCB contaminated equipment and to clean up PCB contaminated land and structures. The Kodiak Electric Association believes that the cleanup of the PCB contamination in transformers and cables could cost \$5 million to \$25 million, not including long-term monitoring costs.

On November 27, 1989, EPA and the Coast Guard entered into a memorandum of agreement concerning the cleanup of PCB contamination of land, structures, and transformers at Support Center Kodiak. Under the terms of the agreement, the PCB cleanup work is scheduled to be completed in 1991.

The following two lists and tables I.2 and I.3 provide information on the status of investigation and cleanup activities for the Coast Guard's 67 potential hazardous waste locations. For the 14 locations that have been cleaned up and the 20 locations that require cleanup, agency estimates of cleanup costs and completion dates are also provided.

**Six Potential Hazardous
Waste Locations That
Need to Be Investigated:**

Base Ketchikan, Alaska
St. Paul LORAN (long-range aid to navigation) Station, Alaska
Back Creek Rear Range Structure, Md.
Coast Guard Yard, Md.
Station Sandy Hook, N.J.
Support Center Seattle Annex, Wash.

The table also shows that the Coast Guard has cleaned up 14 locations. These locations required relatively minor cleanup—such as the excavation of buried waste, tanks, and/or contaminated soil, or the removal of used batteries. The Coast Guard could not provide actual costs for cleaning up each location. However, the agency estimated that the costs for each location ranged from about \$3,000 to \$45,000. Estimated costs for the remaining three locations were unknown.

The Coast Guard estimates that of the 20 locations requiring cleanup, relatively minor actions at 16 locations will cost about \$1.1 million (costs were unknown for 1 of the 16 minor locations) and that all but one of these efforts should be completed by 1993 (completion date was unknown for 1 of the 16 locations). According to the Coast Guard headquarters' environmental section chief, the agency was hindered in its efforts to clean up these minor locations earlier because of an inadequate number of staff with either environmental or contracting expertise necessary for performing the cleanup work or contracting out the effort. The remaining four major locations that need cleanup will require extensive actions at significant cost. The cleanups required at these locations are considered major because they involve potentially extensive groundwater and soil contamination.

Status of Major Cleanup Efforts

Regarding its four locations requiring major cleanup—Air Station Traverse City, Michigan; Air Station Brooklyn, New York; Support Center Elizabeth City, North Carolina; and Support Center Kodiak, Alaska—the Coast Guard has begun cleaning up hazardous waste at its Traverse City and Brooklyn locations; however, the Coast Guard is exploring whether further investigation of the Brooklyn location is needed. The other two major locations are being investigated to determine the types and levels of contaminants that are present. The Coast Guard hopes to begin cleanup efforts at these two locations in fiscal year 1990 or 1991. Agency-appropriated funds through fiscal year 1989 have amounted to about \$15 million, and it currently estimates total costs of about \$40 million to over \$100 million to investigate and clean up the four locations over the next 10 to 30 years.

Traverse City Air Station

At the Traverse City Air Station, groundwater contamination was identified at two sites. The first, identified in 1980, was caused by a 1969 aviation fuel spill; the second, identified in 1985, was caused by three leaking fuel tanks. As a result of this groundwater contamination, local residents' water supplies were connected to city water at Coast Guard

Progress in Cleaning Up Past Hazardous Waste Contamination

Since the early 1980s, the agency has identified 67 potential hazardous waste locations, investigated most of them, and found that over half of the locations required some cleanup action. However, most of the Coast Guard's cleanup work remains to be done. Of the 34 locations found to require cleanup actions, the Coast Guard has cleaned up 14 minor locations at estimated costs ranging from \$3,000 to \$45,000, and it plans to complete additional minor cleanups at 16 locations by 1993 at a total cost of about \$1.1 million (completion date was unknown for one of the locations). The Coast Guard estimates that cleaning up the four major locations will take up to 30 years to complete and could cost over \$100 million.

The Coast Guard is also responsible for paying its portion of the investigation and cleanup costs for 20 other hazardous waste locations, which are primarily landfills, used by the Coast Guard and other parties. The agency's share of investigation costs totaled about \$2 million during the past two fiscal years; however, agency officials are uncertain of future costs because the locations are still being investigated and the extent of the cleanup has not been determined. Similar to its own hazardous waste locations, some of these sites may also take up to 30 years to clean up.

Background

When the Coast Guard identifies a potential hazardous waste location, it employs a three-step process to evaluate and, if necessary, to clean up the location where contamination may have occurred. The first step, a preliminary assessment/site investigation, is a study to determine whether hazards to the public health or the environment exist at the location. The second step, a remedial investigation/feasibility study, is a comprehensive investigation of the location's individual hazardous sites identified in the first step to determine the nature and extent of contamination and the appropriate remedial actions. The third step, remedial design/remedial action, entails designing and implementing the remedial actions chosen to address the location's problem sites.

Through fiscal year 1990, the Coast Guard's environmental cleanup and compliance activities will continue to be funded through two budgetary accounts—the Operating Expense (OE) and the Acquisition, Construction, and Improvements (AC&I) accounts. OE funding is used (1) for routine environmental compliance activities, such as the disposal of currently generated hazardous waste; (2) to support projects to test, remove, and replace existing underground storage tanks; and (3) to perform low-cost and short-term cleanup actions (under \$200,000 and generally less than 6 months) associated with storage tank removals and

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Conclusions

While the Coast Guard has made progress in cleaning up its hazardous waste sites and in complying with environmental requirements, it still has most of its hazardous waste cleanup work to do. This effort will cost millions of dollars and will take decades to complete. The Congress, concerned about the Coast Guard's efforts, recently enacted legislation to establish a new Coast Guard environmental compliance and restoration program. We believe this program, if appropriately and aggressively implemented, should help the Coast Guard in its efforts to clean up its hazardous waste locations and to comply with environmental regulations. However, to effectively implement the new program and to facilitate the required annual progress reports to the Congress, the Coast Guard will need information on environmental violations and the related costs of correcting the violations, including cleanup costs, at its facilities. In the past, most of this information has not been provided by the Coast Guard's field commands, which hindered the Coast Guard's efforts to evaluate the effectiveness of its environmental program and to estimate its program funding needs. The Coast Guard headquarters recently issued a notice to its field commands that reemphasized the importance of reporting information on environmental violations. However, because of noncompliance with previous reporting instructions, the Coast Guard will need to follow up to ensure that this information is properly reported.

Recommendation to the Secretary of Transportation

To improve the information available to the Coast Guard to evaluate its compliance with environmental laws, estimate environmental funding needs, and provide meaningful progress reports to the Congress required by P.L. 101-225, we recommend that the Secretary of Transportation direct the Commandant, U.S. Coast Guard, to take follow-up action to ensure that field commands comply with the recently issued notice requiring that information on environmental violations and the related costs of correcting the violations are reported to Coast Guard headquarters.

Agency Comments

We discussed the results of our review, as reported in our November 1989 testimony and this report, with Coast Guard officials directly responsible for the program. They generally agreed with the data presented and the recommendation, and we incorporated their comments where appropriate. However, as requested, we did not obtain official agency comments on the testimony or this report.

York; Support Center Elizabeth City, North Carolina; and Support Center Kodiak, Alaska—range from \$40 million to over \$100 million.

In addition to being responsible for cleaning up its own hazardous waste locations, the Coast Guard must pay its portion of investigation and cleanup costs for 20 third-party sites that are primarily landfills used by several parties, including the Coast Guard. During the past two fiscal years, the agency's share of the investigation and administrative costs totaled about \$2 million. However, agency officials are uncertain of its future costs for these third-party sites because they are still being investigated and the extent of cleanup has not yet been determined. If groundwater contamination has occurred, the Coast Guard estimates that cleanup actions may take 30 years or more to complete.

The Coast Guard believes that its past and current appropriation funding levels for in-house environmental activities, which averaged about \$6.8 million annually during fiscal years 1988 through 1990, have been and remain adequate for its present stage of work—mainly investigating potential hazardous waste locations, investigating and cleaning up locations with major problems, and cleaning up locations with minor problems. While the agency recognizes that its future funding for cleaning up major hazardous waste locations will need to be increased, it said that it will be unable to more precisely project its total funding needs for cleaning up its hazardous waste locations where past contamination has occurred until investigations are completed at all locations. (See app. I.)

Compliance With Environmental Requirements at Coast Guard Facilities Currently Generating Hazardous Waste

The Coast Guard headquarters does not have needed information on environmental violations or the costs of correcting the violations, which would enable it to effectively evaluate the program and to request appropriate budgetary funding. Our 1986 report also noted that federal agencies, including the Coast Guard, had been slow in developing an awareness and understanding of their responsibilities under RCRA and in establishing programs to carry out the act's requirements. In late 1989, both the Secretary of Transportation and the Inspector General also expressed concern that the Coast Guard is not in compliance with RCRA and/or state environmental regulations for managing and monitoring underground and aboveground fuel storage tanks. The Secretary of Transportation reported that these problems constitute material weaknesses associated with safety and environmental issues that pose a danger or threat to human life, the environment, or both.

Results in Brief

Since our 1987 report, the Coast Guard has made progress in identifying and investigating its potential hazardous waste locations, but most of its cleanup work remains to be done. The Coast Guard has identified a total of 34 hazardous waste locations that need to be cleaned up. Since our earlier report, the Coast Guard has completed minor cleanups at 4 additional sites bringing the total to 14 locations cleaned up. However, the number of Coast Guard locations still requiring cleanup has increased from 15 to 20. The Coast Guard estimates that, among the 20 locations requiring cleanup, major cleanup at 4 of its most contaminated sites will take decades to complete and could cost over \$100 million. The agency, however, does not have total cost information on all sites requiring cleanup because investigations to determine the nature and extent of contamination and the appropriate remedial action are still ongoing.

The Coast Guard does not have most of the information on the nature of environmental violations at its facilities that currently handle hazardous waste or the costs of correcting the violations. Because the Coast Guard's field commands generally are not reporting complete information, the agency is not in a good position to evaluate whether its overall environmental program complies with RCRA or to estimate long-term funding needed for environmental compliance.

Background

The Coast Guard, as well as other federal agencies, and private entities are subject to CERCLA, RCRA, and other environmental laws that require them to regulate and manage their hazardous waste currently being generated and to clean up sites where improper disposal of hazardous waste occurred in the past.

CERCLA provides for the cleanup and management of hazardous wastes or substances disposed of in the past that have been abandoned or left uncontrolled. Among other things, under CERCLA, past and present owners and operators of facilities where hazardous waste was treated, stored, or disposed of, are required to identify such locations and perform or pay for any necessary cleanup efforts.

RCRA provides for the safe management and control of wastes currently being generated and for cleanup of any resulting contamination. The Coast Guard operates hundreds of facilities, many of which currently handle hazardous waste materials regulated under RCRA. The primary types of hazardous waste or substances being handled at Coast Guard facilities include used batteries and spent solvents and paints.

