

GAO

Testimony

Before the Subcommittees on Military Readiness and Military Installations and Facilities, Committee on National Security, House of Representatives

For Release on
Delivery at
10:00 a.m. EST,
Friday,
March 24, 1995

ENVIRONMENTAL PROTECTION:

Challenges in Defense Environmental Program Management

David R. Warren, Director, Defense Management and NASA Issues, National Security and International Affairs Division



063144/153824

Mr. Chairmen and Members of the Committee:

I am pleased to be here to provide you with an overview of our work concerning the Department of Defense's (DOD) environmental program. DOD faces a substantial task in managing its environmental activities. Since 1976, it has spent approximately \$20 billion for environmental programs; \$15 billion in fiscal years 1991 through 1994. In the fiscal year 1995 budget request, DOD estimated that an additional \$25 billion would be needed to fund its environmental activities through fiscal year 1999. Today, I am providing information on (1) the overall status of DOD's environmental program and (2) actions that need to be taken to enhance the success of DOD's program. Before discussing these matters in detail, I want to briefly summarize the key points in my testimony.

RESULTS IN BRIEF

Our work over the past several years shows that DOD has taken actions to improve the management of its environmental program. For example, DOD has revised its environmental strategy to expedite its cleanup efforts and has begun a program to prevent rather than control pollution. DOD has, for the most part, identified its hazardous waste sites--all told, nearly 28,000 potentially contaminated sites have been identified. It has also made compliance with environmental laws a priority by budgeting the funds necessary to meet compliance deadlines, and has worked to preserve the natural resources on its land.

Notwithstanding these efforts, our work also shows that DOD still faces a substantial challenge in cleaning up its hazardous waste sites and improving the overall management of its environmental program. Although substantial amounts of money have been spent, cleanup has been slow at contaminated sites on active installations and those being closed or realigned under the base realignment and closure (BRAC) process. As of September 30, 1993, which is the most current DOD data available, DOD reported having cleaned up only 571 contaminated sites despite spending over \$7 billion for cleanup. Most of this money had been spent for site studies and cleanup design. Some key reasons for the slow pace of cleanup include the overly complex rules and regulations governing cleanup and the level of cooperation between DOD, the Environmental Protection Agency (EPA), and the states. Taken together these things tend to delay the cleanup application and approval processes.

Another problem delaying cleanup is the lack of cost-effective technologies for certain types of hazardous waste sites such as large landfills, unexploded ordnance, and contaminated ground water. In many cases, new, affordable technologies are needed, but they will take time to develop. In addition, DOD has not effectively prioritized its hazardous waste sites to ensure that

those posing the greatest risk to human health and the environment receive funding priority over those that present less severe problems.

Other problems facing DOD, include a lack of timely and accurate estimates of program costs and an effective means for measuring program progress and results. We are also concerned that DOD may be paying cleanup costs attributable to other parties because clear policies and procedures for sharing costs with other responsible parties are not in place.

Lastly, DOD has been slow in preventing or minimizing the generation of pollution, and the lack of baseline data makes it difficult to determine what effect military operations have on natural resources and what effect protecting natural resources (such as wildlife habitat) has on military operations.

BACKGROUND

DOD is responsible for managing and caring for thousands of military installations and defense sites throughout the United States and overseas. Its operations are subject to the same environmental, safety, and health laws and regulations as private industry as well as additional requirements for federal facilities. The day-to-day operations and activities at a typical military installation generally mirror those of a small city. As a result, DOD installations face most of the same environmental problems confronting our nation's industrial and commercial sectors.

The types of hazardous waste at the majority of DOD installations are also found at most industrial operations. The primary contaminants are petroleum or petroleum-related products such as fuels, solvents, corrosives, and paint strippers and thinners. In addition, heavy metals, such as lead, cadmium, and chromium, are also found. Contamination usually results from improper disposal, leaks, or spills, and, in many instances, has contaminated the nearby soil and groundwater. Some unique military substances, such as nerve agents and unexploded ordnance, are also found at DOD installations.

Legal and Regulatory Requirements

Several environmental laws result in significant costs to DOD. They include the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), commonly referred to as Superfund; Resource Conservation and Recovery Act (RCRA); Clean Water Act; Clean Air Act; and Federal Facilities Compliance Act.

The two principal laws governing hazardous waste handling and cleanup at federal facilities are RCRA and CERCLA. RCRA regulates the day-to-day management of hazardous waste and may

include the cleanup of contamination at active facilities where such waste is treated, stored, or disposed of. CERCLA requires cleanups of previous hazardous waste contamination but may deal with emergencies at any site. CERCLA was amended in 1992 by the Community Environmental Response Facilitation Act to expedite the transfers of property resulting from BRAC actions to nonfederal users.

EPA is charged with implementing various environmental laws and maintains the National Priorities List (NPL), a register of the nation's most contaminated sites. EPA has developed implementing regulations that outline, for example, cleanup requirements as well as selection and approval procedures for remedial actions at hazardous sites. However, because national standards do not exist for most contaminants in soil, DOD must work with EPA and state governments to negotiate and set cleanup goals for each site. States may apply more stringent cleanup standards than EPA, and then DOD must comply with those standards, which are not always uniform.

DOD Organization and Funding

To achieve its environmental mission, DOD has organized the program into five elements--cleanup, compliance, conservation, pollution prevention, and technology. The Secretary of Defense has delegated cleanup responsibility to the Army, Navy, Air Force, and Defense Logistics Agency. Cleanup actions are usually accomplished under contract with private firms, which are monitored by the services.

Funding for DOD's five environmental program elements is divided into three broad categories: (1) environmental compliance, (2) environmental restoration, and (3) BRAC cleanup costs. Environmental compliance category activities relate to conservation, pollution prevention, and the development of environmental technology. The environmental restoration category includes identification, investigation, and cleanup of contamination from hazardous substances and waste on active and formerly used DOD land; the correction of other environmental damage, such as unexploded ordnance detection and disposal; the demolition and removal of unsafe buildings and structures; removal of debris; and reductions in DOD's hazardous waste generation--commonly referred to as DOD's pollution prevention program. The BRAC environmental category includes environmental cleanup activities at DOD bases selected to be closed under base realignment and closure decisions.

From fiscal year 1976 through 1994, DOD spent approximately \$20 billion to clean up hazardous waste sites and to comply with other environmental laws. About 75 percent of the total, or almost \$15 billion, was spent in the four year period of fiscal year 1991 through 1994 as shown in the following schedule:

(In millions of dollars)

Fiscal Year	DERA ^a	BRAC	Other Compliance ^b	Total
1991	\$1,065.0	\$ 239.3	\$1,118.9	\$ 2,423.2
1992	1,567.8	408.5	2,033.0	4,009.3
1993	1,199.7	192.5	2,524.7	3,916.9
1994	1,965.0	160.3	2,482.5	4,607.8
Total	\$5,797.5	\$1,000.6	\$8,159.1	\$14,957.2

^aDefense Environmental Restoration Account funds.

^bIncludes compliance, conservation, protection, and prevention.

For fiscal year 1995, DOD's appropriation for environmental activities totalled about \$5 billion; \$1.8 billion for DERA, \$500 million for BRAC cleanup, and the balance for compliance and other programs. DOD has requested just under \$5 billion for fiscal year 1996.

PROGRESS IN ADDRESSING ENVIRONMENTAL PROBLEMS

We reported in September 1994 that DOD has made progress in addressing a number of its environmental problems.¹ For example, DOD recently reorganized its environmental program office and revised its program strategy. In May 1993, DOD abolished the Deputy Assistant Secretary of Defense (Environment) position and created a higher level, Deputy Under Secretary of Defense (Environmental Security). It organized this office to emphasize the importance of its environmental mission.

As part of its new strategy, DOD implemented the Fast Track Cleanup program to accelerate the environmental cleanup at BRAC installations and to expedite their transfer to communities. Also, DOD recently reestablished an interagency Environmental Response Task Force to monitor the BRAC process and formulate interagency solutions to barriers.

¹Environment: DOD's New Environmental Security Strategy Faces Barriers (GAO/NSIAD-94-142, Sept. 30, 1994).

In terms of cleanup, DOD reports that it has generally identified all hazardous waste sites² at its active installations and has made substantial progress in studying these sites to develop cleanup plans and strategies. DOD has identified nearly 28,000 potentially contaminated sites, including 19,694 sites at active and closing installations and 8,004 at formerly used defense sites. DOD has completed studies at 10,096 sites on active and closing installations and has determined that cleanup will not be necessary at 8,835 sites. DOD has closed out all but 2,815 active sites on formerly used defense sites, primarily through determinations that sites are not eligible for DOD cleanup or that no cleanup is required. However, DOD is continuing to find additional contaminated sites, having identified 660 sites during fiscal year 1993.

DOD has also made compliance with environmental laws, such as the Clean Air Act, a priority by budgeting funds to upgrade its facilities by the compliance deadlines and to minimize costly cleanup of hazardous waste and the fines and penalties often associated with noncompliance. For example, DOD budgeted about \$205 million in fiscal year 1993 to upgrade its underground storage tanks. In addition, service personnel are receiving training to reduce the number of administrative and procedural violations of environmental laws that comprise a large part of DOD's environmental violations.

DOD also has a number of initiatives underway to prevent pollution by reducing its use of toxic chemicals. For example, in June 1994, the Secretary of Defense directed the use of commercial practices and performance-based specifications to replace military specifications and standards that require use of toxic chemicals in repairing and maintaining weapon systems and facilities. The Air Force and the Navy are also implementing a pharmacy approach to managing and controlling hazardous material inventories. Under this approach, hazardous materials are tightly controlled, much like the medical field controls the dispensing of certain drugs through prescriptions approved by a physician. The services told us that this program has already achieved results by centralizing their inventories of hazardous materials. For example, according to the Air Force, Hill Air Force Base, Utah, has reduced hazardous material purchases by 50 percent. Also, the Navy reported that the program has saved over \$3 million at three shore facilities and on eight ships.

DOD has also worked to balance mission needs with conserving natural resources. For example, special flight altitude restrictions have been established at some DOD installations to

²EPA defines a hazardous waste site as a location containing hazardous waste. A facility or installation may contain one or more such sites.

reduce wildlife and habitat disturbance and the Army is taking steps to determine the ability of its installations to optimally support their assigned missions over an indefinite period of time without significantly affecting the land.

SUBSTANTIAL ENVIRONMENTAL PROBLEMS AND COSTS REMAIN

Although our recent reports show that DOD has made some progress, they also show that some major problems remain, including

- the slow pace and high cost of hazardous waste cleanup;
- the potential for unnecessarily increased costs because the services have not consistently requested that private parties pay their share of cleanup costs;
- the lack of progress in preventing or minimizing the generation of pollution; and
- a lack of the baseline data needed to measure the impact of military operations on natural resources, such as wildlife, on DOD lands.

DOD's challenge is to address these problems and concerns as quickly and cost-effectively as possible within existing budgets.

ENVIRONMENTAL CLEANUP HAS BEEN SLOW AND COSTLY

Although DOD reported that it has generally identified all hazardous waste sites at its active installations, its progress in cleaning up these sites has been slow over the past 10 years. As of September 30, 1993, DOD reported having cleaned up only 571, or about 5 percent of its potentially contaminated sites, despite spending over \$7 billion for cleanup since 1976. Of the 571 sites cleaned up, 21 are located on BRAC installations. In addition, DOD had cleaned up only 172 of the 2,815 formerly used defense sites eligible for cleanup. Much of DOD's cleanup effort has focused on site studies and cleanup design.

Contributing to the costly and time-consuming cleanup process are: (1) the numerous, complex, and exacting CERCLA cleanup procedures; (2) the lack of an effective DOD system for prioritizing cleanup sites; and (3) the need for better cooperation to facilitate the joint decision-making processes required of DOD, EPA, and state officials.

Complex Regulatory Process

The requirements of the CERCLA process increase the time and costs of DOD's remediation efforts at its high-priority sites. For example, EPA's implementation of CERCLA requires DOD to address issues, such as liability, that are often more applicable

to the private sector than DOD.³ For example, private owners of landfills on the NPL are often difficult to hold liable. Although EPA wants to ensure that all the parties contributing to hazardous waste in the landfills pay for the cleanup, these parties have often gone bankrupt or are no longer in business. However, liability is not pertinent at a site where DOD is the only party involved. Nonetheless, DOD is still required to address liability even when it is not an issue.

As we reported in April 1994,⁴ DOD must extensively study thousands of sites, regardless of the extent of contamination. EPA's system for identifying high-priority sites--those on the NPL--has caused DOD to give a large number of individual sites a high priority status. EPA usually considers only the four to six worst sites on an installation, which may have hundreds of sites, in determining whether the installation should be placed on the NPL. However, when CERCLA work is required, all of the sites on an installation are usually given the NPL status, regardless of the threat posed by the individual sites to human health and the environment. As of February 1995, DOD had 126 NPL installations containing 5,785 sites, most of which would not be designated as Superfund sites in the private sector, according to DOD and EPA. On the other hand, some sites not on DOD's high priority installations, and therefore, not designated as high priority, are more contaminated and pose a greater risk to human health and the environment than some of the sites on high priority installations.

EPA lacks the resources to evaluate sites on DOD installations that do not qualify as high priority installations. As a result, DOD officials believe that some of the most contaminated DOD sites do not have access to limited resources for cleanup. For example, according to officials at the Aberdeen Proving Grounds, two of its worst sites, the fire training area and the Phillips Landfill, have not received adequate funding because they are not listed on the NPL.

Need For Improved Prioritization

DOD has not effectively prioritized its environmental projects. For example, in addition to installations on EPA's NPL, DOD gives the highest priority for cleanup to BRAC installations. In many

³Liability is an issue at BRAC installations because these properties can be leased before cleanup is completed. When the land is leased, DOD is still liable for the cleanup costs. Liability is also a consideration on DOD property operated by contractors.

⁴Environmental Cleanup: Too Many High Priority Sites Impede DOD's Program (GAO/NSIAD-94-133, Apr. 21, 1994).

cases this high priority appears to be unwarranted.⁵ Although CERCLA requires that all property be cleaned up or identified as clean before it is transferred to nonfederal owners, federal agencies will retain much of the property at closing installations. For example, DOD is retaining or transferring to federal agencies about 156,700 acres, or 63 percent of the 250,100 acres on installations from the 1988 and 1991 BRAC rounds. This property can be made available to federal users before it is cleaned up. Of the 84 BRAC installations that have submitted cleanup plans, 63 are not on the NPL and would not have otherwise qualified for high priority funding.

Need For Better Cooperation

Both EPA and DOD officials believe a better working relationship could greatly reduce the amount of time and money required to study and clean up contaminated sites under the CERCLA process. They cited McChord Air Force Base as a case where the cleanup process and costs have increased because of limited cooperation. From July 1988 through September 1991, McChord spent \$3.1 million to prepare reports and other documents required to study its cleanup sites. During that time, 25 documents were prepared and often included multiple versions incorporating EPA's and the state's comments. Each version of a plan or report usually cost \$20,000 to \$30,000. The study was not expected to be completed for many more months, and McChord officials did not know what the studies would actually cost.

In addition, EPA instructed McChord to perform a risk assessment at two of its industrial sites assuming that condominiums would be built on the site and children would be playing on it, even though industrial activity is expected to continue at these sites. The assessment was also to assume that residents will get their drinking water from a contaminated aquifer that is not used by anyone else in the region. Although EPA officials stated that it does not mean that EPA will require McChord to comply with residential standards, the requirement to study such scenarios for risk assessment may unnecessarily increase costs.

We reported in February 1995 that DOD and regulatory agencies have disagreed on the extent of contamination at BRAC bases. For example, although the services identified about 121,200 of 250,100 acres at 1988 and 1991 closing installations as uncontaminated, EPA and state regulators only concurred on 34,499 acres. The regulators did not agree that many parcels were uncontaminated because activities related to compliance--unexploded ordnance, asbestos removal, lead-based paint surveys, and resolution of issues related to petroleum--were not

⁵Military Bases: Environmental Impact at Closing Installations (GAO/NSIAD-95-70, Feb. 23, 1995).

completed. Also, state regulators were not willing to concur because of concerns about the state's potential liability.

Most of the 34,499 acres identified by regulators as uncontaminated will not likely be transferred. About half is being retained for federal use. According to DOD, most of the remaining property will not be of interest to potential transferees because it is undeveloped, remotely located, or linked to contaminated parcels and cannot be used separately. For example, about 7,000 of the uncontaminated acres at Fort Ord, California are considered unusable because, according to DOD officials, this area has no access to a usable water supply.

Technology Limitations Hamper More Timely and Cost-Effective Cleanup

In many cases, the lack of cost-effective cleanup technologies makes cleanup efforts costly and time-consuming for certain types of cleanup problems, such as contaminated groundwater, large landfills, and unexploded ordnance. These cleanup problems are widespread. For example, of the cleanup plans submitted in April 1994 for 84 BRAC installations, 51 identified polluted groundwater, 67 identified contaminated landfills, and 25 identified unexploded ordnance contamination among sites to be cleaned up. One method for cleaning up groundwater contamination, called pump-and-treat, is expensive and can take decades to complete. Pump-and-treat systems were in place or planned for at least 24 of the 51 BRAC installations with contaminated groundwater. The cleanup plan for unexploded ordnance at the Army's Jefferson Proving Ground included \$216 million in estimated costs to clean up as much as 51,000 acres and noted that costs could run to \$2 billion a year for several years. Current technology is costly because it requires using metal detectors to locate the ordnance, mapping the location of the unexploded ordnance, handling or removing it, and disposing of it. In addition, complete cleanup cannot be guaranteed because if unexploded ordnance is buried below 3 feet, current technology may not detect it, and it can migrate to the surface over time.

Containing and cleaning up contamination depends on developing new, affordable technologies, but these technologies will take time to develop. Our work shows that some of the reasons that new technologies are not used more quickly include the following:

- Conflicting priorities prevent the approval of innovative approaches for cleanup.
- Field officials may associate the newer technologies with unacceptable levels of risk.

-- On-site contractors may favor particular technologies on the basis of their own experience and investments.

More Timely and Accurate Management Data Needed

The effort to clean up DOD and other federal hazardous waste sites is likely to be among the costliest public works projects ever attempted by the government.⁶ However, DOD lacks a system for developing reliable cost estimates; as a result, it revises its estimates upward nearly every year. We reported in October 1991 that since 1985, DOD had made several estimates of its long-term cleanup costs.⁷ These estimates had grown steadily from an initial range of \$5 billion to \$10 billion to the latest official estimate of \$24.5 billion made in 1991. The 1991 estimate does not represent DOD's full cleanup liability because (1) it does not include all potential sites to be cleaned up, such as sites at overseas installations or sites on installations included under the BRAC process; (2) studies of most known sites have not been completed; (3) the time required for studies and cleanups could be longer than expected; and (4) some facilities are requiring more cleanup than originally anticipated. DOD has announced that improved cost estimating would be an element in its new system for managing cleanups.

DOD also lacks adequate data to effectively monitor the progress and results of its environmental program. For example, although DOD has begun developing baseline data and performance measures for its Fast Track Cleanup program for BRAC installations, standards are needed that will allow DOD to assess the various actions being taken to speed up the cleanup process. We also reported in August 1994 that DOD cannot effectively monitor its cleanup efforts at its radioactively contaminated sites because its database is inaccurate, is outdated, and does not record such basic data as the amount of radioactivity.⁸ Moreover, although DOD has been collecting data since the mid-1980s, precise measures of its progress in preventing pollution are not available because DOD is not required to provide this information to EPA until July 1995.

⁶Federal Facilities: Agencies Slow to Define the Scope and Cost of Hazardous Waste Site Cleanups (GAO/RCED-94-73, Apr. 15, 1994).

⁷Hazardous Waste: DOD Estimates for Cleaning Up Contaminated Sites Improved but Still Constrained (GAO/NSIAD-92-37, Oct. 29, 1991).

⁸Environmental Cleanup: Better Data Needed for Radioactively Contaminated Defense Sites (GAO/NSIAD-94-168, Aug. 24, 1994).

Measuring progress and results of environmental programs is essential for making funding trade-offs during the current budget environment. Measuring progress requires consistently reporting investment costs and results. However, DOD cannot determine these costs because the services do not consistently budget and report them. For example, some military installations include only investment costs in the research, development, test, and evaluation appropriation, while other installations include not only investment costs but also normal installation operating costs.⁹

COST SHARING OF CLEANUP LIABILITIES

A major issue facing DOD is how to share cleanup costs related to the production of military goods and other defense contractor activities. Cleanups may occur on DOD property, defense contractors' property, or third-party sites. Although total costs are unknown, we testified before the Congress in 1993 that the top 15 defense contractors' estimates of past and known future cleanup costs totaled \$3.1 billion for their sites and third-party sites.¹⁰ In 1994, we reported that DOD's estimate for cleaning up 78 government-owned, contractor-operated facilities and one large case involving a private company at the Rocky Mountain Arsenal totaled another \$2.7 billion.¹¹ We found these estimates significantly understated. According to military service and Defense Logistics Agency data, projected costs will be about \$3 billion, or \$1.24 billion more than DOD reported. Our work at selected government-owned, contractor-operated facilities and the Rocky Mountain Arsenal showed that future costs are likely to be even greater. For example, a recent court action allowed the state of Colorado to impose additional requirements for cleaning up the Arsenal. Army officials told us these requirements could add from \$1 billion to \$20 billion to the cleanup cost.

If DOD pays cleanup costs related to a contractor's activities, the contractor remains a potentially responsible party under CERCLA, and DOD could seek reimbursement or contribution from the contractor or its insurer. The reverse is also true for contractor-owned facilities; the contractor can seek a contribution from the government.

⁹Environmental Compliance: Guidance Needed in Programming Defense Construction Projects (GAO/NSIAD-94-22, Nov. 26, 1993).

¹⁰Environmental Cleanup: Unresolved Issues in Reimbursements to DOD Contractors (GAO/T-NSIAD-93-12, May 20, 1993).

¹¹Environmental Cleanup: Inconsistent Sharing Arrangements May Increase Defense Costs (GAO/NSIAD-94-231, July 7, 1994).

We reported in October 1992 that, at contractor-owned and operated sites, DOD's decisions on whether to pay contractors' costs varied widely.¹² The decisions varied from denying reimbursement to approving it in proportion to DOD's share of a company's business. Our July 1994 report stated that, at DOD-owned sites, DOD typically assumed responsibility for cleanups, although others sometimes participated in the cleanups. Cost sharing at DOD-owned sites also varied widely: from no DOD effort to seek reimbursement, to \$250 million recovered so far from one company.

DOD's Payment of Environmental Cleanup Costs at Private Facilities

Our early work in 1993 showed that although DOD had not estimated its potential liability for reimbursements to contractors, the claims could be substantial. DOD had no comprehensive regulations governing such reimbursements, and still does not. Although the Federal Acquisition Regulation does not expressly address the allowability of contractors' environmental cleanup costs, DOD has treated such costs as normal, reimbursable business expenses. Contracting officers are responsible for determining allowability.

DOD's treatment of contractors' claims for environmental cleanup costs has varied in key respects and has resulted in inconsistent decisions. We reviewed reimbursement practices at four high priority sites; two contractor-owned and-operated properties (Aerojet in Sacramento, California, and Lockheed in Burbank, California) and two third-party disposal sites (used by Boeing near Seattle, Washington). We noted inconsistencies in the way DOD determined allowability of costs, including considerations of wrongdoing, insurance coverage, and profit. For example, one contracting officer investigated potential violations of federal or state environmental laws in one case, but others did not. In the former case, the contracting officer used the evidence of noncompliance to deny the contractor's claim for reimbursement of cleanup costs.

DOD's Payment of Environmental Cleanup Costs at DOD Facilities

A significant part of DOD's environmental contamination has involved defense contractors and other private parties. Some of these private parties performed no services for DOD, but leased property from it. We reviewed DOD cost-sharing policies and practices applicable to 80 DOD facilities with contractor

¹²Environmental Cleanup: Observations on Consistency of Reimbursements to DOD Contractors (GAO/NSIAD-93-77, Oct. 22, 1992).

operators and lessees and found that DOD policies varied widely on whether and when to seek contributions from potentially responsible parties. Generally, contractor operators have not been asked to share cleanup expenses. Also, we reported in November 1994 that military services have sometimes provided advance assurance to hold contractors harmless for environmental contamination.¹³ In other cases, responsible parties have been pursued for contributions.

DOD's POLLUTION PREVENTION AND COMPLIANCE EFFORTS

DOD has been slow in preventing or minimizing the generation of pollution, and the costs to do so have not been defined but are expected to be high.¹⁴ For example, DOD's efforts have focused on treating and controlling pollution generated from its activities rather than eliminating the use of toxic chemicals. DOD is in the early stages of two efforts that are key first steps to reducing its use of toxic chemicals. These efforts involve measuring its releases of toxic chemicals into the environment from installation activities and identifying the uses of toxic chemicals specified in military specifications and standards that govern the design, manufacture, maintenance, and operation of weapon systems and facilities. DOD expects to report its releases of toxic chemicals by July 1995. However, it may not complete its review of specifications and standards until the year 2000. DOD will not know the scope or magnitude of its pollution prevention requirements until these efforts are complete. In addition, the services have not comprehensively incorporated environmental concerns in the design, development, and production of new weapon systems.

The 1976 Toxic Substances Control Act specifically cited PCBs (polychlorinated biphenyls) as a threat to human health and restricted the manufacture and use of equipment containing this substance. However, the services and installations do not always identify PCB items for replacement because DOD has not provided adequate guidance. In addition, some installations were still not meeting the EPA requirements for monitoring, storing, and disposing of PCB items.¹⁵

¹³Environmental Cleanup: Defense Indemnification for Contractor Operations (GAO/NSIAD-95-27, Nov. 25, 1994).

¹⁴Pollution Prevention: Status of DOD's Efforts (GAO/NSIAD-95-13, Nov. 9, 1994).

¹⁵Environmental Compliance: DOD Needs to Better Identify and Monitor Equipment Containing Polychlorinated Biphenyls (GAO/NSIAD-94-243, Aug. 24, 1994).

**MANAGEMENT OF NATURAL RESOURCES ON
PUBLIC LANDS WITHDRAWN FOR MILITARY USE**

The Military Lands Withdrawal Act of 1986 removes more than 7 million acres of land from public use until the year 2001 and devotes them to the military services for training and weapons and equipment testing purposes. The withdrawn lands, which have been under military control since the 1940s and 1950s, include six sites located in the states of Alaska, Arizona, Nevada, and New Mexico.¹⁶

The law defines how DOD and Department of the Interior agencies are to operate in managing the resources of land controlled by the military. We examined the operations at all six sites named in the act to determine whether (1) resource management activities had constrained military operations, and (2) military operations had constrained resource management activities. We found that military operations at these sites had generally not been hampered by concerns for natural resources, such as wildlife. Military officials in charge of training operations said they had adjusted operations to enhance or protect resources at five of the six locations. However, we could not determine the impact of military operations on resource conditions on these lands due to the lack of baseline data required to measure changes in resource conditions.¹⁷

Additionally, we found little evidence that top managers of military services and Interior agencies had taken steps to ensure cooperation in managing resources at these sites. For example, Fish and Wildlife Service officials at Nellis Range told us that the military was generally uncooperative in resource management and that the Air Force constructed military roads, targets, and facilities on the refuge without informing the Refuge Manager. Further, we were told that, without consulting Fish and Wildlife Service managers, the Air Force had stored on the refuge some tank targets contaminated by depleted uranium. Air Force officials said they had no record of coordination on these matters. Subsequent to our review, DOD reported several corrective actions to address these issues.

¹⁶The specific sites are (1) Fort Greely Maneuver Area and Air Drop Zone; (2) Fort Wainwright's Yukon Maneuver Area, both in Alaska; (3) Goldwater Air Force Range in Arizona; (4) Nellis Air Force Range; and (5) Bravo-20 Bombing Range, both in Nevada; and (6) McGregor Range in New Mexico.

¹⁷Natural Resources: Defense and Interior Can Better Manage Land Withdrawn for Military Use (GAO/NSIAD-94-87, Apr. 26, 1994).

ACTIONS NEEDED TO IMPROVE DOD's PROGRAM

We have made a number of recommendations in previously issued reports that we believe remain valid and, if acted on, would improve the management of DOD's program and alleviate some of the problems I have discussed today. Specifically:

- To eliminate the excessive number of high priority hazardous waste sites which we believe impedes the progress of DOD's cleanup efforts, we recommended that DOD and EPA revise the system for designating high priority sites and reduce their number to a more manageable level. In addition, DOD may want to examine the potential for increasing progress with available resources by focusing on those sites having common problems that can be cleaned using commonly available remedies while postponing work at more complicated sites that require costly remedies or new technologies.
- To improve the base closure and realignment process, we recommended that DOD (1) develop better environmental program cost estimates for affected sites, (2) limit the scope of base closure cleanups to only those required for compliance or that are cost-effective, and (3) establish standards that allow assessing progress made in these cleanup efforts.
- To ensure the information needed to manage contaminated site restoration and support DOD's decision-making processes is both accurate and available, we recommended that DOD (1) require the Defense Logistics Agency and the military services to correct existing data errors, (2) ensure that needed data are reported to the Office of the Secretary of Defense at least four times a year as required, and (3) modify reporting requirements to include data on the types and amounts of specific contaminants. Our recommendations were based on work involving low-level radiation; however, the system is the same for all hazardous waste under the Defense Environmental Restoration Program, and we believe they could be applied DOD-wide.
- To help prevent excess defense costs, we recommended that DOD improve cost information and provide guidance to the military services to resolve disparities in cleanup responsibilities and costs. We suggested that the Secretary of Defense consider issues such as (1) the development of incentives to minimize contamination and to ensure fair allocation of costs among DOD and private parties and (2) the question of whether contractors should subsequently be permitted to recover from DOD either part or all of the contributions they made toward cleanup.
- To improve compliance with legislation and implementing regulations, we recommended that DOD require the military

services to fully comply with the Toxic Substances Control Act and EPA regulations by implementing a follow-up program to ensure that deficiencies are corrected. We further recommended that the Administrator of EPA (1) require installations to report on actions being taken to remedy instances of noncompliance and (2) improve the timeliness of follow-up inspections at DOD installations.

In general, DOD has agreed with our recommendations and is taking steps toward their implementation.

Mr. Chairmen, this concludes my statement. I will be happy to answer any questions you may have at this time.

(709130)

Ordering Information

The first copy of each GAO report and testimony is free. Additional copies are \$2 each. Orders should be sent to the following address, accompanied by a check or money order made out to the Superintendent of Documents, when necessary. Orders for 100 or more copies to be mailed to a single address are discounted 25 percent.

Orders by mail:

**U.S. General Accounting Office
P.O. Box 6015
Gaithersburg, MD 20884-6015**

or visit:

**Room 1100
700 4th St. NW (corner of 4th and G Sts. NW)
U.S. General Accounting Office
Washington, DC**

**Orders may also be placed by calling (202) 512-6000
or by using fax number (301) 258-4066, or TDD (301) 413-0006.**

Each day, GAO issues a list of newly available reports and testimony. To receive facsimile copies of the daily list or any list from the past 30 days, please call (301) 258-4097 using a touchtone phone. A recorded menu will provide information on how to obtain these lists.

**United States
General Accounting Office
Washington, D.C. 20548-0001**

<p>Bulk Mail Postage & Fees Paid GAO Permit No. G100</p>

**Official Business
Penalty for Private Use \$300**

Address Correction Requested
