

GAO

Report to the Chairman, Environmental
Restoration Panel, Subcommittee on
Readiness, Committee on Armed
Services, House of Representatives

July 1989

HAZARDOUS WASTE

EPA Cleanup Requirements—DOD Versus Private Entities



RESTRICTED — Not to be released outside the
General Accounting Office unless specifically
approved by the Office of Congressional
Relations.

RELEASED

546077

National Security and
International Affairs Division

B-213706

July 28, 1989

The Honorable Richard Ray
Chairman, Environmental
Restoration Panel
Subcommittee on Readiness
Committee on Armed Services
House of Representatives

Dear Mr. Chairman:

On March 25, 1988, you asked us to determine whether the Resource Conservation and Recovery Act (RCRA) of 1976, as amended, or the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (commonly called Superfund), as amended, has precedence when both are applicable in cleaning up a hazardous waste site. You were concerned that the Department of Defense (DOD) is required to comply with the overlapping requirements of RCRA and Superfund but private industry is not and that DOD is held to higher standards in cleaning up sites than private industry. As agreed with your Office, our work focused on conditions at one military installation and a private site near that installation.

Results in Brief

RCRA and Superfund requirements can overlap when facilities have both active and inactive hazardous waste sites. This situation occurs more frequently at DOD installations than at private facilities. If inactive DOD sites are listed on Superfund's National Priorities List (NPL),¹ DOD and the Environmental Protection Agency (EPA) negotiate a cleanup plan (an interagency agreement) incorporating the requirements of both RCRA and Superfund. DOD and EPA do not have a similar procedure for cleaning up DOD sites that are not on the NPL; thus, it is not clear which law should have precedence. Both EPA and DOD officials told us that decisions on which law to apply are made based on site specific conditions.

DOD is not held to higher standards when cleaning up its sites than private industry sites. EPA draft regulations further implementing RCRA and Superfund will require EPA to consider the same factors, such as the

¹The NPL designates the nation's worst sites contaminated with hazardous substances. The sites are ranked based on the type, quantities, and toxicity of wastes; the number of people potentially exposed; the likely pathways for exposure; the importance and vulnerability of the underlying aquifers; and other factors.

types and amounts of contaminants, when prescribing cleanup requirements for DOD or private sector hazardous waste sites. These factors will determine the complexity of the site cleanup.

Background

The types of environmental problems posed by RCRA facilities and Superfund sites are essentially the same. Current and past practices at the individual sites are likely to cause contamination of the ground-water, surface water, soil, and air. Both RCRA and Superfund have programs to clean up contamination. The corrective action program under RCRA is designed to get the facility owners or operators to pay for cleaning up the contamination caused by their operations. The Superfund program is intended to address environmental problems caused by abandoned or inactive sites in which the former owners and operators are unavailable, unwilling, or financially unable to clean up the contamination caused by their companies' operations. The federal and state governments can use enforcement authority to force responsible parties to clean up Superfund sites or use trust funds² to pay for the cleanup required and then try to recover the funds from the former owners.

Amendments to RCRA in 1984 greatly expanded EPA's authority to implement corrective actions at hazardous waste facilities covered by RCRA. The expanded RCRA corrective action program is a cleanup program for all RCRA hazardous waste facilities, whether they will continue to operate or are in the process of closing. The cleanup program is similar in purpose to the Superfund program, and its corrective action provisions apply to all treatment, storage, and disposal facilities that have accepted hazardous waste since November 19, 1980.

RCRA and Superfund Overlap at DOD Installations

A DOD installation with both active and inactive hazardous waste sites may be subject to both RCRA and Superfund requirements. In such a case the entire installation can be treated as a single hazardous waste site. A Superfund (inactive on base) site can become subject to RCRA requirements when the installation applies for a RCRA operating permit, which is required to operate a hazardous waste facility such as a storage building on the same installation. EPA may use the permit requirements to get the installation to include plans for cleaning up inactive hazardous waste sites in accordance with RCRA requirements before it is issued a permit to store waste in the RCRA facility.

²Generally, federal agencies cannot use Superfund money for remedial actions to clean up their sites. They must use their own appropriations.

Most DOD installations with sites on Superfund's NPL also have active hazardous waste facilities subject to RCRA. In such cases DOD and EPA officials (and often state officials) try to negotiate an interagency agreement for a cleanup plan that considers the requirements of both laws. To facilitate this procedure, DOD and EPA have worked out a model agreement to be used as the basis for each installation's specific agreement. DOD and EPA officials told us that these agreements are intended to minimize the difficulties in cleaning up a hazardous waste site under the overlapping requirements of both RCRA and Superfund.

DOD and EPA do not have a similar procedure in place for resolving differences between the laws when a DOD installation has both inactive sites not on the NPL and active hazardous waste facilities subject to RCRA. EPA is developing RCRA corrective action regulations it believes will be substantially consistent with Superfund cleanup regulations. EPA officials told us that these regulations should eliminate most of the differences between RCRA and Superfund standards. They expect that the use of interagency agreements at NPL sites and the new regulations applied to all Superfund sites should minimize the problems encountered by DOD because of the overlap of RCRA and Superfund.

However, DOD officials do not agree that interagency agreements and EPA regulations will minimize the overlap problems. They are concerned about different terminology and procedural requirements under both laws and the possibility that the states, which can exercise RCRA enforcement authority, will impose differing sets of requirements on military installations around the country.

DOD Sites Versus Private Sites: Cleanup Standards and Conditions

Even though cleanup standards are the same for DOD sites and private sites, conditions at the sites and the effort involved to meet the cleanup standards usually differ. Cleanup requirements are established for each hazardous waste site based on the type and amount of contaminant, the future use and potential contamination of the ground and surface water, whether there is a pathway for the contaminant to leave the site, and the possibility that humans could be adversely affected or the environment damaged. If all conditions are the same at a DOD site and a private industry site, each would have to be cleaned up to the same standards. If conditions are different, the cleanup requirements could differ. Hazardous waste cleanup at DOD sites and private sector sites can range from the very complex—such as at major military installations like McClellan Air Force Base, near Sacramento, California, and the Love Canal area, near Niagara Falls, New York—to the relatively simple.

Agency Comments

DOD, in its comments on a draft of this report, did not agree that interagency agreements and the draft EPA regulations would minimize the overlap problems. DOD said that some agreements are not totally clear regarding how RCRA and Superfund requirements will be integrated. It also expressed concern over how the states will implement their RCRA programs and what effect the programs will have on DOD's cleanup.

EPA, in its oral comments on a draft of this report, said that interagency agreements will resolve problems resulting from overlapping authorities at federal facilities that are on the NPL. However, it also said that some jurisdictional issues concerning state RCRA authorized programs versus federal Superfund authorities will not always be resolved through the interagency agreement process. Further, it stated that the new regulations should minimize the overlap problems at installations not on the NPL.

EPA's efforts to address the RCRA/Superfund overlap in new regulations represent significant progress in resolving the problems resulting from overlapping authorities. However, because the draft regulations are in a state of flux, we did not analyze them to determine if there were any differences.

Details on the overlapping authorities of RCRA and Superfund and their application to federal and private hazardous waste sites are discussed in appendix I. Our objectives, scope, and methodology are explained in appendix II. DOD's comments appear in appendix III.

As agreed with your Office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days after its issue date. At that time we will send copies to appropriate congressional committees; the Administrator, EPA; the Secretary of Defense; the Director, Office of Management and Budget; and other interested parties.

GAO staff members who made major contributions to this report are listed in appendix IV.

Sincerely yours,

Harry R. Finley

Harry R. Finley
Director, Air Force Issues

Contents

Letter		1
Appendix I		8
Cleanup Requirements	RCRA and Superfund Overlap at DOD Installations	8
Overlap at Certain	Differences Between DOD Sites and Private Sites	11
Sites	Overlap Does Not Increase Cleanup at McClellan Air Force Base	14
Appendix II		15
Objectives, Scope, and Methodology		
Appendix III		16
Comments From the Assistant Secretary of Defense (Production and Logistics)	GAO Comments	27
Appendix IV		28
Major Contributors to This Report	National Security and International Affairs Division, Washington, D.C.	28
	San Francisco Regional Office	28

Abbreviations

DOD	Department of Defense
EPA	Environmental Protection Agency
GAO	General Accounting Office
NPL	National Priorities List
RCRA	Resource Conservation and Recovery Act

Cleanup Requirements Overlap at Certain Sites

In 1976 the Congress enacted the Resource Conservation and Recovery Act (RCRA), due to the environmental threat posed by toxic chemicals seeping into the nation's groundwater and surface waters and contaminating the land and the air. RCRA gave the Environmental Protection Agency (EPA) the authority to manage hazardous waste from its generation to disposal. After a number of incidents involving major contamination at abandoned or inactive hazardous waste sites were uncovered in the late 1970s, the Congress enacted the Comprehensive Environmental Response, Compensation, and Liability Act, commonly known as Superfund, in 1980. Superfund provides the EPA with the funds and the authority to initiate cleanup at abandoned or inactive sites. In response to Superfund, a list of the worst abandoned or inactive sites in the nation, known as the National Priorities List (NPL), was created.

In 1984 RCRA was amended. The amendments expanded EPA's authority to implement corrective actions at hazardous waste facilities covered by RCRA. The expanded RCRA corrective action program is a cleanup program for all RCRA hazardous waste facilities, whether they will continue to operate or are in the process of closing, and is similar in purpose to the Superfund program. The expanded RCRA corrective action provisions apply to all treatment, storage, and disposal facilities that have accepted hazardous waste since November 19, 1980.

The objectives of both RCRA and Superfund are to promote the protection of the public health and the environment. Federal agencies, including the Department of Defense (DOD), and private industry are subject to the same hazardous waste management requirements. EPA has estimated that federal facilities produce a substantial amount of hazardous wastes—about 2 percent of the estimated 290 million tons of hazardous wastes generated annually. Of the 1,177 abandoned or inactive hazardous waste sites identified by EPA for the NPL (as of September 1988), 62 are federal facilities.

RCRA and Superfund Overlap at DOD Installations

A DOD installation with both active and inactive hazardous waste sites may be subject to both RCRA and Superfund requirements. Most DOD installations with inactive sites on the NPL also have active hazardous waste disposal facilities subject to RCRA. DOD reported that it has over 8,000 hazardous waste sites on nearly 900 installations. Only 53 of the DOD installations are presently included or proposed for the NPL.

For those few DOD installations with both active hazardous waste facilities and inactive sites that have been included on the NPL, DOD and EPA

**Appendix I
Cleanup Requirements Overlap at
Certain Sites**

officials (and often state officials³) try to negotiate an interagency agreement for a cleanup plan that contains the requirements of both RCRA and Superfund. However, DOD and EPA do not have a similar procedure for resolving differences between the laws for the majority of DOD installations, which have both an inactive site not on the NPL and an active hazardous waste facility subject to RCRA. EPA is considering the revision and expansion of RCRA corrective action regulations that EPA officials believe will be substantially consistent with Superfund cleanup regulations.

Reasons for the Overlap

RCRA and Superfund requirements overlap at DOD installations for different reasons including the following. First, an entire DOD installation is considered as a single hazardous waste site regardless of the number of individual active and inactive sites at that installation. Second, Superfund requires remedial actions selected to clean up abandoned or inactive hazardous waste sites to be designed to achieve any "...legally applicable or relevant and appropriate standard, requirement, criteria, or limitation..." in federal or state environmental laws. (See 42 U.S.C. 9621 (d)(2)(A).)

Definition of a Site

Although a hazardous waste site is usually cleaned up in accordance with the requirements of either RCRA or Superfund, both laws may apply when EPA defines that site as containing both an active and an inactive hazardous waste site. DOD often considers an entire military installation as a single facility when applying for a RCRA permit to generate or store hazardous waste. EPA considers an entire military installation as a single hazardous waste site, regardless of the number of active and inactive sites present. A private site will not usually be subjected to both RCRA and Superfund cleanup requirements because EPA generally does not list private facilities with both active and inactive sites on the NPL if the facility can be cleaned up using RCRA and its implementing regulations. In contrast, all federal facilities meeting Superfund's listing criteria are included on the NPL, regardless of their RCRA status.

Differing Requirements

DOD installations also experience the effect of the overlap when states that have been authorized to enforce RCRA standards by EPA impose standards beyond RCRA or Superfund standards. For example, at McClellan

³States or territories may administer their own hazardous waste programs if their standards are at least as stringent as those in RCRA. As of July 1989, 46 of 56 states and territories had been authorized to administer their hazardous waste programs.

Air Force Base⁴ much of the groundwater contamination was caused by use of unlined ponds into which hazardous wastes had been placed. The ponds are no longer in use. McClellan built a pretreatment plant to process the waste water before sending it to the county's publicly owned treatment works. The waste water is collected by a series of lateral piping that feed into main pipelines that lead to holding tanks at the pretreatment plant. These tanks and lines are part of a system covered by the federal Clean Water Act, and EPA does not require that the system be separately permitted under RCRA. The state hazardous waste laws are more stringent, however, and impose more standards (double lining, etc.) on the waste lines than required by EPA. DOD estimates that double lining requirement will cost over \$1 million for the lateral lines alone. Although this situation is not a "pure" RCRA/Superfund overlap problem, DOD cited it as an example to show how complex it is for a DOD installation to comply with requirements imposed under various authorities and agencies.

Interagency Agreements

To determine cleanup requirements at a DOD installation on the NPL, EPA and DOD negotiate an interagency agreement specifying how the agencies will determine (1) which standards will apply to the cleanup, (2) which applicable or relevant and appropriate requirements will be followed, and (3) how disputes will be resolved should they arise. (States are often parties to these agreements.) These agreements are reached under Superfund authorities and may include RCRA corrective action standards and requirements.

EPA stated that in some circumstances interagency agreements divide responsibilities, focusing Superfund requirements only on certain inactive sites at the installation and leaving the cleanup of the active facilities under the direct control of RCRA requirements. This situation could occur when the active hazardous waste facility is physically distinct from the inactive site and its cleanup would not disrupt Superfund activities.

Draft EPA Regulations

Use of interagency agreements or the Superfund dispute resolution procedure applies to DOD installations on the NPL. There is no similar provision to resolve conflicts at DOD installations not on the NPL. EPA has

⁴McClellan Air Force Base occupies about 2,600 acres approximately 8 miles northeast of Sacramento, California. It uses organic solvents for the maintenance, repair, and modification of aircraft and is on the NPL.

drafted but (as of June 1, 1989) has not proposed regulations to address some inconsistencies between RCRA and Superfund programs. EPA has also established an EPA/State work group on federal facility relations to explore the options for integrating RCRA and Superfund programs.

DOD's Comments

DOD did not agree that interagency agreements and the EPA regulations will minimize the overlap problems. Concerning the interagency agreements, DOD said that reaching satisfactory agreement has been "extraordinarily difficult," and, even after they are signed, some agreements are not totally clear regarding how RCRA and Superfund integrate.

Even though EPA has stated that the requirements for a final site cleanup should be the same under RCRA or Superfund, DOD said that such a result is not required by law, and DOD stated that the EPA regulations will not guarantee it. (Previously, both laws had different regulatory requirements.) DOD also stated that, on the basis of its understanding of the EPA regulations, RCRA terminology and many RCRA requirements will still be significantly different from Superfund terminology and requirements. Because the draft regulations are in a state of flux, we did not analyze them to determine if there were any differences.

DOD also was concerned about the apparent lack of a mechanism to ensure that states which obtain RCRA cleanup authority will apply the standards and requirements consistently at military installations. DOD stated that although the EPA can authorize a state to conduct RCRA cleanup activities if the state demonstrates that its regulations will be consistent with EPA's RCRA regulations, EPA has not announced any intention of doing so. Thus there is no guarantee of consistency between the federal and state RCRA cleanup programs or the RCRA approach and a Superfund response, according to DOD.

Differences Between DOD Sites and Private Sites

RCRA and Superfund require EPA to consider the same factors, such as the type and amount of contaminant, the future use and potential contamination of ground and surface water, the pathway through which the contaminant leaves the site, and the potential for harm to humans and the environment, when defining cleanup requirements for both military installations and private sites. These factors can result in stricter requirements at military installations because people who reside on the bases are in close proximity to the hazardous waste sites. However, in some cases private sector sites may encounter similar cleanup difficulties due to these factors.

EPA and California officials told us that they consider McClellan Air Force Base and similar military installations different than private sector hazardous waste sites because military installations have more complex cleanup problems. DOD believes that hazardous waste sites on most military installations are comparable to those in the private sector.

Same Factors Used to Set Cleanup Standards at DOD Sites and Private Sites

Although military installations tend to be large, complex, and have support areas subject to cleanup requirements, Superfund and RCRA state that regulatory agencies are not to treat them differently from private sites. EPA and Sacramento County environmental officials, as well as DOD representatives at McClellan, confirmed that the same factors are used to establish cleanup standards at DOD sites and private sites.

EPA officials said that these factors could result in more efforts being made to clean up DOD hazardous waste sites because military installations often have contamination from many chemicals and sources, possibly resulting in greater cumulative risks to humans and the environment than at other nearby sites that do not have a variety of contaminants. In addition, military installations might be subject to more cleanup efforts if they have an on-site population at risk of involuntary exposure. Officials of the Sacramento County Air Pollution Control District, which monitors air emissions at McClellan and a nearby private site on the NPL, said McClellan's incinerators are subject to stricter standards because the incinerators are close to the surrounding community. If McClellan were a private site similarly situated, the same requirements would apply.

DOD Sites and Private Sites Differ in Size and Complexity

EPA and California officials believe that hazardous waste sites at some military installations are more complex than those at private sites. On the other hand, many private sites, such as the Love Canal area near Niagara Falls, New York, are also large and complex to clean. DOD believes that most DOD sites are comparable to those in the private sector.

Unlike private sites, some military installations resemble small cities, since they tend to have extensive support facilities and people residing on base and are generally larger and more complex than private sites due to the magnitude and variety of their hazardous waste operations. For example, McClellan Air Force Base has fire-fighting facilities, gas stations, a hobby shop, a maintenance area, and communication sites that produce and store hazardous waste and are therefore subject to

RCRA requirements. Representatives of a private industrial facility in the San Francisco area told us that military installations have generally been operating on-site facilities in the San Francisco Bay Area longer than private companies (since the 1930s versus the 1960s). Moreover, California officials told us that Bay Area companies generally have not disposed of hazardous waste on site but rather in state-operated facilities.

The private site that we visited where five manufacturing companies are located, which was started in the 1960s, covers about 120 acres and manufactures electrical equipment. The businesses located at the site do not dispose of their waste on site, but they do store hazardous waste and materials in underground tanks and sumps. The tanks and sumps have been leaking, and three of the companies located in the industrial facility have undertaken remedial actions, primarily pumping and treating the contaminated groundwater.

Some private sector hazardous waste sites are also large and complex to clean. One of the worst sites is the Love Canal site in Niagara Falls, New York, where a major chemical company dumped its waste from 1942 through 1952. The site, an old unused canal (60 feet wide, 3,000 feet long, with waste buried up to 25 feet deep) was an ideal disposal site at that time. Because it was away from the public and would not endanger their health or attract flies and vermin, the local governments gave the chemical company a permit to dump its waste at the site. The chemical company dumped over 21,000 tons of various chemicals into the site.

The waste was either put in the canal in metal or fiber drums or sludges or liquids were just poured into the canal. By 1953 the site was almost full and was covered over with earth and grass; several years later it was just a broad grassy field. A school and houses were constructed on the site. In the mid-1970s the chemical residue began to seep from the site. Several studies were then made to determine what exactly was happening and what had to be done. In 1977 the magnitude of the environmental disaster was made public.

DOD stated that most of the hazardous waste sites presently in the Defense Environmental Restoration Program result from activities identical to those found in the private sector and are not unique or complex. DOD stated that the complexity associated with their cleanup comes about only as a result of the conflicting statutory and regulatory policies associated with the administrative process.

Overlap Does Not Increase Cleanup at McClellan Air Force Base

Although some DOD officials said that the overlap of RCRA and Superfund created additional cleanup requirements for some of their installations, we found no evidence of this at McClellan. McClellan officials said they intend to clean up past hazardous waste releases from its RCRA-regulated operations under Superfund standards. McClellan officials told us that the base will also comply with California laws to the extent that they are consistent with Superfund requirements. For example, McClellan officials said the base complied with a state requirement to conduct a hydrological assessment study to collect data because this requirement was consistent with Superfund requirements.

In addition, McClellan is installing above-ground tanks to replace its surface impoundments⁵ in compliance with federal and state laws. Because of design defects in the above-ground tank project, McClellan did not meet California's June 30, 1988, deadline for closing the surface impoundments. However, it met the November 7, 1988, federal deadline for closing the impoundments.

DOD Comments

DOD said that although much of our findings concerning McClellan were correct, we had not adequately recognized the effect of significant management costs expended in addressing the RCRA significant non-compliance determination concerning the surface impoundments. Additionally, DOD stated that time-consuming and complex challenges faced by field personnel to sort out the competing and duplicate authorities of RCRA and Superfund and between state and federal entities in an interagency agreement will also result in significant costs. We believe that there will be some additional costs for McClellan, but because the programs are still emerging, we cannot determine how much.

⁵These are special holding ponds used to treat hazardous waste.

Objectives, Scope, and Methodology

Our primary objectives were to determine whether DOD installations with hazardous waste sites were being treated differently by EPA than private sites and whether the overlap of RCRA and Superfund requirements caused problems. To accomplish our objectives, we interviewed regulatory agency officials at EPA headquarters and Region IX; the state of California, and two of California's regional regulatory agencies—the Regional Water Quality Control Board of the Central Valley Board and the Sacramento County Air Pollution Control District.

As agreed with your Office, we interviewed installation personnel responsible for environmental cleanups at McClellan Air Force Base and corporate and contractor personnel responsible for cleanups at a large private site to compare conditions at and application of standards to DOD and private sites. We also discussed the overlap of RCRA and Superfund and the application of cleanup standards with a representative of the Navy's Litigation Office, Office of the General Counsel, San Francisco, California. In addition, we reviewed applicable documents provided to us by EPA, the state of California, the installations, and private entities concerning the overlap of RCRA and Superfund and the resulting standards and their effect on the cleanup efforts of McClellan and the private site. We did not evaluate the effect that the overlap of RCRA and Superfund might have on DOD's costs for hazardous waste operations, including cleanup costs.

Comments From the Assistant Secretary of Defense (Production and Logistics)

Note: GAO comments supplementing those in the report text appear at the end of this appendix.



PRODUCTION AND LOGISTICS

ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301-8000

APR 17 1989

E

Mr. Frank C. Conahan
Assistant Comptroller General
National Security and International
Affairs Division
U.S. General Accounting Office
Washington, DC 20540

Dear Mr. Conahan:

This is the Department of Defense (DoD) response to the General Accounting Office (GAO) draft report, "HAZARDOUS WASTE: EPA Cleanup Requirements - DoD Versus Private Entities", dated February 27, 1989, (GAO Code 392399), OSD Case 7915.

Although the DoD concurs with most of the report, the GAO has not adequately characterized the regulatory confusion that confronts DoD installation environmental cleanup managers. Much of this confusion is unique to federal agencies in general, and to the DoD in particular. The Defense Environmental Restoration Program, which was established as the vehicle to meet DoD responsibilities under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), has been designed to use the procedures, terminology and approach of the National Contingency Plan. This approach was sanctioned and made more strict by the numerous provisions of the Superfund Amendments and Reauthorization Act and Executive Order 12580. The Environmental Protection Agency (EPA) has taken the position that the National Contingency Plan, which establishes precise rules and procedures for site study and cleanup, strictly applies to all DoD sites, regardless of whether they are on the National Priorities List. The Superfund Amendments and Reauthorization Act also requires an interagency agreement between the DoD and the EPA for all DoD sites on the National Priorities List to implement the selected cleanup. Upon mutual agreement of the DoD and the EPA, however, the interagency agreements will be negotiated as soon as possible after the site is proposed for the National Priorities List.

The confusion arises as a result of current policies that allow site cleanups to be conducted pursuant to the provisions and regulatory procedures associated with the Resource Conservation and Recovery Act (RCRA). These regulations use different terminology and impose different procedural requirements for the site cleanup process. The EPA also intends to delegate these RCRA-based authorities to the states. This

See comment 1.

See comment 2.

See comment 2.

See comment 3.

Appendix III
Comments From the Assistant Secretary of
Defense (Production and Logistics)

strategy, in effect, places DoD installations in the position of strictly following National Contingency Plan (CERCLA-based) procedures, while simultaneously subjecting them to EPA authority or state enforced RCRA procedures. The GAO concludes that use of interagency agreements, which only pertain to installations possessing National Priorities List sites (currently 49 out of the nearly 900 in the DoD program), should resolve any overlap and duplication existing between the RCRA and the CERCLA. This mechanism, however, will not resolve the fundamental problem discussed above.

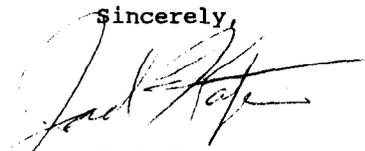
See comment 4.

Finally, the DoD notes that the GAO was asked to determine whether the RCRA or the CERCLA has precedence in cleaning up a site, and whether the DoD is incurring more cleanup costs than the private sector in cleaning up its sites because of the RCRA/CERCLA overlap. The draft report focuses on only one example: one installation on the National Priorities List in one state. If the GAO examined the DoD experience in other states, including those which have RCRA primacy, and non-National Priorities List sites as well as National Priority List sites, significant impacts would be evident.

In summary, the primary result of these conflicting authorities and procedures is to create confusion and tendencies for repetition of work at sites. This confusion invariably leads to delay and frustration, if not outright confrontation between the regulators and the regulated, and program cost growth.

Detailed DoD comments on the draft report findings are provided in the enclosure. Suggested technical corrections were also separately provided to the GAO staff. The DoD appreciates the opportunity to comment on the draft report.

Sincerely,



Jack Katzen
Assistant Secretary of Defense
(Production and Logistics)

Enclosure

cc: See Distribution List

GAO DRAFT REPORT - DATED FEBRUARY 27, 1989
(GAO CODE 392399) OSD CASE 7915
"HAZARDOUS WASTE: EPA CLEANUP REQUIREMENTS - DOD VERSUS
PRIVATE ENTITIES"

DEPARTMENT OF DEFENSE COMMENTS

* * * * *

FINDINGS

- o FINDING A: Overlapping Requirements For Cleaning Up Hazardous Waste. The GAO reported that, under certain circumstances, the clean up of a hazardous waste site may be subject to either the Resource Conservation and Recovery Act (RCRA) of 1976, or the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980. The GAO explained that, generally, the RCRA requirements are invoked in cleaning up a regulated hazardous waste site, while the CERCLA requirements are invoked in cleaning up abandoned or non-regulated waste sites. The GAO found that, although a site is usually cleaned up in accordance with either of the Acts, both laws may apply at one site when a RCRA site is part of a CERCLA site. In this regard, the GAO reported that overlap can occur at a DoD base when a RCRA site (i.e., an active regulated facility), is located over a CERCLA site (i.e., an abandoned or non-regulated site), or when both exist on a base, though not located next to each other. The GAO noted that, most DoD sites could be subject to the requirements of both laws. The GAO concluded that, when such overlap occurs, the result can be a complicated application of procedures and standards. (pp. 1-3, pp. 12-14/GAO Draft Report)

DoD Response: Concur. It should be recognized that nearly all of the sites in the Defense Environmental Restoration Program that are located on active DoD installations are subject to both laws. This overlap leads to duplication of administrative effort, confusion over procedures and delays in site cleanup efforts. This overlap of law and regulatory procedure seems to be much more prevalent for DoD sites than for private sites.

Now on pp. 2-3, 8-11.

See comments 2 and 3.

Appendix III
Comments From the Assistant Secretary of
Defense (Production and Logistics)

See comment 2.

The report accurately points out that both laws can apply to private sites, but does not adequately discuss the actual and much different degree to which private and DoD sites are prone to these overlapping authorities. For example, Environmental Protection Agency (EPA) policy has deferred listing private sites on the National Priorities List if they are subject to RCRA corrective action authorities. This policy precludes any chance for overlap and confusion for private sites. For DoD National Priorities List sites, however, the mechanism of an interagency agreement between the state, the EPA and the installation that addresses the requirements of both regulatory frameworks is the only current alternative. In actual practice, reaching agreements that satisfy all participants and that recognize each one of their real and perceived authorities under both laws, has been extraordinarily difficult. Some of these agreements, even after long and arduous work, are still not totally clear regarding CERCLA-RCRA integration (e.g., some states have not waived their RCRA authorities, etc.).

See comment 3.

Non-National Priorities List sites, however, represent the major disparity between the private sector and the DoD situation. The DoD has a long standing and ongoing CERCLA-based cleanup program for these sites. This program, although it predated the CERCLA, has used CERCLA methodology. This approach was sanctioned and was required to be more rigorously applied by the Superfund Amendments and Reauthorization Act. Extensive site characterization and cleanup work has been taken, and is presently underway, for over 8000 sites located on nearly 900 installations. Only 49 of these installations are presently listed or proposed for the National Priorities List. There are no plans or policies in effect to negotiate agreements for all of the non-National Priorities List sites in an attempt to clarify the confusion over RCRA-CERCLA authorities and procedures. To attempt to do so would require extraordinary resources that no agency, state or federal, possesses. In contrast, private facilities would be subject only to state law or RCRA corrective action, if applicable.

See comment 3.

See comment 3.

Under the proposed National Contingency Plan (Subpart F), state cleanup under state law is not required to be consistent with the National Contingency Plan. The DoD, by contrast, must comply with state law under CERCLA 120(a)(4), and CERCLA through the National Contingency Plan. The EPA has also taken the position that all provisions of the National Contingency Plan apply to non-National Priorities List, as well as National Priorities List sites.

- o FINDING B: Environmental Protection Agency (EPA) Efforts To Address Overlapping Authorities. The GAO reported that, where the RCRA and the CERCLA cleanup authorities overlap, the EPA has enforcement options under both laws and will generally defer compliance with RCRA corrective action requirements at National Priorities List sites to the CERCLA process, to avoid any possible duplicative actions. According to the GAO, whenever overlap occurs at DoD facilities, both DoD and EPA officials said they will agree on an interagency cleanup plan that considers the requirements of both laws, which should minimize the difficulties of the clean up effort. In addition, the GAO found that, the EPA is developing RCRA corrective action regulations that will be consistent with CERCLA cleanup regulations and may eliminate differences between the RCRA and the CERCLA standards. The GAO pointed out, however, that many officials believe that cleanup standards derived under the RCRA would, in certain instances, be difficult to achieve at a CERCLA site. The GAO also observed that some of the recently proposed standards may result in a substantial difference in the RCRA and the CERCLA standards. Overall, the GAO concluded that the use of interagency agreements and the new EPA regulations should minimize the problems encountered by the DoD because of the RCRA/CERCLA overlap. (pp. 3-4, pp. 14-18/GAO Draft Report)

DoD Response: Partially concur. While the facts discussed are correct, the DoD does not agree with the GAO conclusion that the interagency agreements and EPA regulations will minimize the overlap problems. Although the EPA has stated that a final site cleanup should be the same under RCRA or CERCLA, such a result is not required by law, and the EPA regulations do not guarantee it. Unlike the CERCLA, the RCRA does not require an objective process such as applicable, relevant and appropriate requirements to determine "how clean is clean." Instead, it leaves that decision to a subjective determination of the regulators. Nor does the RCRA have the protection from discriminatory application of law that the CERCLA "applicable, relevant and appropriate" process provides. If the EPA draft of RCRA corrective action rules are finalized near to their present form, the terminology and many of the requirements will be significantly different from National Contingency Plan requirements.

As noted in the DoD response to Finding A, the EPA has indicated that the National Contingency Plan fully applies to all DoD sites, National Priorities List and non-National Priorities List. For example, the proposed RCRA rules require a RCRA Facility Assessment and a RCRA Facility Investigation, whereas the CERCLA and the National Contingency Plan require a Preliminary Assessment and a Site Inspection. Although an excellent case can be made that both procedural tracks have identical objectives (indeed the

Now on pp. 3, 10-11.
See comment 3.

Appendix III
Comments From the Assistant Secretary of
Defense (Production and Logistics)

EPA maintains that they do), in actual practice, one will not necessarily suffice for the other.

As an example, during the course of IAG negotiations at McClellan Air Force Base, California, all of which is on the National Priorities List and, therefore, clearly subject to CERCLA/National Contingency Plan procedures, EPA RCRA officials have insisted that specific provisions of the interagency agreement require adherence to the RCRA corrective action procedures. They have stated that a RCRA Facility Assessment will be required, although this clearly duplicates previous Preliminary Assessment/Site Inspection work conducted under CERCLA authorities. In this case, the CERCLA required interagency agreement is apparently being used to require duplication of effort, rather than preclude it. The existence of both regulatory procedures and a lack of clear EPA policies to preclude duplication for federal agencies has led, and likely will continue to lead, to significant repetition of work, with the attendant time delays and cost growths. This is of particular concern for the vast number of DoD non-National Priorities List sites, which will not have the opportunity for clarification through site specific agreements.

See comment 3.

Although the EPA proposed RCRA procedures are not synonymous with the CERCLA/National Contingency Plan approach, of equal concern is the apparent lack of a mechanism to insure that states who obtain RCRA cleanup authority will apply them consistently. Two states presently have this authority and their programs were approved without the EPA RCRA regulations even being proposed. Although the EPA has the authority to condition approval of RCRA cleanup authority for a state on a showing of consistency with the CERCLA or their own RCRA regulation, the EPA has not announced any intention of doing so. There is no guarantee, therefore, of consistency between the federal and state RCRA cleanup programs, or the RCRA approach and a CERCLA/National Contingency Plan response.

See comment 3.

The GAO implies that the EPA has the option to proceed under CERCLA or RCRA at federal facilities. Actually, CERCLA 120(E) requires that federal agencies proceed under CERCLA for National Priorities List sites. This is also consistent with Section 211 of the Superfund Amendments and Reauthorization Act and Executive Order 12580. Nevertheless, the EPA has indicated in some situations that either the RCRA or the CERCLA may govern at a National Priorities List site on a federal facility.

- o FINDING C: Federal and States Agencies Share Responsibilities Under the RCRA and the CERCLA. The GAO found that the overlapping authorities are further complicated by the division of RCRA and CERCLA

Appendix III
Comments From the Assistant Secretary of
Defense (Production and Logistics)

responsibilities between the EPA and the states. The GAO pointed out that, the EPA shares CERCLA responsibilities by designating states as the lead agency at CERCLA sites. The GAO noted that, in EPA Region 9, which includes McClellan Air Force Base, the California Department of Health Services is the lead agency at some private CERCLA sites. The GAO found, however, that Region 9 has not yet worked out a clear role for the Department of Health Services as lead agency at Federal facilities. The GAO reported McClellan and Health Service officials advised that, in the absence of aggressive EPA leadership, the state has assumed an informal "technical" lead role at some Federal facilities. The GAO found that, in contrast, although the California Department of Health Services is not authorized to administer the RCRA program, it performs many RCRA functions for Region 9. According to the GAO, the Department of Health Services enforces California hazardous waste management laws, while performing the RCRA functions. The GAO reported that, while McClellan officials consider state laws and requirements in developing remedial action alternatives, it views their applicability as subject to EPA approval and will comply with state laws only to the extent that they are consistent with CERCLA requirements. According to the GAO, McClellan officials are particularly concerned that, when California receives EPA authorization to administer the RCRA, it might set corrective action requirements that go beyond actions already taken, pursuant to the CERCLA. The GAO reported that Region 9 officials said this possibility presents a good argument for involving the state in the interagency agreement process. (p. 4, pp. 18-23/GAO Draft Report)

Now on pp. 3, 10-11.

DoD Response: Concur. The report implies, however, that EPA Region 9 is considering ways to make the state (California) the lead agency for CERCLA sites at federal facilities. This is another indication of the confusion, of all parties, regarding authorities. The CERCLA, the National Contingency Plan and Executive Order 12580 clearly establish federal agencies as "lead" for their CERCLA sites. (Also see the DoD response to Finding B regarding the relationship between the EPA and the states). The DoD would also like to emphasize the difficulty for DoD installations in determining who is "in charge." In the GAO report, for example, McClellan Air Force Base, though it is a National Priorities List facility (which should simplify the issue), is in effect responding to state enforcement of RCRA regulations, even though California does not have either basic RCRA or RCRA corrective action authority. The installation is thus continually subject to differing interpretations by state and Federal regulatory authorities. It is hoped that an interagency agreement can at least partially address this problem. The majority of DoD installations, however, that are not on the National Priorities List, will still be subject to the potential of differing authorities.

Appendix III
Comments From the Assistant Secretary of
Defense (Production and Logistics)

- o FINDING D: EPA Region 9 In Early Stages Of Addressing Overlap. The GAO found that, although the EPA has been working on the RCRA and CERCLA overlap (see Finding B), Region 9 is still in the early stages of implementing its strategy for addressing the overlap. The GAO reported that, as of October 1988, Region 9 had not integrated RCRA corrective action and CERCLA cleanup requirements into final agreements for either private sites or Federal facilities. The GAO noted that Region 9 is negotiating interagency agreements for several military sites and, through the process, some deferral of RCRA requirements to CERCLA procedures has taken place. The GAO reported that both Region 9 and McClellan officials said that CERCLA remedial activities are proceeding without interagency agreements, but the delays in concluding the agreements have caused some confusion as to what constitutes a workplan and the roles of the involved agencies. In the absence of an agreement, the GAO reported that McClellan officials are concerned that the state might issue a remedial action order to the base with potentially more stringent requirements than would otherwise be included in the agreement. The GAO also reported that, since 1986, there has been disagreement over whether McClellan is in compliance with RCRA groundwater monitoring requirements at a RCRA surface impoundment facility located above a CERCLA site. The GAO reported that, according to McClellan officials, the EPA assumed the base was out of compliance based on an assessment by the state, but did not perform its own assessment. The GAO observed that Region 9 plans to reevaluate the issue during the interagency agreement negotiation process. (p. 4, p. 6, pp. 23-28/GAO Draft Report)

DoD Response: Concur. The EPA Regional officials may be having difficulty in implementing current national policies regarding the overlap difficulties. The situation regarding RCRA groundwater monitoring requirements at McClellan Air Force Base is a typical case in point. The area surrounding the location in question has been characterized by numerous investigations conducted under CERCLA authorities and procedures. This work was fully shared with both state and EPA Region 9. Since a currently active operational waste treatment system is located in this area, however, regulatory authorities determined that the administrative procedures associated with RCRA groundwater monitoring applied to the site. This determination led directly to a finding that McClellan Air Force Base was a significant RCRA noncomplier. Such a determination implied that the installation had made no effort to assess groundwater conditions at this site, effectively giving no recognition to the past and ongoing investigatory and cleanup work at the base. This type of situation could increasingly become the norm for DoD installations that possess RCRA regulated activities and that have conducted significant CERCLA response actions.

Now on pp. 3-4, 10-11.

- o FINDING E: Comparison Of Cleanup Standards and Conditions Between DoD And Private Sites. The GAO reported that, cleanup standards are established for each hazardous waste site based on the type and amount of contaminant, whether or not there is a pathway for the contaminant to migrate, and if there is a possibility that humans could be adversely affected by the environment damaged. According to the GAO, if all conditions were the same at a DoD and a private site, each would have to be cleaned up to the same standards. The GAO observed, however, that there are a number of differences between the DoD and private sites. The GAO reported, for example, that the DoD sites are different from private sites since military installations resemble small cities, containing support facilities and people who reside on base. In addition, the GAO reported that, DoD sites are generally larger and more complex than private sites, have generally been in operation longer than private sites, could be more difficult to clean up because they have been contaminated from many sources, and can have non-working, on-site populations at risk. The GAO concluded that, while the standards are the same for DoD and private sites, conditions at the sites, and, therefore, costs incurred to meet the cleanup standards, could differ. (pp. 4-5, pp. 28-30/GAO Draft Report)

DoD Response: Partially concur. Although the GAO gives a generally correct description of the nature of a DoD installation, it does not fully present the distinction between current policies that subject these installations to RCRA-based cleanup authorities. There are clear differences in definitions of terms used in both laws such as "facility", "site", "cleanup standard," etc. In addition, there are clear differences between what constitutes a regulated unit under RCRA versus a CERCLA site where hazardous substances have been released.

In particular, the definition of a RCRA "facility" should also be recognized. Presently, an entire DoD installation (normally consisting of thousands of acres) is designated as a single RCRA regulated facility because normally one activity needs a RCRA permit. This is in sharp contrast with the situation normally encountered in the private sector. Indeed, this definition of a RCRA facility as it pertains to DoD installations is the real basis for the RCRA versus CERCLA cleanup authority overlap. The GAO currently states that overlap occurs when a RCRA activity is located over a CERCLA site; this is an inaccurate way of defining the source of the overlap.

The report also strongly implies that sites located on DoD installations are generally larger, more complex and, will therefore, be more costly to clean up than private sites. Although this may well be the situation at the base reviewed in the report, this is not the case for DoD sites in

Now on pp. 3-4, 9-13.

Appendix III
Comments From the Assistant Secretary of
Defense (Production and Logistics)

general. Most of the sites presently in the Defense Environmental Restoration Program result from activities identical to those found in the private sector and are not unique or complex. The complexity associated with their cleanup (if it is needed) comes about only as a result of the conflicting statutory and regulatory policies associated with the administrative process.

- o FINDING F: Effects Of Overlap On McClellan Air Force Base Cleanups. According to the GAO, some DoD officials stated that overlapping authorities create additional requirements for their support areas. The GAO reported, however, that it found no evidence of this at McClellan. According to the GAO, information provided by EPA Region 9 indicated that the RCRA corrective action authorities would not extend beyond the physical jurisdiction of the CERCLA authorities. In addition, the GAO observed that a solid waste management unit, subject to corrective action under the RCRA, could also be cleaned up under the CERCLA remedial action process, unless specifically exempted from the CERCLA. The GAO reported that, according to McClellan officials, although other Federal facilities might designate areas to be cleaned up under either the RCRA or the CERCLA, McClellan intends to clean up past hazardous waste releases from its RCRA regulated operations under the CERCLA. In addition, the GAO reported that both Federal and state officials said that cleaning up RCRA units under the CERCLA, such as leaking underground storage tanks, can eliminate confusion or duplication otherwise resulting from pursuing cleanup under two programs.

DoD Response: Partially concur. While much of the discussion regarding the McClellan clean up efforts is correct, the GAO does not adequately recognize the effects. Significant management costs have, for example, already been expended at McClellan Air Force Base in addressing the RCRA significant non-compliance determination; more effort will no doubt be required. Additionally, the time consuming and complex challenges faced by field personnel to sort out the competing and duplicative authorities of the RCRA and the CERCLA, and between state and federal entities in an interagency agreement, will also result in significant costs.

It is likely that costs will be greater at McClellan, perhaps by millions of dollars. For example, even though California does not presently have a delegated RCRA program, the base is still required to comply with the California hazardous waste laws under RCRA Section 6001. These state laws have been applied against McClellan, even though the entire base is a National Priorities List site. Because much of the groundwater contamination was caused by use of unlined ponds, a pretreatment plant to process the

Now on p. 14.

**Appendix III
Comments From the Assistant Secretary of
Defense (Production and Logistics)**

wastewater before sending it to the County's Publicly Owned Treatment Works was constructed. The wastewater is collected by a series of laterals that feed into mains that lead to holding tanks at the pretreatment plant. Since these tanks and lines are part of a system covered by the federal Clean Water Act, the federal RCRA does not require that it be separately permitted. The state hazardous waste laws are more stringent, however, and do not have a permit exemption. The state has indicated that a permit will be required and that the state will impose more stringent standards (double lining, etc.) on the waste lines than required by the EPA. It is estimated this requirement will cost over a million dollars for the lateral lines alone. Although this situation is not a "pure" RCRA-CERCLA overlap problem, it is an example of the extraordinary regulatory and institutional complexity faced by a DoD installation in attempting to comply with requirements imposed under various authorities and agencies. Private facilities are not confronted with this degree of complexity.

In another example that demonstrates the potential cost differential between RCRA and CERCLA based cleanups, the Army is presently conducting an interim response action under the CERCLA at Rocky Mountain Arsenal in Colorado, costing approximately \$43,000,000. Even though the Army is completing this interim action in a manner fully consistent with Colorado law, the state seeks to impose additional requirements in accordance with its perceived delegated RCRA authority. Estimated costs to accomplish these added requirements are in excess of \$300,000,000.

The following are GAO's comments on DOD's letter dated April 17, 1989.

GAO Comments

1. This report has undergone significant revisions since it was sent to the agencies for comment. Most of the background data and other related information has been provided to the requester in briefings and is not included in the final report.
2. This issue was adequately addressed in the report. See pp. 8 and 12.
3. These points are now recognized on pp. 8 and 12.
4. The scope of our review was limited by agreement with the requester.

Major Contributors to This Report

**National Security and
International Affairs
Division, Washington,
D.C.**

Paul L. Jones, Associate Director, (202) 275-4265
George Wooditch, Assistant Director
Jacob Sprouse, Assignment Manager

**San Francisco
Regional Office**

Robert W. Brown, Jr., Evaluator-in-Charge
Michele Grgich, Evaluator

Requests for copies of GAO reports should be sent to:

U.S. General Accounting Office
Post Office Box 6015
Gaithersburg, Maryland 20877

Telephone 202-275-6241

The first five copies of each report are free. Additional copies are \$2.00 each.

There is a 25% discount on orders for 100 or more copies mailed to a single address.

Orders must be prepaid by cash or by check or money order made out to the Superintendent of Documents.

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

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

**First-Class Mail
Postage & Fees Paid
GAO
Permit No. G100**
