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Report to the Chairman, Subcommittee
on Environment, Energy and Natural
Resources, Committee on Government
Operations, House of Representatives

August 1991

HAZARDOUS WASTE

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Improvements Needed in DOD's Contracting System for Disposal of Waste



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

National Security and
International Affairs Division

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The Honorable Mike Synar
Chairman, Subcommittee on Environment,
Energy and Natural Resources
Committee on Government Operations
House of Representatives



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Dear Mr. Chairman:

This report responds to your request that we determine if the Department of Defense is ensuring that transportation and disposal contractors are capable and that hazardous waste generated by installations is reaching the proper disposal site.

As arranged 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 the Chairmen of other appropriate committees; the Secretaries of Defense, the Air Force, the Army, and the Navy; the Director, Office of Management and Budget; and other interested parties.

Please contact me at (202) 275-4268 if you or your staff have any questions concerning this report. Other major contributors to this report are listed in appendix I.

Sincerely yours,

Norman Patton
for Nancy R. Kingsbury
Director
Air Force Issues

91-10699



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Executive Summary

Purpose

The Department of Defense generates more than 500,000 tons of hazardous waste each year. In cases where Defense has failed to properly monitor the disposal of its hazardous waste, U.S. courts and the Environmental Protection Agency have held Defense, rather than contractors it has hired to transport and dispose of the waste, liable for the cleanup costs.

The Chairman, Subcommittee on Environment, Energy and Natural Resources, House Committee on Government Operations, asked GAO to determine how Defense selected and monitored contractors to ensure proper disposal of hazardous waste.

Background

Military installations use independent contractors to transport, treat, store, and dispose of their hazardous waste. The installations arrange for disposal of certain types of wastes, and the Defense Reutilization and Marketing Service contracts on behalf of the installations for disposal of the remaining waste.

The Resource Conservation and Recovery Act requires complete management and accountability of hazardous waste by all activities involved in the generation, storage, removal, and disposal of that waste. A Florida court has enforced that point by holding a generator of waste responsible for a contractor's improper disposal of waste.

Results in Brief

Defense selects its contractors for removing and disposing of hazardous waste using competitive procedures and awards contracts at lowest proposed prices. Although contractors who received awards have been determined to be technically acceptable and responsible, the Marketing Service has experienced some problems with small business concerns.

Defense's current system for monitoring and tracking the disposal of hazardous waste relies upon written documentation controlled, in most cases, by the transportation contractor. Some improvements could be made to provide added assurance that waste reaches a proper disposal facility. Defense does not independently verify on a continuing basis that the waste has been disposed of properly. Use of interim storage facilities by transportation contractors further reduces Defense's ability to track waste to the final disposal site.

Principal Findings

Problems Encountered With Small Business Contractors

The Marketing Service and the military installations selected contractors to remove and dispose of hazardous waste on a competitive basis at the lowest proposed price. While the Marketing Service has not experienced significant problems with most of its contracts, it has had problems with contracts awarded to small business concerns. After contract award, several small business concerns encountered performance or financial difficulties that resulted in their defaulting on their contracts. In each case, however, the concern had been determined to be technically acceptable and to be a responsible contractor before contract award. The Marketing Service recognizes the difficulties small business concerns have encountered in hazardous waste disposal activities, and it plans to take actions it believes will resolve this problem in the future.

Hazardous Waste Disposal Could Be Monitored More Closely

The current system for monitoring contractor disposal of hazardous waste—relying primarily on written manifests—does not ensure that Defense's waste is transported and disposed of properly. A transportation contractor and a disposal facility are responsible for sending a copy of the manifest to an installation after waste is delivered to a disposal site. However, the Marketing Service and most military installations do not check, through a phone call or other independent verification, to see if waste arrived at the disposal facility. The manifest tracking system relies solely on documentation that contractors have submitted, not the disposal facilities. Private companies we met with said they avoided the problems involved with a contractor controlling the paper trail by awarding separate contracts to a transporter to haul waste from the generator to the disposal site and a disposal facility to process the waste.

The practice of storing waste at an interim storage facility also is a weak link in the waste tracking and monitoring process. Defense-generated waste is sometimes kept at an interim storage facility until a transporter gathers a sufficient quantity for economic transportation and disposal. When the waste arrives at a disposal site, the notification of receipt of the waste is sent to the storage facility, not the Marketing Service or the installation that bears legal responsibility. In such cases, the installation may not know where its hazardous waste is and what is done with it.

Site Audits Are Essential to Assure Contractor Compliance

Neither the Marketing Service nor the military installations have performed routine on-site audits that would give them added assurance that their waste was handled and disposed of properly. Marketing Service contractors are audited when discrepancies are identified, but no ongoing program exists for routine, independent verification from a disposal facility that the facility has received and disposed of the waste.

Recommendations

GAO recommends that the Secretary of Defense, through the Director of the Defense Logistics Agency, direct the Marketing Service to

- issue disposal contracts that require transporters of hazardous waste to have disposal facilities send tracking manifests directly to the Defense generator,
- consider tracking hazardous waste to final disposal by not allowing transporters to use interim storage, and
- give high priority to audits of hazardous waste disposals.

GAO also recommends that these changes to hazardous waste disposal procedures and practices be required of all Defense installations.

GAO further recommends that the Secretary of Defense study the costs and the benefits of issuing separate contracts for transportation and disposal of hazardous waste.

Agency Comments

As requested, GAO did not obtain written agency comments on this report. However, GAO discussed a draft of this report with Defense officials and incorporated their comments where appropriate.

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Abbreviations

EPA	Environmental Protection Agency
GAO	General Accounting Office
PCBs	polychlorinated biphenyls
RCRA	Resource Conservation and Recovery Act
SBA	Small Business Administration

Introduction

➤ Military installations operated by the Department of Defense generate more than 500,000 tons of hazardous waste each year. Waste is hazardous if it is ignitable, corrosive, reactive, or toxic or if it appears on a list of about 100 industrial waste streams. Hazardous waste includes contaminated sludges, solvents, acids, heavy metals, and other chemical wastes. Defense hazardous waste is generated primarily through industrial processes that are used to repair and maintain weapon systems and equipment, such as aircraft, ships, or trucks. If waste is disposed of improperly, it can be hazardous to health and the environment, and improper disposal may require billions of dollars in cleanup costs. As generators of hazardous waste, Defense installations may have current and long-term financial liability for those cleanups.

National concern for health and environmental hazards posed by these wastes resulted in the enactment of strict environmental laws, including the Resource Conservation and Recovery Act (RCRA) of 1976 and the Comprehensive Environmental Response, Compensation, and Liability Act, commonly referred to as the Superfund Act. The Superfund Act authorizes the federal government to respond to spills and releases (or threatened releases) of hazardous substances and to clean up those sites. RCRA, among other requirements, established regulatory controls over the generation, transportation, and disposal of the waste materials. These controls include permit requirements for storage facilities and disposal sites and a manifest system to track waste from points of generation to final disposal sites.

RCRA places heavy emphasis on management of hazardous waste from generation to final treatment, storage, or disposal. Generators of hazardous waste must comply with regulations concerning record keeping and reporting, labeling of waste, use of appropriate containers, information on the waste's general chemical composition, and use of a hazardous waste tracking manifest system. Transporters of hazardous waste must comply with transportation safety regulations and use the manifest system, in effect since 1980, to monitor waste from its point of generation, along its transportation routes, to its final treatment, storage, or disposal site. Treatment, storage, and disposal facilities are required to have permits, to comply with strict operating standards, to meet financial requirements, and to comply with strict requirements when closing their facilities.

Objectives, Scope, and Methodology

On August 4, 1989, the Chairman, Subcommittee on Environment, Energy and Natural Resources, House Committee on Government Operations, asked us to review Defense's program for disposing of hazardous waste that Defense generates. Specifically, the Chairman asked us to determine the following:

- How do the Department of Defense, the Defense Logistics Agency (DLA), and the military services select and monitor contractors used for transporting and/or disposing of hazardous waste?
- What assurances do the military services have that contractors are properly trained and equipped to safely transport and dispose of hazardous waste and that contractors do not have a history of violations of environmental or other laws and regulations that would raise questions regarding their integrity?
- Do the military services have adequate controls to determine whether hazardous waste reaches a safe and environmentally conforming disposal site?
- Can a transportation or a disposal contractor sell or transfer hazardous waste to another party, and if so, who is ultimately responsible for the safe handling and the disposal of the waste?
- Is the federal government, through DLA and the military services, liable for accidents or contamination caused by a contractor's mishandling of the services' hazardous waste?

To answer these questions, we interviewed officials and reviewed records from numerous Defense activities. These activities included the Office of Deputy Assistant Secretary of Defense for Environment; the environmental offices of the Air Force, the Army, and the Navy at their respective headquarters and at major commands (the Army Materiel Command, the Air Force Logistics Command, and the Office of the Chief of Naval Operations); the Defense Logistics Agency, Alexandria, Virginia; the Defense Reutilization and Marketing Service headquarters, Battle Creek, Michigan; and the Defense Reutilization and Marketing Service's regional office in Memphis, Tennessee. On the basis of discussions with DLA and Defense personnel, and information they provided to us on installations where we could obtain contracting information on disposal of hazardous waste, we selected five military installations as representative of Defense installations. We interviewed command level and environmental contracting officials and reviewed records at the Air Logistics Center at Warner Robins Air Force Base, Georgia; the Anniston Army Depot, Anniston, Alabama; the Letterkenny Army Depot, Chambersburg, Pennsylvania; the Jacksonville Naval Air Station, Jacksonville, Florida; and the Pensacola Naval Air Station, Pensacola, Florida.

At each of these installations, we also interviewed officials from the Defense Reutilization and Marketing Service, which has offices at many military installations throughout the world.

In addition to interviewing Defense officials, we interviewed Environmental Protection Agency (EPA) officials and officials from three private companies that generate large amounts of hazardous waste and contacted transportation or environmental officials in 48 states. EPA officials interviewed included those from EPA's regional office in Atlanta, Georgia, and EPA's National Enforcement Investigative Center, Denver, Colorado. We interviewed officials from the three private companies to assess policies and procedures for selecting and monitoring hazardous waste transportation and disposal contractors. We also selected some recent manifests from installations and Defense Reutilization and Marketing Offices that we visited and contacted 14 treatment, storage, and disposal facilities to verify that they had received the hazardous waste and had the manifests in their files. State transportation or environmental officials were contacted to obtain information on their policies and procedures for issuing licenses or permits, or other monitoring programs, for hazardous waste transporters operating in their states.

The Marketing Service awarded 75 contracts in fiscal year 1988, 58 in fiscal year 1989, and 75 in fiscal year 1990. At the time of our review in July 1990, the Marketing Service had 79 active contracts with disposal contractors. On the basis of discussions with Marketing Service officials, we selected eight contracts for review because the contractors were having some problems and at the time of review of the proposals the technical staffs had recommended that these contractors, among 11 others, not be awarded contracts. Each of the installations we visited had at least one waste disposal contract of its own, and we discussed the contracts with installation officials to determine whether they were experiencing any significant difficulties.

We conducted our review from August 1989 to February 1991 in accordance with generally accepted government auditing standards. As requested, we did not obtain written agency comments; however, we discussed a draft of this report with Defense officials and incorporated their comments where appropriate.

Defense System for Selecting and Awarding Hazardous Waste Disposal Contracts

DLA and the military installations use small and large contractors to transport, treat, store, and dispose of hazardous waste that is generated by various defense activities. For the disposal contracts we examined, DLA and the military installations awarded the contracts on a competitive basis at the lowest proposed price. Several small business concerns that received DLA contracts encountered performance or financial difficulties that resulted in the concerns' defaulting on their contracts. DLA recognizes the difficulties these concerns have encountered and plans to take actions it believes will resolve this problem.

Hazardous Waste Disposal Contracts

In 1980, Defense assigned DLA responsibility for disposing of hazardous waste generated at military installations; however, Defense determined that the services would retain disposal responsibility for eight categories of hazardous waste. These categories were toxicological, biological, and lethal chemical warfare materials; ammunition, explosives, and dangerous articles; municipal type garbage, trash, and refuse; contractor-generated materials that were the responsibility of a contractor; sludges from municipal type wastewater treatment facilities; sludges and residues generated as a result of industrial plant process or operations; refuse from mining, dredging, construction, and demolition operations; and unique wastes and residues of a nonrecurring nature generated by research and development programs.

DLA assumed control over active waste disposal contracts that had been awarded by the military services and delegated responsibility for issuing hazardous waste disposal contracts to its Defense Reutilization and Marketing Service. As the military service contracts expired, the Marketing Service awarded new contracts for continued disposal services at military installations. The contracts assumed from the military services generally were for the one-time removal of hazardous waste at specific installations. The Marketing Service decided to award annual requirements contracts that it believed would be more cost-effective and responsive to the installations' needs.

As of July 1990, Marketing Service records showed that it had 79 active contracts valued at an estimated \$86.2 million, with 30 different contractors (see table 2.1).

Table 2.1: Active Contracts as of July 1990

Dollars in millions				
	Number of contracts	Percent	Contract value	Percent
Top 2 large businesses	32	41	\$39.7	46
Next 11 large businesses	23	29	32.4	38
17 small businesses	24	30	14.1	16
	79	100	\$86.2	100

In addition to Marketing Service contracts, each of the five installations we visited had one or more contracts for disposal of hazardous waste.

Process for Selecting Hazardous Waste Disposal Contracts

The Marketing Service and the military installations awarded the eight contracts we examined on a competitive basis. After assessing the contractors' offers, the Marketing Service and the military installations awarded the contracts based on the lowest price to those concerns that submitted technically acceptable offers and were determined to be responsible contractors. The Federal Acquisition Regulation provides that an award shall not be made unless a contracting officer makes an affirmative determination that a contractor is responsible.

When evaluating offers, contracting officers at the Marketing Service and at individual installations identify the lowest offer and determine whether that offer is technically acceptable. To do this, contracting officers compare the concerns' proposals to conditions called for in the solicitation. For example, contracting officers check to determine whether each offeror identified a disposal site.

If the lowest offer is found to be technically acceptable, contracting officers then determine whether the concern is a responsible contractor. Contracting officers and their supervisors at the Marketing Service and the installations we visited told us that they rely on the Federal Acquisition Regulation. The regulation defines a responsible contractor as one that has

- adequate financial resources to perform the contract or the ability to obtain them;
- the ability to comply with the required or proposed delivery or performance schedule;
- a satisfactory performance record;
- a satisfactory record of integrity and business ethics;

- the necessary organization experience, accounting and operational controls, and technical skills or the ability to obtain them;
- the necessary production, construction, and technical equipment and facilities or the ability to obtain them; and
- the ability to qualify and be eligible to receive an award under applicable laws and regulations.

Contracting officers also seek the advice of environmental specialists and legal advisors in selecting contractors.

The Marketing Service's award of a contract to a large business concern illustrates the Marketing Service's typical process used to award hazardous waste disposal contracts. On December 22, 1988, the Marketing Service issued a full and open competitive solicitation for hazardous waste disposal at several locations in North Dakota. The solicitation provided for a firm-fixed-price, 1-year requirements contract with a total option period of 90 days. The contract was to be awarded to the responsible offeror submitting a technically acceptable proposal at the lowest offered price.

The solicitation closed on January 31, 1989, with eight contractors submitting proposals. The Marketing Service evaluated the proposals and found various technical deficiencies. As part of the evaluation process, the contracting officer determined that one proposal was outside the competitive range and eliminated the contractor from further consideration. On March 30, 1989, the Marketing Service discussed the technical deficiencies with the remaining seven contractors and requested them to submit revised technical proposals by April 10, 1989. The Marketing Service found all of the revised proposals to be technically acceptable and requested best and final offers from the contractors. Three contractors decided to either not submit best and final offers or withdraw their previous offers.

The Marketing Service selected the contractor that submitted the lowest best and final offer from the four remaining contractors. The Marketing Service made a preaward survey at the contractor's facility and determined that it should be able to perform the contract satisfactorily. According to the price negotiation memorandum, the contracting officer concluded that the contractor's offer was technically acceptable. On the basis of this determination, the Marketing Service awarded the contract on June 28, 1989.

The military installations we visited used a similar approach in selecting hazardous waste disposal contractors. At the Letterkenny Army Depot, for example, we examined the process used to award a contract for the disposal of sludge generated at the installation. Letterkenny issued a full and open competitive request for proposals on February 22, 1989, with a closing date of March 24, 1989. The solicitation stipulated that the contract would be awarded based on the lowest priced, technically acceptable offer submitted.

Three companies submitted proposals and Letterkenny made technical evaluations of the proposals. Its Environmental Management Division determined that all of the proposals were technically acceptable. As part of the evaluation process, an environmental scientist told us that she visited the plant of one contractor, the only one of the three contractors on EPA's roll of contractors with special permits to perform the required work, and examined its permit and equipment and its employee training and driving records.

The Letterkenny contracting officer selected the contractor that submitted the lowest price and also determined that the contractor was a responsible contractor. In making the responsibility determination, the contracting officer cited satisfactory performance on two previous contracts at the installation, as well as discussions with the Chief, Environmental Management Division. On the basis of these determinations, Letterkenny awarded the contract on March 31, 1989.

Problems Encountered With Small Business Contractors

Six of the eight small business concerns' contracts we reviewed encountered performance and financial difficulties in recent years in carrying out their hazardous waste disposal contracts with the Marketing Service. During 1990, four of these small business contractors defaulted on their contracts. In all four cases, the Marketing Service determined that the offers were technically acceptable. Also, either the Marketing Service or the Small Business Administration determined that the concerns were responsible contractors. The Marketing Service therefore awarded contracts to the concerns offering the lowest price. However, due to lack of experience, optimistic planning for disposal of hazardous waste, lack of technical expertise, or lack of funds, among others, these small businesses were unable to complete their contracts.

One of the contracts we reviewed represents an example of a small business concern that was unable to carry out its hazardous waste disposal contract. The Marketing Service determined that the contract award

would be set aside for small business. On December 30, 1988, the Marketing Service issued a request for proposals for hazardous waste disposal at multiple locations in Michigan. The solicitation closed on February 2, 1989, with three small business concerns submitting proposals. The contracting officer submitted their proposals for technical evaluation after he had determined that they were within the competitive range.

The Marketing Service determined that each of the proposals contained various technical deficiencies and discussed the deficiencies with the concerns. As requested, the contractors submitted revised proposals, which the Marketing Service found to be technically acceptable. The Marketing Service then requested best and final offers from the contractors and selected the contractor that proposed the lowest price.

As part of the contract award assessment process, the contracting officer pointed out that the contractor selected was the incumbent contractor and was performing satisfactorily under its existing contract. The contracting officer concluded that the contractor had proven to be a responsible contractor and had the financial capability to accomplish the work. The contracting officer therefore waived the preaward survey and awarded the contract to the small business concern on July 14, 1989.

Subsequent to contract award, the contractor began to fall behind in removing hazardous waste on schedule. In early 1990, the contracting officer contacted the concern about its failure to remove waste on schedule and requested it to provide a new removal schedule within 10 days. The contractor also had not obtained adequate insurance coverage. The contracting officer pointed out that if it did not comply its contract could be subject to termination for default without further notice.

The contractor provided the revised removal schedule but continued to fall further behind in removing the waste and was also unable to obtain insurance. Marketing Service officials told us that the main problem was that the concern had lost its main technical employee. After repeated attempts to get the contractor to perform as required, the contracting officer terminated the remainder of the contract on June 1, 1990. The termination action showed that the contract was terminated because of the contractor's failure to perform the services within the time specified and to provide adequate insurance coverage.

In another case, a waste disposal contract was terminated because the small business concern went bankrupt. On January 6, 1989, the Marketing Service issued a full and open competitive request for proposals for disposal of hazardous waste at various locations in Alaska. The Marketing Service evaluated the six proposals it received and found various technical deficiencies. The contracting officer eliminated one contractor from further consideration because its proposal was outside the competitive range. The contracting officer discussed the technical deficiencies with the other five contractors and requested them to submit revised proposals. The Marketing Service found the revised proposals to be technically acceptable and requested best and final offers from the contractors. One of the contractors subsequently withdrew its offer because of its work load on other projects. Of the four remaining contractors, the contractor that submitted the lowest proposed price was awarded the contract.

Because the contractor had no previous experience as a prime contractor with the Marketing Service, the Marketing Service requested the Seattle Defense Contract Administration Management Area to make a preaward survey on the contractor's financial responsibility, subcontractors' relationship, and media coverage. The preaward survey determined that the contractor was a responsible contractor in these categories and recommended that the contract be awarded. The Marketing Service's Directorate of Environmental Protection made a preaward survey of the contractor's technical capabilities.

The Directorate issued the results of its preaward survey of the contractor's technical capabilities on July 20, 1989. The Directorate reported that it found a number of technical problems and recommended that an award not be made unless the technical problems were corrected. One of the problems concerned a drain in the contractor's facility that could allow hazardous waste to migrate into the municipal storm sewer. On the basis of the unfavorable preaward survey results, the contracting officer determined on August 8, 1989, that the contractor was a nonresponsible contractor.

Because the contractor was a small business concern, the Marketing Service forwarded the nonresponsibility determination to the Small Business Administration for assessment. The Administration advised the Marketing Service, by letter dated September 8, 1989, that it was considering issuing a Certificate of Competency based on the results of its review. The Administration pointed out, for example, that the contractor (1) had adequate capital to perform the contract and (2) had

made a commitment to install a secondary retaining wall in its facility if the contract were awarded. The Administration also pointed out that the contractor provided information showing that other problems had also been resolved.

On the basis of its findings, on September 21, 1989, the Small Business Administration issued a Certificate of Competency, and the Marketing Service's Contract Review Board approved awarding a contract to the contractor. The Marketing Service awarded the contract based on the condition that the contractor would seal the drain completely with poured concrete and that a secondary containment system would be constructed to comply with environmental regulations. Although the contractor had adequate capital to perform the contract at the time of the award, the contractor had a large theft of its cash assets, declared bankruptcy, and disbanded the company. A Marketing Service official told us he tried to call the concern shortly after the incident, but the phone had been disconnected. The official was unable to say whether the contractor tried to obtain other financing. The Marketing Service terminated the contract on April 23, 1990.

Actions Planned to Alleviate Problems With Small Business Concerns

Marketing Service officials told us that they would continue using small business concerns for hazardous waste disposal in accordance with legal requirements. The officials pointed out, however, that they planned to take several actions to avoid small business contractors' defaulting on their contracts. These actions include (1) making experience a technical factor in the solicitation, (2) reducing the scope of work awarded to a small business concern, and (3) forming a review team to assess and resolve issues before making a determination that a contractor is a responsible concern. Marketing Service officials also told us that they should have recognized the problems they were having with small business concerns and probably should have taken the actions sooner.

Marketing Service officials told us that they have taken steps to make experience a technical factor in the solicitations and would require contractors to include information in their proposals about their experience in hazardous waste disposal operations. The officials stated that contractors without experience could be determined to be not technically acceptable and be eliminated from further consideration.

Marketing Service officials also told us that the Marketing Service planned to break out some of the hazardous waste disposal activities for

small business contractors. At installations having 25 line items of hazardous waste for disposal, for example, an official stated that 2 or 3 line items would be broken out for award to a small business concern. In addition to these actions, a Marketing Service official told us that he planned to establish a team of environmental, contracting, legal, and other Marketing Service officials to review a contracting officer's decision to override a recommendation from the technical staff not to award a contract to a small business concern. We were told that the team would meet and resolve the issues involved in the case before referring the matter to the Small Business Administration.

Conclusions

The services and the Marketing Service are awarding contracts in accordance with procedures set out in the Federal Acquisition Regulation to assure that contracts are being awarded to technically acceptable and responsible contractors. For the contracts we examined, the Marketing Service and the military installations awarded hazardous disposal contracts on a competitive basis at the lowest price. Several small business concerns that received contracts from the Marketing Service encountered performance or financial problems that resulted in the concerns' defaulting on their contracts. As discussed in the two case examples, however, the Marketing Service assessed the financial and performance capabilities of both contractors before awarding the contracts.

Marketing Service officials recognize the difficulties small business concerns have encountered in hazardous waste disposal operations and are taking actions they believe will alleviate similar problems in the future. By making experience a technical factor in the solicitation, the Marketing Service should be able to eliminate marginal performers from further consideration during the contract award evaluation process. The planned reduction in the scope of work awarded to small business concerns should also assist by placing less performance and financial demands on these concerns. In addition, the special review team should be of assistance in resolving issues in those cases where preaward surveys contain recommendations for no award. The combination of these actions should reduce the number of small business concerns' defaulting on their contracts.

Opportunities Exist for Improvements in Systems for Monitoring Hazardous Waste Contractors

Failures to adequately monitor hazardous waste contractors and disposal sites have already exposed Defense to substantial liabilities under applicable federal, state, and local environmental laws and regulations. The systems the Marketing Service and the military installations use to monitor a shipment of hazardous waste could be improved to provide better assurance that the waste reaches the proper disposal facility and is disposed of as required.

Government Held Liable for Contractors' Improper Disposal of Hazardous Waste

Defense has been held liable for disposal contractors' mishandling of hazardous waste. Under RCRA, the generators of hazardous waste must comply with regulations concerning record keeping and reporting; labeling of waste; using appropriate containers; providing information on the waste's general chemical composition to transporters, treaters, and disposers; and using a manifest system. Even when generators comply with the regulations, they still may be held liable for cleanup costs or other damages when a contractor improperly disposes of hazardous waste.

A Federal court in Florida ruled that a Defense facility negligently supervised a contractor who was disposing of hazardous waste from military facilities. The 1987 case, in Jacksonville, Florida, revealed that in 1982 a contractor illegally sold Defense's hazardous waste, which had been contaminated by polychlorinated biphenyls (PCBs), as fuel to an asphalt paving company, although the manifest showed that the waste was supposed to go to a hazardous waste disposal facility. The asphalt company sued the government for damages. The U.S. District Court determined that Defense had not properly monitored the contractor to ensure that the disposal facility had received the waste and that Defense should have at least called the disposal facility to ensure that the waste had been received. The Court held Defense liable for damages to the asphalt company in the amount of about \$1.1 million. In addition to paying this amount, Defense had to reimburse EPA about \$1.6 million for the cleanup of two Superfund sites where the contractor improperly stored other Defense-related wastes not sold to the asphalt company and not properly disposed of.

Another case of Defense liability illustrates the inherent weaknesses in relying only on paperwork submitted by a contractor. A private waste incineration facility transferred hazardous waste from two Army installations in 1982 to an illegal dump site after the contractor's normal disposal facility's incinerator became inoperative. The dump site was discovered in 1984 and cleaned up by EPA. In 1988, EPA advised Defense

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that it had to reimburse EPA about \$126,000 for its share of the cleanup costs. Until EPA notified the installations, they never knew of the problem because the contractor submitted manifests and falsified certificates of destruction indicating that waste had been transported to and incinerated by the facility.

Defense is not alone when it relies on contractors for waste transportation and disposal services. In July 1990, EPA fined a private company \$550,000 because its waste transporter had taken the waste to a disposal facility that did not have an EPA permit for accepting that particular type of waste. The company had relied on the transporter to take the waste to the proper disposal facility without verifying that the facility was permitted to dispose of the waste.

Manifest Tracking System Has Problems

The system that the Marketing Service and the installations use to track their hazardous waste does not give them adequate assurance that their waste is properly disposed of by their contractors. Contractors are responsible for submitting documents showing what they have done with the waste. We found, however, little evidence that the Marketing Service and the installations had performed any routine independent on-site verification. In addition, some contractors are allowed to store waste in interim facilities before taking it to disposal sites. This also limits Defense's assurance that waste is disposed of properly.

The Marketing Service's primary method for monitoring transportation of hazardous waste from an installation to a final disposal facility is through its manifest tracking system. The hazardous waste manifest is a shipping document that is required by RCRA, and it must accompany all shipments of hazardous waste. The manifest includes a description of each waste in the shipment; the amount of each type of waste; and the names and EPA identification numbers of the waste generator, transporter, and treatment, storage, or disposal facility that will receive the waste. The manifest contains several copies so that (1) the generator, the transporter, and the designated disposal facility can retain copies for waste tracking and (2) the designated disposal facility can return a copy to the generator to indicate the waste has been received.

To be paid for its services, a contractor is required to submit certain documents, including the completed manifest. These documents are used by the manifest trackers, located at the Defense Reutilization and Marketing Regions, to analyze the paper audit trail that a contractor has submitted to verify that the services have been performed, ensure that

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the disposal is in compliance with environmental requirements, and ensure that the contractor has complied with the terms and conditions of the contract. On the basis of this review, a manifest tracker determines if the contractor is to receive the payment due at that time under the contract terms.

If the manifest tracker notes any discrepancies in the contractor's documentation that requires further review, the tracker must advise the surveillance staff, located in the same office, that the contractor or subcontractor is a candidate for an on-site review. At the Marketing Region that we visited, we were advised that the most common discrepancy was disposal of a specific type of hazardous waste at a disposal facility that was not permitted to accept it. One Marketing Region official advised us that the Region was conducting audits of one contractor a month and that the Region had 15 contractors. The Region's auditors used a 37-page checklist to audit the contractor and, in addition to reviewing the discrepancy noted on the particular manifest, the auditors also checked some current and 3- to 9- year-old manifests for compliance.

Contractors Control Paper Trail

Defense's implementation of the manifest tracking system relies on copies of hazardous waste manifests and other documents submitted solely by contractors, not disposal facilities. Because the documents are not received directly from disposal facilities, a contractor can submit a falsified copy that indicates waste has been transported to a proper disposal facility when in fact the waste may have been sold or disposed of at an unregulated or improper location. On this point, officials told us that they would detect a falsified document during an on-site audit because the disposal facility would not have the carbon copy of the manifest.

Officials from the three private companies told us that they avoided the problems involved with a contractor controlling the paper trail by awarding separate contracts—one to a transporter to haul the waste from the generator to the disposal site and one to a disposal facility to process the waste. According to these officials, separate documentation from a disposal facility provides independent verification of receipt and disposal of the waste. These companies also prefer to deal directly with a disposal facility to maintain better control over waste disposal, which also eliminates the incentive for a transporter to dispose of hazardous waste improperly. Further, having separate contracts also assures private generators that they have a readily available disposal site.

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Defense has encountered problems when its contractor could not find a disposal facility willing to take its waste in a timely manner and at a price the contractor could afford. Under current contracting practices, Defense pays contractors for both transportation and disposal costs. If contractors could avoid paying the disposal cost, they could increase their profits.

**Interim Storage Is a Weak
Link**

The Marketing Service procedures for implementing the manifest system do not provide the Marketing Service or the installations independent verification that a disposal facility has received waste when a contractor uses an interim storage facility. In these instances, the Marketing Service, the Region, or an installation receives notification of receipt only from an interim storage facility, not from a disposal facility.

When waste is transported from a storage facility to a disposal facility, a new manifest reflecting the name of the storage facility, not that of the generator (i.e., the military source), is used. Therefore, a disposal facility returns the manifest to the storage facility, not the Marketing Service, the Region, or the installation.

Two of the installations we visited recognized this as a serious weakness in the manifest tracking system, and at least one (Anniston Army Depot) has a policy of not allowing its hazardous waste to be held in interim storage. An official from one of the three private companies we met with advised us that they did not allow their waste to be held in interim storage facilities.

**Site Audits at
Contractor Facilities
Are Essential to
Assuring Compliance**

Increased frequency of visits to contractor disposal facilities would provide the Marketing Service and the installations added assurance that their waste was handled and disposed of in accordance with RCRA requirements and contracts. However, neither the Marketing Service, which was performing comprehensive audits with EPA's National Enforcement Investigations Center, nor the installations were performing routine on-site audits. Therefore, the Marketing Service and the installations were not getting adequate on-site audit assurance that their hazardous waste was being handled and disposed of properly.

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**Marketing Service Audits
Done Only When Problems
Surface**

In addition to manifest tracking, the Marketing Service has performed some limited auditing of hazardous waste disposal contractors through its environmental-audit program. Technical personnel from its compliance division audit disposal facilities upon the recommendation of manifest trackers. The auditors visit a facility and examine documents to track waste from the time it was received at a facility until it was treated or disposed.

These audits are conducted on a case-by-case basis, only when documentation discrepancies are identified. No routine, independent verification has been done to assure that a disposal facility has received and disposed of the waste. Over a 5-year period, the Marketing Service's compliance division only visited about 25 percent of the disposal facilities it used to ensure that the waste was properly handled and that the disposal facilities had the proper permits, complied with regulations, and was authorized to handle the types of waste transported.

The 1987 Jacksonville, Florida, case pertaining to a 1982 incident is a good example of how audits of disposal facilities could limit Defense's liability for waste cleanups. During that court case, Marketing Service officials testified that if their technical staff had visited the contractor's site, the Marketing Service might have detected that the contractor was not properly disposing of the PCB-contaminated waste. If problems had been found earlier, the Marketing Service could have discontinued sending waste to the site and thereby limited its liability for cleanup.

At one time, the Marketing Service's personnel and EPA's National Enforcement Investigations Center were conducting several joint investigations of hazardous waste management and disposal practices of companies that transport, treat, store, and dispose of Defense hazardous waste. From August 1983 through February 1990, the Center prepared 41 reports concerning disposal of hazardous waste from Defense facilities. These reports addressed (1) waste disposal contractors' overall compliance with applicable pollution control rules, record keeping requirements, and RCRA regulations; (2) contractors' ability to comply with applicable regulations; and (3) EPA's need for enforcement action.

Although these reports indicated serious compliance problems and a need for continued monitoring of Defense contractors, the investigations were discontinued by EPA headquarters. According to a Center investigator, the reports prepared by the Center as a result of joint reviews with the Marketing Service were discontinued because (1) the Marketing Service's selection of the contractors to be reviewed diminished the

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Center's independence and objectivity, (2) the Center was not as objective as it would be if the Marketing Service was not working with it, and (3) the Center's responsibilities to other federal and state agencies prohibited the Center from adequately monitoring Defense's hazardous waste contractors. Marketing Service officials told us that they wanted to continue the audits but it was EPA that made the decision to discontinue the audits.

The audit reports prepared by the National Enforcement Investigations Center were quite comprehensive. During the period the 41 audits were conducted, the auditors found over 350 RCRA violations, 315 of which were considered serious enough to cause an actual or a potential threat to the environment or public health. The audits also disclosed 237 serious violations and 37 procedural violations concerning inspecting contractor operations.

The Marketing Service has transferred its auditing function from its headquarters to its Defense Reutilization and Marketing Regions, and the Marketing Regions now have the responsibility for performing audits. The Marketing Service stated that it transferred the function because it could make more effective use of its resources by having the auditors in its Marketing Regions rather than at the headquarters level. They also said they have more auditors in each of the regions than they had at the headquarters. Officials from one of the regions we visited said they had performed two audits and had three planned for the remainder of fiscal year 1990. The Regions' audits, however, were not as comprehensive as those performed by the National Enforcement Investigations Center with the assistance of the Marketing Service.

The installations we visited did not have any policies for monitoring the hazardous waste disposal facilities their contractors used. Environmental officials at the installations told us that they did not conduct on-site audits of disposal facilities to determine if the facilities were receiving and properly disposing of the waste.

**EPA and State Efforts
Vary Widely**

EPA concentrates its monitoring efforts on large waste generators and waste disposal facilities, rather than transporters. However, EPA has delegated much of its hazardous waste program to the states.

Most states administer their own hazardous waste programs with requirements that are, at least, as strong as or stronger than federal requirements. State monitoring of hazardous waste disposal contractors,

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however, is generally limited to observations of transportation vehicles to ensure compliance with state and federal transportation regulations. Because states also have limited resources to enforce regulations, Defense cannot rely on the states to closely monitor its hazardous waste contractors.

Conclusions

Defense is potentially liable if any of its hazardous waste has not been properly handled and disposed of. Therefore, Defense installations and the Marketing Service should be doing all they can to ensure that their contractors are properly handling waste.

At a minimum, Defense's manifest tracking system could be changed to require separate documentation from disposal facilities, which would provide added assurance that waste was received and properly disposed of. Elimination of interim storage of hazardous waste by Defense contractors would also eliminate a potential problem.

The private sector's practice of using separate contracts for transportation of waste from the sites and for ultimate disposal should be considered by Defense for added assurances that waste reaches the appropriate disposal sites and removal of incentives for transportation contractors to improperly dispose of the waste. We have not examined the administrative costs of an additional contract process, but we believe the probability that these costs could be significantly less than Defense's liability if the waste were handled improperly should be studied.

Audits of the hazardous waste disposal process have been shown to be an effective way to identify RCRA violations and reduce the government's liability. They further provide the Marketing Service added assurance that waste is being properly handled. Consequently, the Marketing Service should give high priority to conducting these audits.

Recommendations

We recommend that the Secretary of Defense, through the Director of the Defense Logistics Agency, direct the Marketing Service to

- issue disposal contracts that require transporters of hazardous waste to have disposal facilities send tracking manifests directly to the Defense generator,
- consider tracking hazardous waste to final disposal by not allowing transporters to use interim storage, and

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- **give high priority to audits of hazardous waste disposals.**

We also recommend that these changes to hazardous waste disposal procedures and practices be required of all Defense installations.

We further recommend that the Secretary of Defense study the costs and the benefits of issuing separate contracts for transportation and disposal of hazardous waste.

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