

**GAO**

United States General Accounting Office <sup>33297</sup> 128951  
Report to the Chairman, Subcommittee on  
Oversight and Investigations, Committee  
on Energy and Commerce, House of  
Representatives

December 1985

# HAZARDOUS WASTE

## Federal Agency Hazardous Waste Disposal at Kettleman Hills, California



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Resources, Community, and  
Economic Development Division

B-221408

December 26, 1985

The Honorable John D. Dingell  
Chairman, Subcommittee on Oversight  
and Investigations  
Committee on Energy and Commerce  
House of Representatives

Dear Mr. Chairman:

In accordance with your June 5, 1985, letter, and subsequent discussions with your office, we agreed to determine whether federal agencies disposed of any hazardous wastes at the Chemical Waste Management, Inc., facility at Kettleman Hills, California, after the Environmental Protection Agency (EPA) had cited the facility for significant violations of environmental regulations promulgated under the Resource Conservation and Recovery Act (RCRA).<sup>1</sup> Because of these violations EPA, in October 1984, banned its own use of the facility for disposal of hazardous wastes cleaned up under the Comprehensive Environmental Response Compensation and Liability Act—commonly known as Superfund. You also asked us to determine (1) whether federal agencies that used the Kettleman Hills facility had policies or procedures prohibiting disposal of hazardous waste at facilities with significant environmental regulation violations and (2) whether EPA has the authority to prohibit federal waste disposal at facilities with such compliance problems.

Overall, we found that:

- From November 1984 through May 1985, after EPA had prohibited sending its Superfund cleanup waste to the facility, other federal agencies disposed of about 8,300 tons of hazardous waste at Kettleman Hills.
- Federal agencies we reviewed<sup>2</sup> required that when commercial disposal sites are used, they must be regulated under RCRA. However, the agencies had no policies or standards for prohibiting disposal at facilities with significant RCRA environmental problems.
- Short of closing a facility, EPA does not have the authority to prohibit other federal agencies from using commercial facilities that are in violation of RCRA regulations. EPA can, however, provide other agencies with

<sup>1</sup>Significant RCRA violations include violations that result in a release or serious threat of release of contaminants into the environment or that involve failure to meet requirements for groundwater monitoring and financial assurances.

<sup>2</sup>The Departments of Defense and Energy and the National Aeronautics and Space Administration.

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information and guidance that would assist them in selecting environmentally sound disposal facilities. EPA is implementing plans to fulfill this role with respect to some but not all hazardous wastes disposed of by federal agencies.

We believe that federal agencies should not dispose of hazardous waste at disposal facilities that EPA deems to be experiencing significant environmental problems. We are making recommendations to the EPA Administrator which would make information on standards available to federal agencies for use in assessing the environmental acceptability of disposal facilities.

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## Background

The RCRA and Superfund statutes require appropriate control and safe disposal of hazardous wastes. RCRA governs the management and disposal of hazardous wastes currently being generated and prescribes minimum operating standards for disposal facilities. Wastes regulated under RCRA are referred to as RCRA wastes. The Superfund Act, on the other hand, provides for the cleanup of old, abandoned, and uncontrolled hazardous waste sites that pose threats to health and the environment by establishing a fund financed primarily by taxes on business. These wastes are commonly referred to as Superfund wastes. As a practical matter, however, there is little difference between RCRA and Superfund wastes in terms of their potential threats to the environment. In fact, cleanup of Superfund sites often involves the transfer of hazardous wastes to commercial disposal facilities regulated under RCRA. A major concern today is that commercial disposal facilities that are not in compliance with RCRA environmental regulations may themselves become uncontrolled hazardous waste sites requiring cleanup under Superfund sometime in the future.

EPA manages the disposal of hazardous wastes removed from private sites under the Superfund program. Similarly, other federal agencies are responsible for cleaning up and disposing of hazardous wastes from uncontrolled hazardous waste sites located on federal property. These agencies' cleanup activities are not normally paid for under Superfund. These sites may be included on EPA's list of Superfund sites if they represent serious environmental or health threats, but the agencies still maintain responsibility for cleaning them up.

In addition to the disposal of cleanup wastes, EPA and the federal agencies are responsible for the proper disposal of hazardous waste generated from their current day-to-day operations. Disposal of such waste is

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regulated under RCRA. Available EPA data indicate that federal agencies represent a relatively small portion of the total number of current waste generators. As of October 1985, federal agencies represented less than 2 percent (about 1,100 of 69,000) of hazardous waste generators, nationwide, reporting to EPA.

In addition to protecting the environment, a major concern of federal agencies disposing of wastes in commercial facilities not in compliance with RCRA requirements is the potential liability for cleaning up these sites if the facilities go out of business. Under Superfund legislation, entities disposing of hazardous wastes in a commercial disposal facility can be held liable for all or part of the cost of cleaning up the facility if the owner is unable to close the facility in a proper manner. Information is not readily available for estimating the government's potential liability for such costs. However, the government's share of the costs to clean up commercial facilities could be substantial. For example, in July 1985, we reported that two disposal sites used by Tinker Air Force Base had been identified as sources of groundwater contamination (GAO/NSIAD-85-91, July 19, 1985). EPA officials estimated that Tinker's share of the cost for cleaning up these sites under Superfund could range from \$2 million to \$4 million.

In hearings before the Subcommittee on Oversight and Investigations in April 1985, we provided information indicating that many commercial disposal facilities may have significant regulatory problems. EPA data provided at that time showed that, as of November 1984, 57 commercial hazardous waste landfills were operating throughout the country; 28 of the 57 landfills had received Superfund wastes; and 16 of the 28 facilities receiving Superfund wastes had significant violations of EPA regulations. EPA officials also noted that 5 of the latter 16 landfills were leaking contaminants into the groundwater.

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## Scope and Methodology

To obtain information to answer your questions, we (1) interviewed Chemical Waste Management, Inc., officials at the Kettleman Hills facility and reviewed manifests of wastes received at the facility and other records for the period January 1984 through May 1985, (2) reviewed records and interviewed officials at EPA headquarters and EPA's Region IX office regarding the compliance problems at Kettleman Hills, the Superfund ban on the facility, and EPA's policies and procedures for advising other federal agencies of these matters, (3) reviewed pertinent government regulations and interviewed both headquarters and field officials of the Departments of Defense (DOD) and Energy (DOE) and the

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National Aeronautics and Space Administration (NASA)—the federal agencies sending the majority of the federal hazardous wastes to Kettleman Hills—regarding their policies and procedures for use of commercial hazardous waste disposal facilities, and (4) reviewed the applicable statutes and interviewed EPA headquarters and Office of General Counsel officials concerning EPA's authority to prohibit disposal of federal wastes at facilities with significant compliance problems.

We performed our review between June 1985 and October 1985 in accordance with generally accepted government auditing standards. The views of directly responsible officials were sought during our review and are incorporated into the report where appropriate. In accordance with the wishes of your office, we did not request EPA to review and comment officially on a draft of this report.

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## EPA Restricts Kettleman Hills Facility From Receiving Superfund Wastes

EPA inspections at Kettleman Hills in 1983 and 1984 disclosed that the facility was violating significant RCRA environmental regulations. For example, (1) there was no groundwater monitoring system at the facility, (2) the facility had been modified without prior approvals, and (3) polychlorinated biphenyls (PCBs) were being disposed of in RCRA landfills not approved for PCB disposals.<sup>3</sup> In complaint actions filed in July 1984 and June 1985, EPA proposed fines totaling over \$7 million for the violations cited in the inspections. As a result of the problems disclosed by the inspections, EPA, on October 3, 1984, restricted itself from sending its Superfund wastes to Kettleman Hills. On November 12, 1985, EPA and the California Department of Health Services jointly announced that they had entered into a \$4-million settlement with Chemical Waste Management, Inc., for the violations at the Kettleman Hills facility. As part of the settlement, Chemical Waste Management agreed to take several corrective actions to bring the facility into compliance with RCRA and the Toxic Substances Control Act. According to EPA, lifting of the ban will be dependent on the actions taken at the facility to correct the problems.

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## Federal Agencies Used Kettleman Hills After Superfund Ban

Federal agencies disposed of hazardous waste at the Kettleman facility during the period that the facility was experiencing compliance problems and also after EPA's Superfund ban. Between January 1984 and May 1985, federal agencies shipped 1,081 loads—totaling approximately 18,000 tons—of hazardous wastes and substances to Kettleman

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<sup>3</sup>EPA also identified violations of the Toxic Substances Control Act at Kettleman Hills during the 1984 inspections.

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Hills. This represented about 5 percent of the total shipments and tonnage at the Kettleman Hills facility during that period. From November 1984 through May 1985, during the EPA ban, federal agencies disposed of about 8,300 tons of hazardous waste at Kettleman Hills. While the amounts varied from month to month, federal shipments after the October 1984 Superfund ban averaged 1,200 tons per month, slightly more than the 1,000 tons per month shipped before the ban.

Most of the federally generated waste disposed of at Kettleman Hills, both before and after the Superfund ban, came from DOD sources. Before the ban, DOD shipped about 52 percent of the federal waste disposed of at the facility; after the ban it shipped about 78 percent of such waste. The hazardous wastes and substances that federal agencies shipped to the Kettleman Hills facility included 6,690 tons of lime sludges, 3,125 tons of contaminated soils, 2,221 tons of inorganic solid wastes, 1,548 tons of PCBs and PCB contaminated materials, and lesser quantities of various other hazardous waste.

Appendix I shows the major federal generators and the quantities of hazardous wastes they disposed of at Kettleman Hills immediately before and after EPA's ban.

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## Federal Agency Policy and Procedures for Off-Site Disposal

The policies and procedures of the federal agencies we reviewed—DOD, NASA, and DOE—require that RCRA regulated facilities must be used for disposal of any hazardous wastes, whether it be RCRA-regulated waste or cleanup waste from old, abandoned, or uncontrolled waste sites on federal property. The agencies, however, do not prohibit the use of RCRA-authorized waste facilities during times that the facilities are not in compliance with RCRA environmental regulations. Lack of agency policies prohibiting the use of such facilities contributed to the fact that substantial quantities of federal hazardous wastes were disposed of at Kettleman Hills at a time when EPA considered the facility not to be in compliance with significant RCRA requirements and after EPA banned it from receiving Superfund wastes.

We contacted environmental officials at nine federal facilities of the above three agencies which disposed of more than 100 tons of hazardous waste at Kettleman Hills to determine how they select commercial facilities for disposal of hazardous wastes.<sup>4</sup> All of the officials said that they check with regulatory agencies to assure that a disposal site is a

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<sup>4</sup>See app. I for facilities contacted.

RCRA facility. Officials at three of the nine federal facilities said that this is as far as they go—they assume that it is safe to ship their wastes to any RCRA facility. Environmental officials at the remaining six facilities indicated that they visit disposal sites periodically and/or check with local regulatory agencies to determine whether the facilities have operational or regulatory problems. However, the officials acknowledged that, without agency policies and criteria for evaluating the seriousness of RCRA violations, agencies find it difficult to assess the compliance status of the facilities and decide if they should avoid using them. This problem is demonstrated in the example discussed below.

The Defense Logistics Agency is responsible for disposing of all DOD hazardous materials, with certain exceptions.<sup>5</sup> The Agency's Defense Reutilization and Marketing Service, acting as the disposal agent for several Army, Navy, and Air Force facilities, contracted for about three-quarters of the DOD hazardous waste shipments to the Kettleman Hills facility in the period of our review.

The Service's procedures for evaluating potential disposal contractors include contacting the responsible regulatory agency to determine that the disposal facility is permitted and is complying with environmental laws and regulations. In April 1985 the Service awarded a contract to dispose of Navy hazardous wastes at several commercial facilities, including the Kettleman Hills facility, even though the Service's preaward evaluation noted that Kettleman Hills had compliance problems and was in arbitration with the state and EPA. A Service official said that the Service has no criteria for evaluating the compliance status of disposal facilities and deciding whether or not to use them. Lacking such criteria, the official noted, the Service has to rely heavily on the states or EPA to tell them when problems at disposal facilities are serious enough to avoid doing business with them. This same official said that the regulatory agencies often, as in this case, are unwilling to make such judgments on their behalf. Headquarters EPA officials said that EPA has no policy prohibiting field offices from making these judgments. However, these officials confirmed that its regional offices are sometimes reluctant to make judgments for other federal agencies because of the potential for court challenges.

<sup>5</sup>For example, the Defense Logistics Agency is not responsible for disposing of toxicological and other materials which, by law, must be destroyed; sludges and residues generated from industrial plant processes; and unique nonrecurring wastes generated by research and development programs.



## EPA Policy for Disposing of Its Hazardous Wastes

EPA's "off-site" policy establishes standards for evaluating the suitability of hazardous waste facilities to receive wastes being cleaned up under the Superfund Act.<sup>6</sup> Basically, the off-site policy prohibits disposal of wastes from Superfund sites at commercial facilities with significant RCRA violations. A facility not in compliance with RCRA regulations may be used only (1) if the owner or operator agrees to correct the problems through a consent order or decree, (2) EPA determines that the facility can comply with the order and that it is likely to correct the problems, and (3) that disposal within the facility is at a unit or location within the facility which is in compliance with RCRA and does not contribute to adverse conditions caused by other units or areas at the facility. EPA's Deputy Director, Office of Waste Programs Enforcement, said that the off-site policy was developed to reduce the agency's risk of potential liability for the cost of cleaning up commercial facilities known to have significant environmental problems and to recognize the congressional move toward developing of higher standards for disposing of hazardous wastes.

In addition to Superfund wastes, EPA also disposes of RCRA waste generated by its laboratories and other EPA operations. EPA is preparing guidelines for managing and disposing of this waste. These guidelines, which have been written and are now under review within EPA prior to being implemented, will be included in EPA's Occupational Health and Safety Manual. The proposed guidelines state that EPA's RCRA waste must be disposed of in RCRA permitted facilities or facilities operating under an interim status permit. The guidelines do not include criteria for assessing the seriousness of environmental problems at RCRA approved facilities nor for restricting disposal of wastes at a facility experiencing environmental problems. Given EPA's reasons for adopting the off-site policy, and that the potential for environmental harm from RCRA waste is the same as that from Superfund wastes, it would seem that EPA's guidelines for disposal of its RCRA wastes should be reflective of its off-site policy for disposing of Superfund wastes.

## EPA's Role in Helping Agencies Select Disposal Facilities

Under the Clean Air and Clean Water Acts, EPA is authorized to bar federal contracts, grants, or loans to entities that have violated, or have records of continuing or recurring noncompliance with, standards of the acts. The purpose of this program is to promote effective enforcement of the Clean Air and Clean Water Acts and to assure that firms do not

<sup>6</sup>EPA's "off-site" policy draws its name from the fact that it addresses old, abandoned wastes that are to be removed from where they are currently located and taken to a new site (disposal area).

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obtain a competitive advantage due to noncompliance with the requirements of the two acts. EPA has no comparable authority under the RCRA or Superfund legislation that would allow it to prohibit federal agencies from using hazardous waste facilities that are experiencing compliance problems as long as EPA or the state has not terminated the facility's permit. The only way EPA can prevent federal agencies from using a particular disposal facility is to close the facility.

While EPA does not have authority to prohibit waste disposal at RCRA-regulated facilities with significant compliance problems, it does have an administrative mandate to assist other federal agencies in meeting their environmental responsibilities. Executive Order 12088, dated October 13, 1978, establishes the executive branch's basic program for complying with pollution control standards. The federal agencies are to cooperate and consult with EPA in meeting their pollution control responsibilities, and EPA is directed to advise and assist the agencies in carrying out their responsibilities.

EPA is initiating a program to assist other federal agencies in selecting hazardous waste facilities for the disposal of their wastes from old, abandoned, and uncontrolled disposal sites on federal properties. EPA requested comments on its off-site policy in a Federal Register notice on November 5, 1985, and plans to follow up on the notice with a memorandum to all federal agencies suggesting that they use the policy for disposing of their cleanup wastes.

To help implement the off-site policy, EPA regions were directed to assess land disposal facilities which may receive Superfund waste to determine their compliance with the off-site disposal policy. The agency is developing regional data bases that will include information on inspections, enforcement actions, and other information needed to assess the compliance status and environmental soundness of each facility. The regions have designated management officials responsible for implementing the policy and providing information on the acceptability of proposed disposal sites to parties undertaking cleanup under Superfund and to other federal agencies or military activities.

While EPA's off-site policy was established for use in managing Superfund hazardous wastes, it logically could assist federal agencies in selecting environmentally sound RCRA facilities for disposal of any federally generated hazardous waste, whether it be waste from older sites being cleaned up on federal lands or waste currently being generated and subject to RCRA disposal regulations. EPA's off-site policy coordinator

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said the agency could not require federal agencies to recognize its off-site policy standards for disposing of federal hazardous wastes. However, the coordinator pointed out that the EPA regions could provide information on the compliance status of RCRA facilities to federal agencies for use as their good judgment dictates in any disposal actions.

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## Off-Site Policy Concerns

EPA officials raised several concerns regarding implementation of the off-site policy. First, EPA officials view the mechanics of administering the policy on a day-to-day basis as most inefficient. Under the policy, federal agencies will have to call EPA regional officials before entering into a waste disposal contractual agreement to find out which disposal facilities in their area do not meet the off-site policy requirements. EPA regional officials would review their waste facility files and records and advise the requesting agency accordingly. All this will be done on a case-by-case basis. EPA officials said that EPA can handle its own regional requests for information adequately under this process but that they are concerned about having adequate staff resources to respond to requests from other federal agencies in a timely manner. Expanding the off-site policy to include RCRA waste, in addition to clean up waste, would affect the staff workload even more.

An alternative to the current process would be to provide a list of facilities not in compliance with environmental regulations to federal agencies. This would allow agencies to make their disposal decisions without having to contact EPA. EPA's additional workload would be to make sure the list is kept current and reflects the conditions at a facility as changes occur. In EPA's opinion, this approach would be more administratively efficient than the current process but would be subject to more legal challenges than what would be expected under the case-by-case approach. The time period to respond to and debate these challenges can be long and drawn out and consume a substantial amount of EPA's resources.

EPA officials explained that if a list of environmentally unacceptable facilities is published periodically, each firm on the list would most likely want to challenge EPA's judgment and have its name removed from the list. Thus, even before any agency solicitations for contract bids to dispose of waste, EPA might have to deal with several administrative or court challenges. Under its current off-site policy implementation strategy, inquiries on the environmental acceptability of a disposal site will be made only on firms bidding on a particular contract. If the

low bidder's disposal facility is deemed acceptable for the proposed disposal and is awarded the contract, it is unlikely that the contract award would be challenged on the basis of the firm's environmental acceptability. If the low bidder is rejected because of EPA's concerns about its disposal facility, the rejected lower bidder might challenge this determination. Although either method of implementing the off-site policy—the case-by-case approach or the listing approach—could be challenged, EPA officials believe that the case-by-case approach it intends to follow would be subject to fewer challenges.

Administratively, the case-by-case approach may be difficult to implement because of regional office staff resource limitations. EPA officials said that should challenges to its off-site policy become too time consuming and difficult to handle, the agency would prefer to have the policy promulgated as a legislative mandate rather than as an agency requirement. These officials indicated that the agency could be more effective in administering the policy and dealing with court actions if it were a legislative requirement. They indicated that EPA would welcome the opportunity to assist the Congress in preparing legislation to this end.

In addition to the staffing and legal concerns, a third concern in implementing the off-site policy noted by EPA is possible commercial facility capacity limitations. Adoption of such a policy could result in a number of facilities becoming ineligible to receive federal hazardous waste. The capacity of the remaining facilities approved to receive federal wastes may be less than what would be necessary to meet federal disposal needs. The proximity of acceptable waste sites is also intertwined in the capacity issue. This policy might require agencies to ship hazardous wastes longer distances because closer disposal facilities might not be acceptable. Extending transportation distances would increase the public's risk of exposure to hazardous wastes. EPA is planning to study the issue of commercial hazardous waste facility capacity. EPA officials said the study is in the planning stage now and will be completed (if funded) in about a year.

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## Conclusions

Federal agencies disposed of hazardous wastes at the Kettleman Hills facility after EPA had identified significant environmental regulation violations at the facility and after EPA had banned the facility from receiving Superfund cleanup wastes. There is no government-wide policy or procedure prohibiting hazardous waste disposal at a facility authorized to receive RCRA waste when the facility is experiencing environmental problems. Furthermore, neither DOD nor the civilian agencies

we reviewed had such policies or procedures. While most representatives of subordinate commands or field units said they checked on the compliance status of disposal facilities, they had no criteria for determining the seriousness and the extent of violations necessary to justify discontinuing the use of a facility.

EPA has recently adopted a policy prohibiting the disposal of EPA Superfund cleanup wastes at facilities experiencing significant environmental problems. It also has established standards or criteria and procedures for implementing this policy. EPA is implementing a program to encourage all federal agencies to adopt a similar policy and evaluation criteria for the disposal of wastes removed from old, abandoned, and uncontrolled hazardous waste sites on federal properties. However, EPA has no authority to mandate this more restrictive disposal policy for federal agencies; moreover, EPA's policy does not cover its own or other federal agency RCRA hazardous waste. In implementing this policy, EPA may be faced with legal challenges from hazardous waste facility operators regarding EPA's evaluation and judgment of environmental conditions at disposal facilities and the continued use of the facilities by federal agencies.

We made no evaluation of the adequacy of the technical aspects of EPA's off-site policy for protecting the federal government's interests, and we have not tried to predict what might be the outcome of a legal challenge to the policy. Notwithstanding the answers to these questions, a major concern is that the federal establishment avoid disposing of hazardous wastes—whether the wastes are RCRA wastes; Superfund wastes being cleaned up by EPA; or old, abandoned hazardous waste being cleaned up by federal agencies on the properties they occupy—at facilities that EPA deemed to be experiencing serious environmental problems. Not recognizing the potential downstream environmental harm from such facilities runs counter to federal objectives in the environmental protection arena, and also unnecessarily exposes the government to future liabilities if these sites prove to be environmentally unsafe and need to be cleaned up. Furthermore, we believe that the federal sector should be guided by common standards in assessing the environmental acceptability of disposal facilities.

There are several options for achieving these objectives. One option would be for EPA to expand its current Superfund off-site disposal policy to include all hazardous wastes, regardless of the source, and encourage all federal agencies to follow this policy. Agencies, however, would have the discretion of following or not following EPA's guidance. A second

option would be for EPA to expand its policy as in the above option, and then through an executive order issued by the President, mandate that all agencies comply with EPA's guidance. A third option would be that the Congress through legislation mandate that EPA's policy be expanded to cover all hazardous waste and be followed by all federal agencies.

In our opinion, the first option seems to be a prudent approach to follow at this time in that the federal agencies we reviewed indicated they would welcome more specific guidance on the acceptability of hazardous waste disposal facilities. We found no evidence in our review to indicate that federal agencies would not be responsive to EPA guidance and that EPA's current efforts to persuade other agencies to follow its guidelines could not be effective. If, in time, this option does not yield the desired results—whether it be due to legal difficulties or due to resource limitations within EPA—this issue could be revisited by EPA, the administration, or the Congress and a different course of action taken.

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## Recommendations

We recommend that the Administrator of EPA

- expand EPA's off-site policy for the disposal of Superfund cleanup waste to also include EPA's hazardous waste being disposed of under the Resource Conservation and Recovery Act and also
- encourage other federal agencies to adopt the off-site policy for the disposal of RCRA regulated hazardous waste in addition to encouraging them to adopt the policy for the disposal of cleanup waste.

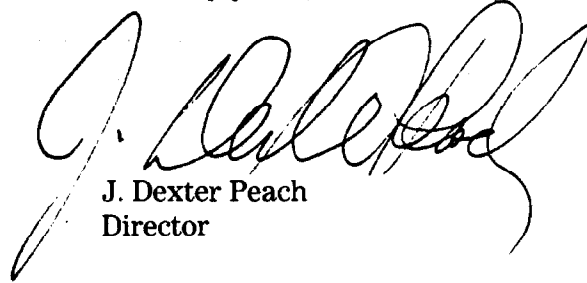
Should the Administrator determine that statutory authority is needed or desirable to ensure adoption and implementation of this policy throughout the federal sector, or to ensure the successful enforcement of the policy, we further recommend that the Administrator develop and submit to the Congress the appropriate legislative language to achieve these objectives.

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from

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its issue date. At that time we will send copies to interested parties and make it available to others upon request.

Sincerely yours,



J. Dexter Peach  
Director

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Letter Report

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Appendix

Appendix I: Federally Generated Hazardous Wastes  
Disposed of at Kettleman Hills Before and During  
EPA's Superfund Ban on the Facility

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## Abbreviations

DOD Department of Defense  
DOE Department of Energy  
EPA Environmental Protection Agency  
NASA National Aeronautics and Space Administration  
RCRA Resource Conservation and Recovery Act





# Federally Generated Hazardous Wastes Disposed of at Kettleman Hills Before and During EPA's Superfund Ban on the Facility

Generators	Tons received		
	Total (Jan. 1984 - May 1985)	Before (Jan. 1984 - Oct. 1984)	During (Nov. 1984 - May 1985)
<b>DOD:</b>			
Riverbank Army Ammunition Plant <sup>a</sup>	7,447	4,021	3,426
McClellan Air Force Base <sup>b</sup>	955	148	807
Mare Island Naval Shipyard <sup>b</sup>	631	0	631
Long Beach Naval Shipyard <sup>b</sup>	305	0	305
Naval Air Station, Lemoore	303	303	0
Naval Air Station, Alameda <sup>b</sup>	226	0	226
Sierra Army Depot	189	189	0
Hughes (Air Force Plant #44) <sup>a, b</sup>	188	83	105
Norton Air Force Base <sup>b</sup>	114	0	114
Various	1,096	268	828
<b>Total</b>	<b>11,454</b>	<b>5,012</b>	<b>6,442</b>
<b>Non-DOD:</b>			
Rockwell International (NASA) <sup>a, b</sup>	2,804	2,804	0
Federal Reserve Bank <sup>c</sup>	1,855	0	1,855
Lawrence Livermore National Laboratory (DOE) <sup>a, b</sup>	1,756	1,756	0
EPA	52	52	0
Sandia National Laboratories (DOE) <sup>a</sup>	28	19	9
Various	18	13	5
<b>Total</b>	<b>6,513</b>	<b>4,644</b>	<b>1,869</b>
<b>Total</b>	<b>17,967</b>	<b>9,656</b>	<b>8,311</b>

<sup>a</sup>Government-owned, contractor-operated facilities.

<sup>b</sup>We contacted environmental officials at these eight facilities and at Defense Logistics Agency offices in Battlecreek, Michigan, which disposed of wastes for Riverbank Army Ammunition Plant and several other facilities, to determine how they select commercial hazardous waste disposal facilities.

<sup>c</sup>The Federal Reserve Bank's waste, although large in quantity, consisted of shredded currency and food stamps. The ink used in printing currency and food stamps is considered hazardous in California.

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