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GAO

Report to Congressional Requesters

April 1999

SUPERFUND

Progress Made by EPA and Other Federal Agencies to Resolve Program Management Issues

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GAO

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Resources, Community, and
Economic Development Division

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Congressional Requesters

This report addresses whether EPA and other selected federal agencies are setting risk-based cleanup priorities under the Superfund law and whether EPA is recovering cleanup costs and managing its cleanup contractors as efficiently as possible. We are making recommendations to the Administrator of EPA designed to improve the agency's information on and management of cleanups of high-risk sites, maximize EPA's recovery of cleanup costs, and help prevent EPA from incurring unnecessary costs for contractors' work.

We are also making recommendations to the Secretary of Defense and the Secretary of Agriculture, to coordinate their efforts to address hazardous wastes generated by the Department of Defense's activities on National Forest System lands, and to the Secretary of the Interior, to direct the Bureau of Land Management to develop a comprehensive strategy to identify and clean up hazardous waste sites. We are sending copies of this report to the Honorable Carol Browner, Administrator, EPA; the Honorable Dan Glickman, Secretary of Agriculture; the Honorable Mike Dombeck, Chief, Forest Service; the Honorable William Cohen, Secretary of Defense; the Honorable Bill Richardson, Secretary of Energy; the Honorable Bruce Babbitt, Secretary of the Interior; the Honorable Tom Fry, Director, Bureau of Land Management; and the Honorable Jacob Lew, Director, Office of Management and Budget. Copies will also be made available to others on request.

If you or your staff have any questions please call me on (202) 512-4907. Major contributors to this report are listed in appendix II.

Peter F. Guerrero
Director, Environmental
Protection Issues

List of Congressional Requesters

The Honorable John H. Chafee
Chairman, Committee on Environment
and Public Works
United States Senate

The Honorable Tom Bliley
Chairman
The Honorable John D. Dingell
Ranking Minority Member
Committee on Commerce
House of Representatives

The Honorable Michael G. Oxley
Chairman, Subcommittee on Finance
and Hazardous Materials
Committee on Commerce
House of Representatives

The Honorable Bud Shuster
Chairman
The Honorable James L. Oberstar
Ranking Minority Member
Committee on Transportation
and Infrastructure
House of Representatives

The Honorable Sherwood L. Boehlert
Chairman
The Honorable Robert A. Borski
Ranking Minority Member
Subcommittee on Water
Resources and Environment
Committee on Transportation and
Infrastructure
House of Representatives

Executive Summary

Purpose

The magnitude of the nation's hazardous waste problem calls for making effective use of limited available funds. Current estimates indicate that cleanups are expected to cost the federal government about $300 billion and the private sector hundreds of billions more. Since the early 1990s, GAO has identified several long-standing management problems with the Environmental Protection Agency's (EPA) Superfund program, created under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980. These problems have hindered the agency's ability to effectively manage cleanups of the nation's most hazardous sites.[1] This report assesses (1) the efforts that EPA and the other federal agencies with major cleanup responsibilities have made to set priorities for spending limited cleanup funds at the sites posing the highest risks, (2) EPA's actions to recover its expenditures for cleanups from the parties that are legally liable for the contamination, and (3) EPA's efforts to better control contractors' cleanup costs.

Results in Brief

For several years, GAO has included the Superfund program on its list of federal programs that pose significant financial risk to the government and potential for waste and abuse. Agencies have corrected some of these problems, but those that remain are important enough to prevent GAO from removing Superfund from the high-risk list. For example, four of the five agencies GAO reviewed—EPA, Agriculture, Defense, and Energy—are setting cleanup priorities on the basis of the relative risk that sites pose to human health and the environment.[2] EPA, Agriculture, and Defense set nationwide priorities for most of their sites. However, EPA may not know about all high-risk sites because states are taking on more cleanups and deciding, often on the basis of factors other than risk, which sites, if any, to refer to EPA for possible listing. Each Energy facility, such as a national laboratory, considers risk and other factors when setting priorities among its competing environmental management projects. However, cleanups at one facility do not currently compete with those at another facility on a nationwide basis. Energy maintains that because each facility is unique, locally set priorities are more appropriate. Finally, Interior's Bureau of Land Management has not set nationwide cleanup priorities because it has not yet developed an overall cleanup strategy or an inventory of its hazardous waste sites, estimated to cost billions of dollars to address.

[1]High-Risk Series: Superfund Program Management (GAO/HR-93-10, Dec. 1992; GAO/HR-95-12, Feb. 1995; GAO/HR-97-14, Feb. 1997; and GAO/OCG-99-17, Jan. 1999).

[2]All federal agencies have agreed in principle to address their highest-risk sites first. Although each agency employs its own methods to assess risks, each considers risks to human health and the environment along with other issues, such as community concerns and cost-effectiveness, when prioritizing cleanups.

Although EPA has succeeded in getting responsible parties to conduct 70 percent of long-term Superfund cleanups, it has been less successful in recovering its costs from responsible parties when it conducts a cleanup. EPA has lost the opportunity to collect almost $2 billion it spent on cleaning up sites since the program began because it excluded large portions of its indirect costs—the agency's costs to administer the program—when it calculated what costs to assess parties. While EPA has developed a new method of calculating these costs that could increase their recovery, the agency has not yet implemented it. Until it does so, it will continue to lose funds that it could use for cleanups at additional sites. EPA also has not established measures that compare the amount of costs recovered with the amount that was potentially recoverable to better evaluate its overall performance.

In response to GAO's past concerns, EPA has eliminated almost all of its backlog of 500 required Superfund contract audits, a key tool for helping to deter contractors from fraud, waste, and abuse, and is trying to complete new audits on time. However, some of EPA's actions have been slow and have not gone far enough to address GAO's concerns that the agency was not using its own estimates of what contract work should cost to negotiate the best contract price for the government or to control contractors' program support costs, such as the costs for rent and managers' salaries. While EPA is now more frequently using its own estimates of what cleanup actions should cost to negotiate contract prices, some regional staff lack cost-estimating experience and training, as well as historical site-specific data on actual cleanup costs, to help them develop more accurate estimates and better negotiate contract prices. EPA took a number of actions to reduce the amount of money it was paying to contractors for program support costs instead of actual cleanup work. However, its actions have not gone far enough, as indicated by the fact that the program support costs for 10 of 15 new contracts exceed EPA's target of 11 percent of total cleanup costs. The program support cost for the 10 contracts ranged from 16 to 76 percent, with a median of 28 percent. As a result, less money is going toward the actual cleanup of high-risk sites, and excessive amounts are still being spent on administrative support costs.

This report contains recommendations to improve agencies' consideration of risk in setting funding priorities and EPA's ability to recover and control costs.

Principal Findings

Most Agencies Are Using Risk as a Factor to Set Cleanup Funding Priorities

EPA, Agriculture, Defense, and Energy have made progress over the years and are setting priorities for their limited cleanup funds on the basis of sites' risks, among other factors, while Interior has not developed an inventory of sites in order to set priorities among them.[3] EPA funds cleanups at those sites already on its National Priorities List according to the risks that they pose, but it is not necessarily placing the riskiest sites on its list. According to cleanup managers in 4 of EPA's 10 regions, the states are now deciding to address more of the sites that are risky enough to be eligible for the federal Superfund program under their own state programs. Furthermore, since 1995, EPA has been seeking concurrence from a state's governor to include a site on its list and has obtained such concurrence for 123 sites but not for another 31 sites. As a result of this trend toward more state cleanups, EPA expects that states will refer sites to it for cleanup on the basis of difficulty and expense, rather than risk. For example, EPA anticipates the referral of sites requiring many years of groundwater cleanup and sites with no financially viable parties available to pay for cleanup. The main problem EPA regions have with this trend is that once a state begins managing a site's cleanup, EPA has little or no information on its status. A small subset of these sites are of great concern to EPA because, for example, the contaminants are particularly hazardous, responsible parties are recalcitrant, or local communities have come to EPA with complaints and questions about cleanup. Most of the EPA regions in this review would like the states to provide more information on the status of these sites so that they can better plan their own workload in the event that a state later seeks EPA's involvement and so that they can be more responsive to citizens' inquiries.

Since February 1997, Agriculture—more specifically its agency with the largest potential cleanup workload to date, the Forest Service—has taken a number of actions to complete its inventory of sites, set priorities among them nationwide, and obtain additional cleanup funding for them. Defense has also further implemented its process to set risk-based priorities. The Department has five primary components in its environmental cleanup program—one for each of the three military services; one for all Defense-wide agencies, such as the Defense Logistics Agency; and one for formerly used Defense sites. Each component follows a process that the Department established in order to request and allocate cleanup funds

[3]The departments of Agriculture, Defense, Energy, and the Interior are responsible for the largest number of federal facilities cleanups.

according to risk-based priorities for its nationwide backlog of sites. While Defense formerly tried to set priorities across its components, it no longer does so, in part because each component receives its own, separate cleanup appropriation. Instead, Defense established department-wide cleanup goals on the basis of risk and monitors to make sure the components fund and achieve these goals. According to the Department's environmental budget examiner, the components have been receiving sufficient funds each year to meet their goals for addressing high-risk sites.

At Energy, each field operations office or facility, such as a large laboratory, uses its own methodology to set risk-based priorities for the cleanup projects that it manages. In March 1995, we reported concerns because the Department was not allocating funds across its field operations offices on the basis of risk. To date, the Department has not taken action in response to our recommendation that it set nationwide priorities, stating that this would interfere with priorities already set with local communities and other stakeholders at each of its facilities on the basis of each facility's unique contamination, activities, and cleanup requirements. Furthermore, the agency stated that while it does provide the same amount of environmental management funds to each facility from year to year, the proportion of funds allocated to any one of its facilities was based on the amount and type of work and the risks at that site. Interior's Bureau of Land Management has yet to complete an inventory of its contaminated sites—a problem we first identified in 1987.[4] The Bureau must complete this step in order to set priorities, estimate necessary resources, and develop a cleanup strategy that considers using Superfund authority as a tool to get private parties to help pay for some cleanups. Until then, some Interior sites could continue to pose health and environmental risks and increased cleanup costs for the government if contamination spreads and responsible parties are no longer able to pay.

EPA Could Recover More Costs and Adopt Better Performance Measures

For the past several years, EPA has consistently succeeded in getting responsible parties to conduct about 70 percent of long-term cleanups, one of its main goals for the program. If EPA cleans up a Superfund site, its next goal is to seek the recovery from responsible parties, where appropriate, of 100 percent of the federal funds expended at the site. However, EPA has lost the opportunity to recover about $2 billion from responsible parties because the methodology it used to calculate the amount of indirect costs—the administrative costs of operating the program—that it would

[4]Superfund: Civilian Federal Agencies Slow to Clean Up Hazardous Waste (GAO/RCED-87-153, July 24, 1987).

charge these parties when settling cost recovery cases excluded a large portion of these costs. Following federal accounting standards, EPA has developed a new methodology that more accurately accounts for these costs. Cost recovery program managers estimate that using the new methodology could increase recoveries in cases yet to be settled by about $629 million. The cost recovery program has not yet implemented the new methodology because it is waiting for approval from EPA; the Department of Justice, which litigates cost recovery cases; and an independent accounting firm hired to review the methodology. Until EPA uses the new methodology, it will continue to lose the opportunity to recover these funds.

According to EPA's cost recovery data as of the end of fiscal year 1998, the most recent data at the time of GAO's review, the agency had agreements to recover a total of about $2.4 billion since the beginning of the program. The agency spent a total of $15.9 billion in the Superfund program during this same period, but not all of this amount is recoverable. At some sites, for instance, there were no financially viable parties. Because EPA does not have a cost recovery performance measure that compares annually the amount of costs it recovers with the amount of costs it had the potential to recover, the agency cannot determine how well it is performing its cost recovery activities. The agency is concerned that developing such a recovery rate might be misinterpreted by settling parties as a willingness to settle for less than 100 percent of the recoverable costs in all cases and could therefore jeopardize its negotiations. In addition, EPA notes that it cannot control some factors that influence the amount of funds it can recover, such as the percentage of cleanups with financially viable responsible parties.

EPA Has Reduced Its Audit Backlog and Improved Some of Its Cost Estimates but Still Does Not Effectively Control Contractors' Cleanup Costs

EPA relies heavily on private contractors to perform or manage its cleanup activities. To deter and detect fraud, waste, and abuse by contractors, GAO recommended in February 1997 that EPA reduce its backlog of more than 500 required Superfund contract audits—the primary tool the agency uses to evaluate the adequacy of contractors' policies, procedures, controls, and performance. Depending on the size of the contractor and the amount of EPA work that the contractor is to accomplish, either EPA's Office of Inspector General or the Defense Contract Audit Agency is to conduct an audit within at least 2 years of EPA's request. Since February 1997, both agencies have eliminated almost all the backlog and are performing new audits on time. Although GAO did not review the quality of these audits,

conducting them in a more timely manner helps ensure that important records are maintained.

As GAO reported in February 1995 and 1997, EPA was not developing its own estimates of what cleanup work should cost and was not using such estimates to negotiate the best contract price for the government. In this review, GAO tested a sample of 35 work assignments that EPA had issued to contractors and found that the agency had generated its own estimates for all 35 assignments. GAO also determined that about half of those estimates closely matched the final price set for the work. However, EPA overestimated costs for 6 of the remaining assignments by as much as 36 percent and underestimated costs for 11 of them by as much as 101 percent. Such variances, according to EPA's own Financial Managers' Financial Integrity Act report, can indicate problems with the quality of the agency's estimates. The EPA staff that prepared these cost estimates said their lack of experience and access to detailed historical site-specific cost data hinder their ability to develop accurate estimates. EPA has established a workgroup to assess its cost-estimating procedures and to design solutions to identified problems, including training options. The agency has undertaken similar corrective measures in the past but has had problems fully implementing and sustaining them over the long term. While EPA is also collecting cost data as part of a new Superfund contract management information system, several EPA cost estimators are concerned that the system will collect aggregate cost data, not the site-specific data they need to improve their estimates. Furthermore, because cost data from prior work will not be entered into the system, estimators will have to wait years for the historical data they need.

Finally, as GAO reported in the past, EPA was paying too high a percentage of funds to contractors for program support costs, such as rent and management salaries, leaving too small a percentage for cleanup work. One major reason for the high percentage was that EPA retained all of its 45 Superfund contractors and continued to pay their program support costs, even though it did not have enough cleanup work to give to all of the contractors. In response, EPA reduced by half the number of contractors it plans to retain as it authorizes its new round of Superfund contracts. However, at the time of our review, 10 of 15 new contracts exceeded EPA's target of 11 percent for program support costs, ranging from 16 to 76 percent, with a median of 28 percent. The costs remain high, in part, because EPA continues to retain more contractors than it needs and continues to pay their overhead costs. Given that EPA expects its future Superfund workload to decrease as states take on more cleanups, the

percentage of program support costs will continue to rise unless the agency now takes the opportunity to make adjustments when deciding whether to exercise the contract options to renew those contracts whose base periods are expiring soon.

The recurring problems that GAO identified raise broader questions about EPA's contracting practices and the need for sustained management attention to reforms. EPA currently has a "Contracts 2000" initiative to consider, among other things, various contract management options that it could use to address additional issues, such as the need to have contracts and contract management staff in place in each of its 10 regional offices. However, the agency could not provide GAO with documentation describing the team's (1) overall strategy for determining what options it would recommend that the agency adopt and (2) time frames for implementing them.

Recommendations

GAO makes a number of recommendations in this report to improve (1) agencies' processes for ensuring that limited cleanup dollars go to the sites posing the highest risks, (2) EPA's ability to recover its cleanup costs from the parties responsible for the contamination at sites, and (3) EPA's control of contractors' costs.

Agency Comments

GAO provided a draft of this report for review and comment to EPA and the departments of Agriculture, including the Forest Service; Defense, including the U. S. Army Corps of Engineers; Energy; and the Interior, including the Bureau of Land Management. GAO met with or obtained information from officials in each of these organizations responsible for making cleanup funding decisions, implementing various portions of each agency's cleanup programs, and contracting for cleanup work. The agencies provided updated information on and technical corrections and clarifications to the draft report, which were incorporated as appropriate. EPA, Agriculture, Defense, and Interior generally agreed with GAO's findings and recommendations. Energy agreed with GAO's presentation of its process for setting risk-based priorities for funding cleanups at individual facilities, but continues to disagree with GAO's long-standing recommendation that it develop a nationwide risk-based system to set cleanup priorities in order to achieve more cost-effective cleanup progress. Energy maintains that locally set priorities are more appropriate, given the unique characteristics of each of its facilities, and that all of its facilities pose high enough risks to merit steady funding. GAO maintains

that developing nationwide cleanup priorities would help the Department make informed budget decisions and analyze trade-offs among its facilities. Additional discussions of the agencies' comments and GAO's responses are provided in chapters 2, 3, and 4.

Contents

Abbreviations

BLM	Bureau of Land Management
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
DCAA	Defense Contract Audit Agency
EPA	Environmental Protection Agency
NPL	National Priorities List
OAM	Office of Acquisition Management
OMB	Office of Management and Budget
OSWER	Office of Solid Waste and Emergency Response

Introduction

The Environmental Protection Agency (EPA) administers the federal program for ensuring the cleanup of abandoned hazardous waste sites that pose significant risks to public health and the environment. EPA may compel parties responsible for the contamination to conduct or pay for these cleanups. EPA manages cleanups for a portion of these hazardous sites through the Superfund program. Other federal agencies clean up sites on their lands and can also compel parties responsible for the contamination to conduct or pay for these cleanups. States generally manage cleanups at sites that are not addressed in the Superfund program. Estimates predict that the nation's total investment in cleanups will exceed hundreds of billions of dollars. This report assesses federal agencies' progress in solving several problems that hinder their ability to protect this investment.

Background on the Superfund Program

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended, governs cleanups of both federal and nonfederal hazardous waste sites. The program was originally authorized for 5 years and has been reauthorized twice, in 1986 and 1990. EPA evaluates contaminated sites and places those that qualify for long-term cleanup on its National Priorities List. EPA may either order parties responsible for the contamination to perform cleanups or clean up sites itself and seek reimbursement from the responsible parties.[1] EPA relies heavily on private contractors to perform or manage cleanup activities. CERCLA also established a trust fund (the Superfund trust fund) to pay for cleanups and related activities, financed primarily by taxes on crude oil and chemicals. The program's authorization, and the taxes financing the fund, expired in 1995. The Congress continues to fund the program through annual appropriations from the Superfund trust fund and general revenues.[2]

The federal government faces an even greater potential cleanup investment than EPA alone. Federal agencies must report potential hazardous waste sites on lands that they administer to EPA. Agencies clean them up using funds from their own appropriations.[3] The agencies potentially responsible for the most cleanups are the departments of Agriculture, Defense, Energy, and the Interior. As of September 1998, EPA

[1]Parties responsible for cleanups include waste generators, site owners and operators, transporters, and persons who arranged for the treatment or disposal of hazardous wastes.

[2]See Superfund: Status of the Superfund Trust Fund (GAO/RCED-98-152R, Apr. 16, 1998).

[3]The costs of long-term cleanup actions at federal facilities are generally not eligible for funding from the Superfund trust fund.

had included 2,104 of these agencies' facilities on the federal facility docket—the list of federally owned facilities that EPA is to consider for placement on the National Priorities List—and had included a total of 173 of these facilities on the National Priorities List.[4] (See table 1.1.)

Table 1.1: Number of Federal Facilities on the Docket and on the National Priorities List as of September 1998

Agency	Facilities on docket	Facilities on the National Priorities List
Agriculture	182	3
Defense	974	141
Energy [a]	84	21
Interior	453	3
All others [b]	411	5
Total	**2,104**	**173**

Source: EPA's Office of Solid Waste and Emergency Response.

[a]Energy cleanup managers said that 3 of the Department's 21 facilities on the National Priorities List have now been transferred to the U.S. Army Corps of Engineers, within Defense.

[b]Agencies in the "All others" category include the Central Intelligence Agency, Commerce, EPA, General Services Administration, Health and Human Services, Housing and Urban Development, Justice, Labor, National Aeronautics and Space Administration, Postal Service, Small Business Administration, Tennessee Valley Authority, Transportation, Treasury, and Veterans Affairs.

For a federal facility on the National Priorities List, EPA enters into an interagency agreement under which the responsible federal agency cleans up the facility. The agreement establishes penalties for failure to comply with the schedule or terms of the cleanup.

In 1995, a group of representatives from federal agencies responsible for cleanups under the Superfund program, the Federal Facilities Policy Group, estimated that the total cost of cleaning up these federal facilities ranges from $234 billion to more than $300 billion over a 75-year period.[5] For fiscal years 1991 through 1999, the Congress appropriated to Agriculture, Defense, Energy, and the Interior—the four agencies included

[4]A "site" generally refers to a specific area of contamination and a "facility" to a geographically contiguous area under an agency's ownership or control within which a contaminated site or sites are located.

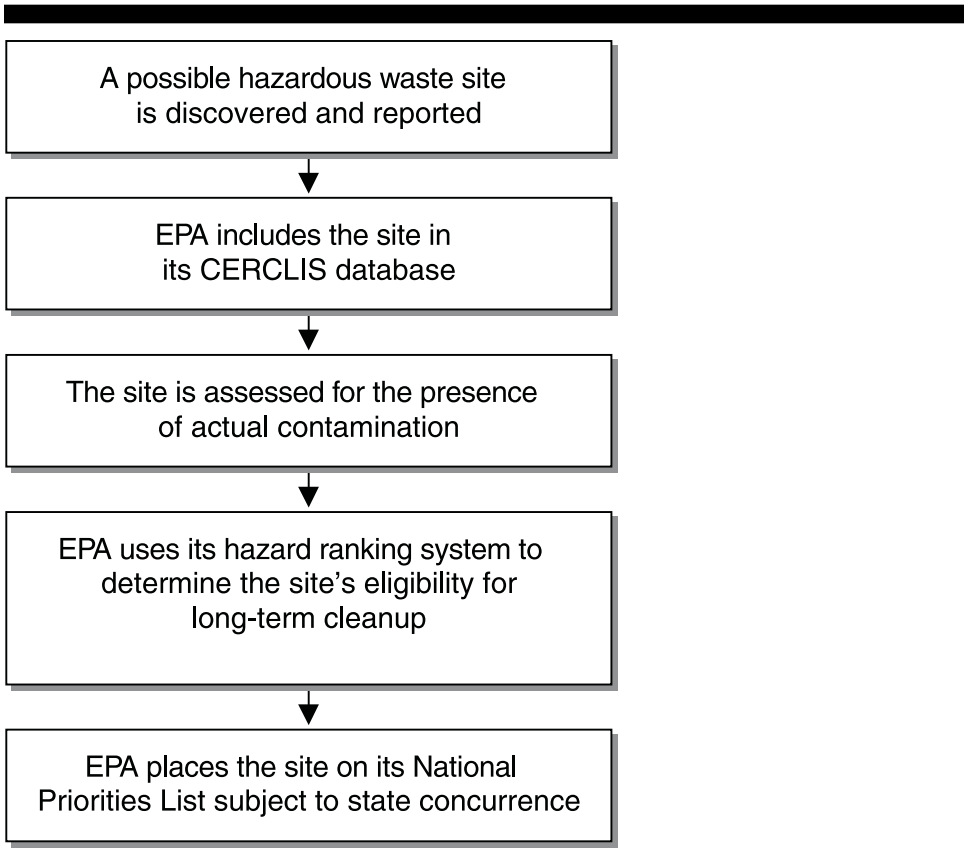
[5]The Federal Facilities Policy Group was convened by the Director of the Office of Management and Budget and the Chair of the Council on Environmental Quality to review the current status and future course of environmental response and restoration at federal facilities. The group included officials from the departments of Agriculture, Defense, Energy, and the Interior; EPA; and other organizations.

in our review— a total of almost $33 billion for hazardous waste cleanups.[6]

EPA's Site Cleanup Process

Once a site has been identified, EPA includes it in the database it uses to track hazardous waste sites, known as the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS). The next step in EPA's cleanup process is to assess the site to determine whether the contamination poses a large enough health or environmental risk to qualify for a long-term cleanup under the Superfund program. (See fig. 1.1.)

Figure 1.1: Steps Toward Including a Site on EPA's National Priorities List

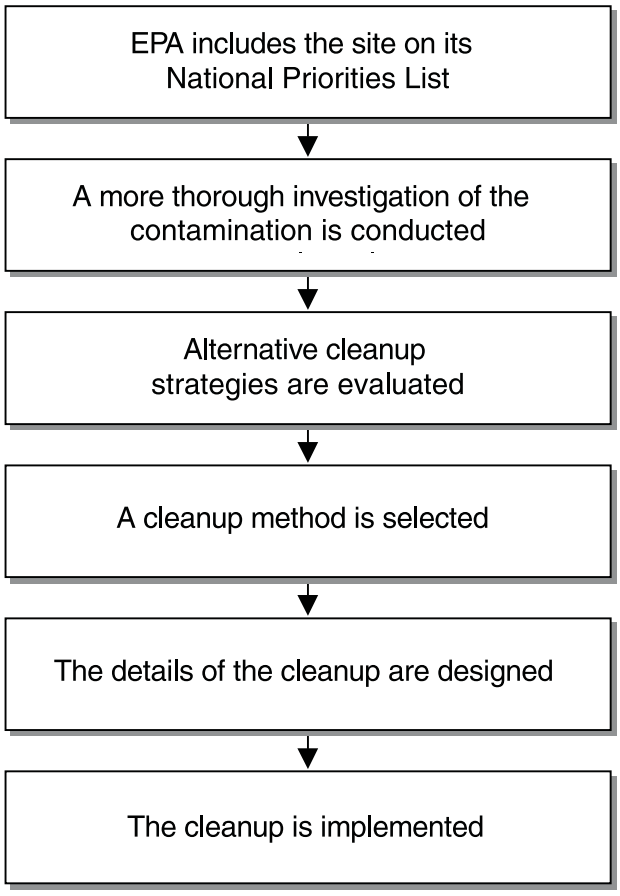


[6]The $33 billion includes approximately $18.2 billion for Defense, $13.8 billion for Energy, $0.5 billion for Interior, and $0.2 billion for Agriculture.

For nonfederal sites, EPA or the state in which the potentially contaminated site is located conducts the assessment. The responsible federal agencies assess their own sites that are on the federal facility docket. EPA then uses the data from these assessments to calculate a site's potential risks by using its hazard ranking system. This system assesses potential risks to humans and sensitive environments, such as wetlands, from exposure to contamination at the site through four "pathways"—soil, groundwater, surface water, and air. Each site receives a score ranging from 0 to 100, and sites that score above 28.5 in this system are eligible to be considered for placement on EPA's National Priorities List. Only sites on this list may receive long-term cleanups financed by the Superfund trust fund.

EPA, typically with a state's concurrence, proposes that an eligible site be placed on the agency's National Priorities List. Once EPA places the site on the list, it generally receives a more extensive investigation of the risks it poses and an evaluation of alternative cleanup methods to address these risks. After one or more cleanup methods are selected, the cleanup is designed and implemented, either by EPA or by the responsible parties under EPA's oversight. (See fig. 1.2.)

Figure 1.2: Cleanup Steps for Sites on the National Priorities List



Once the cleanup is completed and EPA considers that the site no longer poses a risk to human health or the environment, EPA may remove the site from the National Priorities List and delete it from CERCLIS.

EPA's Office of Solid Waste and Emergency Response (OSWER) administers the Superfund program, setting its policy and direction through the Office of Emergency and Remedial Response. However, EPA's 10 regional offices award contracts for the cleanups in their jurisdiction that the agency has decided to fund, manage cleanup activities at these sites, monitor private parties' and federal agencies' cleanups, and determine when to propose new sites for the program or delete completed sites.

Prior GAO Work

In 1990, we identified a group of federal programs that could pose a significant risk of waste, fraud, abuse, and mismanagement, as well as a significant financial risk to the government. We included the Superfund program in this group because of the anticipated large federal investment and the extensive use of contractors to implement the program. In 1992, we reported on key problems with the Superfund program and actions EPA should take to decrease this risk.[7] Specifically, we reported on the need (1) for EPA and other federal agencies to give greater consideration to the relative risks of sites when setting priorities for using their limited cleanup funds; (2) for EPA to improve its limited recovery of cleanup costs from responsible parties; and (3) for EPA to correct poor contract management practices and inadequate controls over contractors' costs. Since we issued our initial report in 1992, we have reviewed the agencies' progress in addressing these issues every 2 years.[8] In 1997, we reported that (1) several agencies had begun to implement systems that consider the relative risks of sites when allocating cleanup funds, while other agencies had not; (2) EPA had not resolved the cost recovery problems we had identified; and (3) EPA still had to improve its use of independent estimates to set the best contract prices for cleanups, its ability to control contractors' high program management costs, and its efforts to reduce a significant backlog of Superfund contract audits.

Objectives, Scope, and Methodology

Given EPA's and other federal agencies' uneven progress in responding to the concerns about the Superfund program's management that we raised in our prior work, we initiated this review to determine whether the agencies had now more fully addressed these concerns and, therefore, reduced the government's financial risks. Specifically, we wanted to assess (1) the efforts that EPA and other federal agencies with major cleanup responsibilities have made to set priorities for spending limited cleanup funds at the sites posing the highest risks; (2) EPA's actions to recover its expenditures for cleanups from the parties that caused the contamination, and (3) EPA's efforts to better control contractors' cleanup costs.

To respond to the first objective, we conducted interviews with EPA site assessment managers in 4 of EPA's 10 regions with the largest number of sites that are awaiting consideration for the National Priorities List or have already been listed – regions I (Boston), II (New York), IV (Atlanta), and V (Chicago) – and the director, deputy director, and staff of the State,

[7] High-Risk Series: Superfund Program Management (GAO/HR-93-10, Dec. 1992).

[8] High-Risk Series: Superfund Program Management (GAO/HR-95-12, Feb. 1995; GAO/HR-97-14, Feb. 1997; and GAO/OCG-99-17, Jan. 1999).

Tribal, and Site Identification Center within OSWER to understand the agency's approach to assessing and listing sites. We also interviewed the chair and 4 of 10 regional representatives on EPA's National Prioritization Panel, which assigns nationwide priorities for all sites that are on the National Priorities List and are ready to construct the cleanup. We obtained and reviewed documents that describe the criteria and weights the panel uses to score and rank sites. In addition, we examined the panel's funding decisions for fiscal year 1997, confirming that they were based on the panel's ranking. To understand EPA's responsibilities and overall approach to federal facility cleanups, we met with the associate director of OSWER's Federal Facilities Restoration and Reuse Office and interviewed remedial managers who oversee federal facility cleanups in regions IV (Atlanta), V (Chicago), VIII (Denver), IX (San Francisco), and X (Seattle). We also conducted interviews with environmental cleanup and budget officials at the headquarters of the departments of Agriculture, Defense, Energy, and the Interior. As necessary, we visited regional offices to test how field offices implemented these relative risk policies and used relative risk to make cleanup funding decisions.

For the second objective—assessing EPA's cost recovery program—we interviewed and obtained data from cost recovery program managers in EPA headquarters and two regional offices. In EPA headquarters, we met with the director of the Policy and Program Evaluation Division in the Office of Site Remediation and Enforcement, Office of Enforcement and Compliance Assurance, as well as the chief of the Program and Cost Accounting Branch in the Financial Management Division, Office of the Comptroller, Office of the Chief Financial Officer. We reviewed EPA's proposed methodology on developing a new indirect cost rate to charge to responsible parties to identify changes from the previous method. In addition, we analyzed EPA's 1999 annual plan for the Government Performance and Results Act to determine the status of EPA's goals and performance measures. We also spoke with EPA enforcement, cost recovery, and legal staff in regions IV (Atlanta) and V (Chicago), which we selected because of their unique and large recovery efforts, respectively.

For the last objective—assessing EPA's management of Superfund contracts—we conducted work at EPA headquarters and three EPA regions. At headquarters, we met with Superfund program managers in OSWER, including the deputy director, Office of Emergency and Remedial Response and the director and senior managers, Office of Acquisition Management, to understand EPA's contracting policies and procedures. We also met with Superfund program and contracting managers in regions III

(Philadelphia) and VII (Kansas City), because their Superfund contracts had been in place for the longest time, and in Region V (Chicago), because we had selected this region in our last review. To test the quality and use of independent government cost estimates to set contract prices, we conducted a detailed analysis of a total of 35 Superfund contract work assignments initiated in the three EPA regions from January 1, 1997, through September 30, 1997. We used this time frame because it was similar to the time frame in our last review and would serve as a basis for comparison. We also visited the U.S. Army Corps of Engineers in Washington, D.C., to compare its cost-estimating practices with EPA's. In addition, we visited a private Superfund contractor in Region III to get a general understanding of how contractors estimate costs for Superfund cleanup activities. We also met with EPA's Office of the Inspector General in Washington, D.C, and officials from the Defense Contract Audit Agency (DCAA) in Fort Belvoir, Virginia.[9]

For a more detailed description of our audit's scope and methodology, see appendix I. We conducted our work from May 1998 through April 1999 in accordance with generally accepted government auditing standards.

[9]EPA's Office of the Inspector General audits the agency's contractors when EPA is the primary customer for the contractor. The Defense Contract Audit Agency conducts audits of EPA contractors when EPA is not the primary agency providing work and funding to the contractors.

Most Agencies Are Considering Risk in Setting Cleanup Priorities

EPA has made progress over the years in responding to our concerns that it was not effectively using its limited cleanup dollars by setting funding priorities on the basis of sites' relative risks to human health and the environment. "Relative risk" refers to the risk a site poses to human health and the environment compared with the risks posed by other sites. This comparison may also consider other important factors, such as communities' concerns and legal requirements. EPA now manages sites on the National Priorities List according to a "worst sites first" policy. However, EPA may not know about all high-risk sites because states now increasingly decide which ones they will address under their own cleanup programs and which ones they want EPA to address through the Superfund program. Because states are managing these sites, EPA does not have information on the status of their cleanups. Without this information, EPA cannot assure local communities near high-risk sites that these sites are being addressed. Nor can EPA plan its own work in the event that the states require EPA's assistance at these sites. Furthermore, because of the significant federal investment still needed to clean up hazardous waste sites on federal facilities and lands, it is important that other federal agencies likewise use their limited cleanup dollars efficiently by addressing the riskiest sites first. While the departments of Agriculture, Defense, and Energy have begun using risk to set priorities for cleanups to varying degrees, Interior, specifically the Bureau of Land Management (BLM), has not completed the first step—developing an inventory of its hazardous waste cleanup workload, estimated to cost billions of dollars.

EPA Funds Its Cleanup Actions According to Risk but Is Not Adding New Sites to the National Priorities List Solely on the Basis of Risk

For sites that EPA has already placed on its National Priorities List and whose cleanup will be conducted or monitored by EPA, EPA provides funding according to their relative risk. However, EPA is not using relative risk as the primary basis for deciding what new sites to list. States are now assuming more responsibility for high-risk sites—those that are risky enough to be eligible for the National Priorities List. As a result, this evolving relationship with the states has created a need for closer coordination between EPA and the states with respect to sharing information on the status of cleanups, deciding who should address sites, and disseminating that information to the public. Currently, EPA cannot ensure that some of the worst sites are being addressed first, if at all, because some states may not be reporting all high-risk sites to EPA and, therefore, EPA may not know the full universe of such sites. Furthermore, states are not always recommending sites for EPA to address through the Superfund program because the sites present the highest risk to human

health and the environment, but rather because they are too difficult and too expensive for the states to address.

EPA Uses Relative Risk to Set Cleanup Priorities for Sites on the National Priorities List

Once EPA places a site on its National Priorities List for cleanup, the agency uses relative risk to decide which ones to fund when priority setting is needed. Even though EPA's policy has been to address the worst sites first since 1989, our prior work showed that the agency's regions were setting priorities for early phases of cleanup on the basis of other factors, such as geographical considerations (e.g., funding equal numbers of sites in each state). In 1997, we reported that EPA had begun to give greater consideration to sites' relative risks when setting priorities.[1]

Since then, EPA has continued to implement a nationwide process to set risk-based funding priorities for sites ready to begin construction of the cleanup method because it has had more sites to fund than dollars available. EPA does not go through a similar process for sites in earlier cleanup phases. Because it funds most of these sites so as not to delay them from moving through the cleanup process, EPA officials told us that they had a relatively small or no backlog of sites waiting to begin the earlier cleanup phases; therefore, they did not have to set funding priorities.

In order to distribute its fiscal year 1996 funds to the backlog of sites awaiting construction, EPA created the National Risk-Based Prioritization Panel. This panel, which is composed of regional and headquarters cleanup managers, is to rank all of the sites ready to construct the cleanup method nationwide, primarily on the basis of the risks they pose. The panel uses five weighted criteria, four of which address health and environmental risks and one of which addresses considerations such as cost-effectiveness. The panel then ranks the sites and EPA, in turn, allocates funding for these sites according to this ranking. The sites that are not funded in one year can compete again for funding the following year.

In our 1997 report, we determined that the panel used the ranking process to allocate fiscal year 1996 funds. However, because the panel process was new and the Congress did not pass EPA's appropriations act until April of that year, we decided to continue monitoring the agency's use of the panel process. We found that, in fiscal year 1998, EPA ranked 50 sites and funded 38 according to the panel's ranking, at a value of more than $200 million.

[1]High-Risk Series: Superfund Program Management (GAO/HR-97-14, Feb. 1997).

EPA Does Not Fully Control Which Sites Are Identified and Included on the National Priorities List

EPA does not know the universe of high-risk sites remaining to be addressed. EPA has never had its own site identification program and relies primarily on other entities, such as states and private citizens, to report sites for possible inclusion in the Superfund program. Early in the program, these entities referred tens of thousands of sites to EPA. Over time, however, according to site assessment managers in all four regions in our review, the states became reluctant to report sites because they wanted to avoid what they saw as the long and costly Superfund cleanup process. As a result, they currently do not necessarily report all high-risk sites to EPA.

For those sites that are reported to EPA, the agency assesses the level of potential risk posed to human health and the environment by applying the hazard ranking system.[2] Sites scoring at least 28.5 are considered eligible for the National Priorities List but are not automatically included. As state cleanup programs have matured, the states have assumed a greater role in determining which sites EPA will address under Superfund and which sites the states will address under their own cleanup programs. Most states have established enforcement programs similar to the Superfund program and, more recently, have used EPA grants to help establish voluntary cleanup programs. Consequently, many states prefer to use their own programs to address sites, including sites with risks high enough to make them potentially eligible for the National Priorities List. If a state does not want to assume responsibility for a cleanup, it can turn the site over to EPA.

The states also have a greater role in deciding which sites get listed because EPA, as a matter of policy, seeks the relevant state governor's concurrence before listing a site. EPA was required to seek concurrence under appropriations laws for fiscal years 1995 and 1996 and has since continued the practice. According to EPA officials, some governors are reluctant to concur, because placement on the list stigmatizes a site as one of the worst in the country, thus discouraging development. As of February 1999, governors had opposed the listing of 31 sites and supported the listing of another 123 sites. Since 1995, EPA has proposed only one site for listing without the relevant governor's concurrence.[3]

[2]EPA's hazard ranking system assigns a score from 0 to 100 to evaluate the potential risks a site poses to humans and sensitive environments from exposure through four pathways–soil, groundwater, surface water and air. A site with a score of 28.5 or higher is considered eligible for placement on the National Priorities List.

[3]EPA proposed the Fox River, Wisconsin, site for listing in July 1998, over the governor's objection, because of concerns raised by EPA and other stakeholders about the lack of cleanup progress, given the significant risks posed to wildlife and humans.

Given increases in the states' ability to address sites combined with EPA's policy of seeking the relevant governor's concurrence, EPA does not propose an eligible site for the National Priorities List until it enters into negotiations with the state to determine whether the state plans to take any action at the site through its own programs. If EPA anticipates that the state will clean up the site, the agency usually assigns the site a low priority for listing, according to cleanup managers from the four EPA regions. In addition, the managers said that they typically do not take any further action at these sites unless the state subsequently asks EPA to list the site. Therefore, according to these cleanup managers, decisions to propose sites for listing on the National Priorities List are not based primarily on the sites' relative risks. Instead, states turn sites over to EPA for cleanup under the Superfund program when they have difficulties in getting responsible parties to pay for the cleanup, for example, or when they encounter a complex cleanup, such as one addressing groundwater problems. Consequently, EPA cleanup managers expect that future National Priorities List sites will be large, complex, and thus costly to clean up or will have either recalcitrant or no financially viable responsible parties to help pay for the cleanup. This trend could influence the future number and types of sites on the list. In the late 1980s to early 1990s, EPA proposed about 76 sites, on average, per year for listing. In the mid 1990s, this number dropped to 28 because EPA decided to concentrate more on completing cleanups for sites already listed. Although EPA has recently stated that it expects to return to an average listing rate of about 40 sites, this workload may depend on states' concurrence.

EPA Lacks Information on the Status of State Cleanups

As the states' roles in cleaning up high-risk sites have increased, EPA cleanup managers have noted that they do not know to what extent all high-risk sites are being addressed and cannot respond to public inquiries about the status of cleanups at the sites that the states are addressing. EPA administers the federal cleanup of abandoned hazardous waste sites that pose significant risks to public health and the environment. As the states increasingly take responsibility for cleaning up these sites outside the Superfund program, EPA must rely on the states to report on the sites' status. Sometimes a state may later ask that EPA increase its involvement at a state-run cleanup.

In order to plan their own workload and to respond to public inquiries, three of the four EPA regions in our review said that they would like more information on the status of state-led cleanups at certain high-risk sites that posed particular concerns for the regions. For example, cleanup managers in EPA's Region I in Boston predicted that although only a

handful of sites from their region would be placed on the National Priorities List in the future, they plan to monitor about 50 additional high-priority sites being addressed under state programs because of risks posed by particular hazards, recalcitrant responsible parties, or community concerns. Cleanup managers in Region IV in Atlanta expressed similar interest in tracking the status of certain high-priority sites in their region that are being cleaned up outside the Superfund program. Region II in New York is already piloting a project to monitor the progress of state cleanups to better plan its own Superfund workload if the state later decides to turn sites over to EPA, as well as to provide better information to the public on the status of these cleanups. Under the pilot project, EPA and New York are trying to electronically link the state's database on the status of sites with EPA's CERCLIS database so that EPA can better track sites. According to these regional officials, one reason for New York's willingness to cooperate in this effort is that it could speed up the process of eliminating sites from further consideration for the Superfund program. On the other hand, cleanup managers in Region V said that they have enough information on the status of cleanups and do not need a tracking system because the states send letters to EPA notifying it that cleanups are either under way or complete.

Lack of Communication and Coordination Between States and EPA Means That Some High-Risk Sites Are Not Addressed

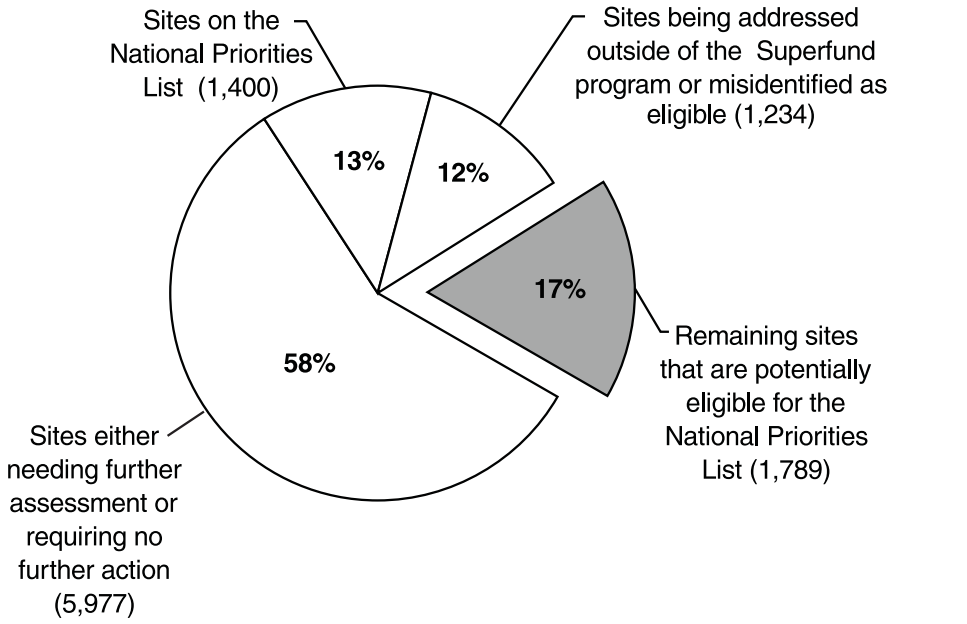
In November 1998, we reported on the need for better communication and coordination between federal and state officials to set priorities and determine cleanup responsibilities for high-risk sites.[4] As of October 1998, according to EPA, the agency had about 10,400 sites in CERCLIS—the database EPA uses to track hazardous waste sites. Of these sites, 5,977 need further assessment or are candidates for removal from CERCLIS because no further EPA action is required. About 1,400 sites are on the National Priorities List.[5,6] EPA classified the remaining 3,023 sites as potentially eligible for listing on the basis of the hazard ranking system. (See fig. 2.1.)

[4]Hazardous Waste: Unaddressed Risks at Many Potential Superfund Sites (GAO/RCED-99-8, Nov. 30, 1998).

[5] As of Aug. 1998, EPA had deleted 175 of these sites from the National Priorities List upon construction of the cleanup remedy.

[6] Of these 1,400 "sites," 173 are federal facilities.

Figure 2.1: Status of All Sites in EPA's CERCLIS Database



Source: GAO and EPA.

Of these 3,023 sites, we found that approximately 1,234 have ongoing or completed cleanups outside of Superfund or are misidentified as eligible. The disposition of most of the remaining 1,789 sites, 307 of which were considered among the highest-risk sites, was uncertain. The state and federal cleanup managers did not know who would address them, under what programs, whether responsible parties would participate, or when the cleanup actions would begin. As a result of our findings, we recommended in November 1998 that EPA regions and the states coordinate their efforts to ensure that the highest-risk sites are addressed, assigning a lead agency as necessary. In response, the agency is planning to further assess the 307 highest-risk sites to determine whether it needs to take any immediate cleanup actions at these sites through its short-term removal program.

For those sites that EPA and states have agreed should be placed on the National Priorities List, EPA does not use relative risk to decide which ones to list first. Although EPA initially uses its hazard ranking system as a screening tool to determine a site's eligibility for listing, other factors, such

as a governor's concurrence or EPA's inability to identify a responsible party willing to conduct the cleanup, will determine when EPA decides to propose a site for listing.

The Departments of Agriculture, Defense, and Energy Have Set Risk-Based Cleanup Priorities, but Interior Has Not Yet Identified All Sites Needing Cleanup

Three of the four federal agencies with the largest cleanup workloads—the departments of Agriculture, Defense, and Energy—have implemented systems to set cleanup funding priorities on the basis of the relative risk sites pose. The Department of the Interior has not developed a central database of hazardous waste sites, estimated the resources it needs to address them, or developed an overall strategy to manage its cleanup workload.

Given that current estimates predict federal agencies could spend more than $300 billion to clean up contaminated federal facilities, it is imperative that they spend this money effectively. Since 1995, we have encouraged these agencies to set risk-based priorities for applying their cleanup dollars to the backlogged sites waiting to be addressed.[7] In 1995, the Federal Facilities Environmental Restoration Dialogue Committee—consisting of representatives from federal, state, local, and tribal governments, as well as citizens' groups and labor organizations—reached a consensus that risk should be a primary consideration, among other factors, in setting cleanup priorities at federal facilities.[8] These other factors include the cost-effectiveness of the cleanup remedies and their responsiveness to any cleanup requirements and concerns from the communities surrounding a facility. Likewise, in 1995, the Administrator announced EPA's intention to promote risk-based priority setting at federal facilities and sites.[9] The federal agencies in our review have responded to this call for setting risk-based cleanup priorities to varying degrees. (See table 2.1.)

[7]Federal Facilities: Consistent Relative Risk Evaluations Needed for Prioritizing Cleanups (GAO/RCED-96-150, June 7, 1996), Federal Hazardous Waste Sites: Opportunities for More Cost Effective Cleanups (GAO/T-RCED-95-188, May 18, 1995), and Superfund Program Management (GAO/HR-95-12, Feb. 1995).

[8]EPA chartered the Federal Facilities Environmental Restoration Dialogue Committee in 1992 to develop a consensus on how agencies can make fair and consistent decisions about cleanup priorities and funding.

[9]In Aug. 1998, EPA issued a new policy, the "Interim Final Policy on the Use of Risk-Based Methodologies in Setting Priorities for Cleanup Actions at Federal Facilities," that provides guidance for its regions to use to promote risk-based priority setting for cleanups at federal facilities and calls for EPA regions to meet annually with the federal facility environmental staff in their areas to negotiate cleanup priorities.

Table 2.1: Summary of Steps Four Federal Agencies Have Taken to Set Risk-Based Priorities

Department	Does the agency have a system in place to identify potential hazardous waste sites and characterize their risks?	Do individual locations within the agency fund cleanups on the basis of sites' risk?	Does the agency allocate funds across locations nationwide on the basis of sites' risks?
Agriculture [a]	Yes	Yes	Yes
Defense	Yes	Yes	No [b]
Energy	Yes	Yes	No
Interior	No	No	No [c]

[a]For this table, Agriculture represents the programs within the Forest Service because it is responsible for the most significant portion of the Department's cleanups to date.

[b]Although the Department of Defense does not allocate funds nationwide on the basis of risk, it has set nationwide cleanup goals for high-risk sites that are to be met by each of its five environmental budget components—one for each of the three services, one for all Defense-wide agencies, and one for all formerly used Defense sites. Each component sets priorities for its own sites on a nationwide basis.

[c]Although the Department of the Interior does not set priorities for all sites across its bureaus on a nationwide basis, it does use risk to set nationwide priorities for the small number of sites it considers for funding from its Central Hazardous Materials Fund.

Agriculture's Forest Service Sets Risk-Based Cleanup Priorities

In the early 1990s, Agriculture's Forest Service, which has accomplished the most significant portion of the Department's cleanup activities to date, implemented a process to rank and fund sites on the basis of their relative risks. The Forest Service manages the National Forest System, including remote public lands that have been contaminated by the activities of other parties. However, in 1996, we reported that the Forest Service had made limited progress in completing an inventory of its potential hazardous waste sites, such as mining waste sites, a critical first step for effectively establishing priorities.[10] Since that time, the Forest Service has made a concerted effort to identify its universe of sites and develop an inventory of them. The Forest Service has also used the results of its inventory to fund cleanups of the sites posing the most serious risks, while also requiring the parties responsible for the contamination to pay for some of the cleanups.

According to Agriculture's coordinator for hazardous waste cleanups and the Forest Service's chief engineer in charge of cleanups, the Forest Service, as of January 1999, had completed its inventory of underground

[10]Federal Land Management: Information on Efforts to Inventory Abandoned Hard Rock Mines (GAO/RCED-96-30, Feb. 23, 1996).

tanks, landfills, and abandoned hard rock mining sites.[11] In completing the mining site inventory, which encompasses the largest number of sites remaining to be addressed, the Forest Service set standard procedures for its regions to identify sites with the potential to release hazardous substances and pose risks to human health and the environment. The regions ranked each site as posing a high, medium, or low relative risk depending on the presence of mining wastes or discharges; the site's proximity to sensitive environments, such as wetlands; and applicable regulatory cleanup requirements. As a result of this nationwide inventory, the Forest Service has identified a total of approximately 39,000 abandoned mine sites, of which an estimated 1,800, or about 5 percent, are considered high priorities because they are or could be releasing hazardous substances.

The Forest Service has not yet completed an inventory of sites contaminated by Defense activities on its lands, such as sites containing unexploded ordnance. This is mainly because the Forest Service has had very little information about these sites, according to Agriculture's coordinator for hazardous waste cleanups. Defense and Agriculture have not fully implemented a 1988 memorandum of understanding for cooperation between the two agencies on this issue. Recently, Defense provided the Forest Service with a list of sites that Defense had used in the past and that the Forest Service now manages. However, the Forest Service would like Defense, which may be a potentially responsible party at these sites, to better identify its activities at those sites and the hazards that may be associated with those activities. As a start, the Forest Service would like to be included in Defense's process for setting cleanup priorities and standards when addressing sites on National Forest System lands. In this way, Defense and Agriculture could begin to work together to clean up sites on lands that Defense could have contaminated. To help ensure that the federal agencies address these sites, EPA plans to establish a workgroup in the spring of 1999, according to the associate director of the Federal Facilities Restoration and Reuse Office. The workgroup will initially consist of EPA representatives and, later, other federal agencies to discuss how to accurately characterize the risks at these sites, set priorities among them, and fund their cleanups. Furthermore, according to a senior official in the Office of the Deputy Under Secretary of Defense for Environmental Security, Defense, Agriculture, and Interior are in the

[11]Hard rock mining involves the extraction and preliminary processing of minerals such as gold, silver, copper, and lead, typically for use in industrial applications. Abandoned hard rock mines could pose physical safety hazards (e.g., open shafts or pits, unsafe structures, or explosives) or risks to the environment and human health (e.g., through the drainage of hazardous substances into nearby surface water or groundwater).

process of finalizing a new memorandum of agreement to establish the Inter-Agency Military Land Use Coordination Committee. The committee consists of senior policy officials from Defense, Agriculture, and Interior and has established five subgroups addressing issues such as the contamination and cleanup of public lands.

The Forest Service has used its inventories to set cleanup goals, justify requests for additional cleanup funds, and allocate the funds it receives. On the basis of data from its inventories, the Forest Service has set a goal to clean up all of its high-priority hazardous waste sites by 2045, at a cost of approximately $2 billion. Funding for the Forest Service's hazardous waste program has increased in recent years from approximately $7 million in fiscal year 1997 to approximately $12.5 million in fiscal year 1999. Furthermore, the administration has requested over a 70-percent increase for Forest Service programs, to $21.5 million for fiscal year 2000. This request is based on the Forest Service's inventories of hazardous waste sites.

To develop the Forest Service's annual funding request, the regions select sites to submit to a round table of regional and headquarters staff for priority ranking. For example, the Forest Service's regional office in Utah forwards approximately 10 to 15 sites to the round table each year depending on the relative risks the sites pose, the size of the cleanup workload the region can manage, and the degree to which parties responsible for the contamination are available and able to pay for the cleanup. The round table then ranks the sites from all nine regions using six factors, two of which specifically address risks to human health and the environment. The remaining four factors address such things as the cost-effectiveness of the proposed cleanup actions and any applicable statutory or regulatory cleanup requirements. The Forest Service uses this list to justify its cleanup budget requests to Agriculture and, eventually, the Congress. Agriculture's coordinator for hazardous waste cleanups explained that once the Forest Service receives its cleanup budget, it allocates funds to the regions according to their ranked list of priorities, and the regions in turn spend the funds following these priorities.

To supplement its limited cleanup funds, the Forest Service places priority on requiring responsible parties to clean up sites on its lands. In recent years, with EPA's assistance, the Forest Service and Agriculture have negotiated and issued cleanup orders to these parties and sought reimbursement for its cleanup costs from responsible parties under CERCLA. For example, in fiscal year 1998, Agriculture estimates that the

Forest Service was able to leverage its cleanup funding to produce more than $100 million in cleanup work funded by responsible parties.

Defense Has a Risk-Based Process for Setting Cleanup Priorities

In 1994, Defense implemented a consistent process for identifying and funding most sites according to risk within each of its five environmental components—one for each of the three military services, one for all Defense-wide agencies, and one for formerly used Defense sites. Following detailed guidance from the Department's Environmental Security Office, each of the components evaluates its sites and categorizes them into groups, depending on whether they pose high, medium, or low relative risks to human health and the environment.[12] These components evaluate the nature and concentration of the site's contaminants, the possible pathways for the contaminants to move from the site, and the opportunities for the contaminants to come in contact with humans. If the service or agency does not have enough information to evaluate a site, it must schedule the site for further study and conduct an interim cleanup action to address any immediate threats to public health and the environment.

The components use the results of their relative risk evaluations to develop their budget requests and allocate funds accordingly. Each Defense component has its own, separate appropriations account for environmental restoration and decides for itself what percentage of its high-risk sites it will fund in any given year. In 1997, the most recent year for which data are available, Defense spent about 82 percent of its cleanup dollars (on average, departmentwide) on high-risk sites, for those sites evaluated.[13]

The Department does not set priorities for sites among its components, and they do not compete against each other for environmental funding on the basis of the relative risks at their sites. According to the manager within the Department's Office of Environmental Security in charge of tracking cleanups, this has not been necessary because the components have been receiving sufficient appropriations to conduct scheduled

[12]Defense has set risk-based priorities for formerly used Defense sites containing hazardous waste but has not applied the priority-setting system to sites containing unexploded ordnance. According to an EPA official, federal agencies currently disagree about how to characterize the potential risk associated with unexploded ordnance. Defense is developing a risk-based priority system for unexploded ordnance sites but has not yet developed goals for addressing them.

[13]Defense does not require relative risk evaluations for sites where it has already made cleanup commitments; unexploded ordnance sites; sites requiring environmental cleanup as part of building demolition; or sites where it lacks information for an evaluation.

cleanups. This would also be somewhat difficult, according to Defense's environmental budget examiner, because once funds are appropriated, the Department cannot transfer funds between two appropriations accounts without obtaining statutory authority.

Even though the Department does not set nationwide priorities, it has established a set of nationwide cleanup goals—to have cleanup remedies in place at 50 percent of all installations' high-risk sites in 2002 and at 100 percent of these sites in 2007. The Department requires each component to annually certify that it is sufficiently funding its installations to meet these goals and biannually reviews the components' progress. If the Department determines that a component has not included sufficient funds in its annual budget request to meet its goals for that year, the Comptroller will require the component to revise its request, according to the Defense manager in charge of tracking cleanups.

In response to congressional concerns that the components were identifying too many sites in the high-risk category when requesting cleanup funding, in August 1997, the Office of Environmental Security developed more precise criteria for classifying sites' risks as high, medium, or low. In 1998, we found that for more than 99 percent of the 6,000 sites we analyzed, the components' classifications were consistent with the new definitions.[14] We recommended, however, that the Department provide more specific Defense-wide categories to aid in priority setting. The Department's Secretary for Environmental Security does not agree with this recommendation, stating that more refined categories of risk are currently being applied by individual installations.

Energy Sets Risk-Based Priorities Within but Not Among Facilities

In 1995, Energy developed procedures for considering the relative risks of its environmental management activities to help its facilities, or operations offices, establish cleanup funding priorities. Since then, Energy has continued to set priorities for its cleanups on the basis of risk and other factors at its operations offices. The Department's Office of Environmental Management requires its operations offices, in preparing their budget requests, to rank all of their proposed environmental management projects, which include CERCLA cleanups; activities required to maintain safe operations related to nuclear materials; and activities required to close, clean, and transfer property. Operations offices are to classify proposed cleanup projects as high, medium, or low priorities considering,

[14]Environmental Cleanup: DOD's Implementation of the Relative Risk Site Evaluation Process (GAO/NSIAD-99-25, Oct. 7, 1998).

at a minimum, seven core criteria, three of which relate to the level of risk to workers, the public, and the environment. The Department's Office of Environmental Management also provides guidance for operations offices to evaluate projects in four additional areas: (1) compliance with federal, state, and local cleanup regulations; (2) support for crucial operations at the site; (3) the potential for reducing costs; and (4) responsiveness to local citizens' concerns. Considering the results of the evaluations in these seven areas, each field office uses its own priority-setting system to rank its cleanup projects along with all of its other environmental management projects and submits this combined list to headquarters as part of the Department's budget request. Once the operations offices receive their budget allocations, they distribute the funds across projects according to the rank-ordered list.

For example, Rocky Flats, a facility that is preparing for closure, has assigned the highest priority to those environmental management projects needed to maintain safety, such as security systems for the plutonium and other special nuclear materials at the site. In its overall plan to close the facility, Rocky Flats used its own system to qualitatively rank-order all remaining projects, including CERCLA cleanup projects, and established a time line to complete them. To develop the sequence of projects, program managers considered the extent to which each one (1) reduces risks to human health and the environment as well as costs, (2) helps the facility progress toward closure, (3) cleans up the site, (4) complies with regulatory requirements, and (5) improves contractors' performance and the site's overall management. According to the risk expert at Rocky Flats, the resulting rankings will remain relatively constant from year to year; however, the time line or sequence for completing the projects may change. Because EPA was concerned that CERCLA cleanups may not rank high enough when compared to other efforts to clean up or manage nuclear materials, Energy agreed to work with EPA's federal facilities manager for Rocky Flats to annually select and fund a maximum of 12 of EPA's highest-priority environmental cleanup projects. EPA's federal facilities manager then monitors to ensure that Rocky Flats completes these projects in accordance with this cleanup agreement.

The Oak Ridge Operations Office, an active facility where CERCLA cleanups compete with ongoing operations, also assigns the highest priority to funding the environmental management activities needed for safety at its facilities. To set priorities among the remaining environmental projects, including the on-site treatment of waste, CERCLA cleanups, and the demolition of contaminated buildings, Oak Ridge uses its own quantitative

system to rank order these activities following Energy's seven relative risk areas. The Operations Office reviews and adjusts this ranking as necessary two to three times a year. Using these rankings in accordance with their 1992 cleanup agreement, EPA and the Oak Ridge Operations Office are to select their highest-priority environmental cleanup projects and set time lines for completing them. Recently, however, EPA has not been satisfied with its level of involvement in these decisions and is concerned because fiscal year 1999 is the third consecutive year that Energy has postponed funding some cleanup activities and asked EPA to extend the time lines of its cleanup agreement. Consequently, EPA has begun the formal dispute process provided for in the cleanup agreement with Energy. The agreement establishes penalties and possible fines for failure to comply with its schedule or terms.

Energy does not allocate funds across operations offices according to any nationwide ranking of projects. We previously reported that Energy would continue to make limited progress in cleaning up environmental problems if it did not set national priorities for cleanups.[15] Thus, we recommended that Energy set national priorities and allocate its resources accordingly. To date, the agency has not adopted this recommendation. According to a senior official in charge of strategic planning, Energy prefers to allow local decision-making when setting priorities among its environmental management projects because of the unique requirements posed by local regulations, community concerns, and the types and extent of contamination. As a result, according to a senior analyst in Energy's Office of Budget and Planning, Energy continues to allocate an environmental management budget to each operations office that is based on the extent and nature of the work required at its sites and the risks they pose. The amount of the environmental budget for each operations office varies very little from year to year, but the amount that operations offices use for CERCLA cleanups can vary substantially, depending on other competing funding priorities at the facility. For example, a contractor's unforeseen costs at one facility resulted in delays of certain CERCLA cleanups agreed to with EPA.

Energy also had previously stated that it could not adopt a nationwide priority system because it did not have the necessary data to do so. However, several of Energy's senior environmental managers at Oak Ridge and Rocky Flats and EPA's federal facilities managers for Energy's Hanford facility and Idaho National Engineering and Environmental Laboratory

[15]Department of Energy: National Priorities Needed for Meeting Environmental Agreements (GAO/RCED-95-1, Mar. 3, 1995) and Nuclear Weapons Complex: Establishing a National Risk-Based Strategy for Cleanup (GAO/T-RCED-95-120, Mar. 6, 1995).

stated that it is feasible for Energy to produce a national list of risk-based cleanup priorities. Energy officials acknowledge that although it may be technically feasible, it is not practical and could be counterproductive, stating that altering agreements reached with local stakeholders to accommodate a new national, risk-based prioritization scheme would cause significant disruption and legal challenges.

Interior Cannot Fully Set Priorities for Funding Cleanups Until the Bureau of Land Management Develops an Inventory of Sites and a Strategy for Their Cleanup

As we reported in 1997, Interior—in particular, its bureau with the largest number of potential cleanups, the Bureau of Land Management (BLM)—does not have a comprehensive inventory of its hazardous waste sites, an essential step for setting risk-based cleanup priorities.[16] Early estimates by BLM indicate that it faces a substantial cleanup workload, potentially costing billions of dollars, yet it has not systematically assessed the full extent of its cleanup problems. For example, in 1996, BLM estimated, on the basis of available data from sources such as the U.S. Bureau of Mines and the U.S. Geological Survey, that it had 70,000 to 300,000 abandoned mining sites on its lands. On the basis of sample field tests, BLM further estimated that about 4 to 13 percent of these sites—a range of 2,800 to 39,000 sites—may have contaminated material that poses potential risks to human health and the environment and must be addressed. Assuming that Interior would, at a minimum, conduct short-term removal actions at these sites, which can cost up to about $40,000 each according to the manager of BLM's hazardous materials program, the cost of cleaning up these sites could range from $112 million to $1.5 billion, while more extensive cleanups could cost billions of dollars. These estimates do not include the costs of cleanups at other BLM sites, including landfills, illegal dumping areas, and underground storage tanks.

BLM employs a reactive approach to cleanup by addressing hazards at sites after they have been identified by other federal and state agencies. Sometimes hazards are identified following injuries to citizens or livestock. The resulting patchwork of information is insufficient to develop an effective cleanup strategy for addressing the worst sites first. Furthermore, by not getting responsible parties to perform or pay for cleanups under CERCLA, BLM could cause the federal government to incur greater costs in the long run.

[16]BLM has developed six priorities for funding hazardous materials activities in its Hazardous Materials Management Manual. The first priority is for funding emergency removals to protect public health and BLM's natural resources. However, without a centralized database of sites requiring cleanup, these priorities have limited usefulness in making risk-based cleanup decisions.

Individual Field Offices Have Developed Some Inventory Data, but This Information Is Insufficient for Developing an Overall Cleanup Strategy

Cleanup managers differ on the need for an inventory. For example, the manager of BLM's hazardous materials management program has not supported the development of a more comprehensive inventory of BLM's hazardous waste sites, stating that each of BLM's 12 state offices has already discovered most large hazardous waste sites.[17] However, several BLM hazardous waste specialists in the field disagreed, stating that some field offices continue to find large, high-risk sites each year. These specialists believe that a comprehensive database of known sites and a process for identifying new sites would help the field offices better identify high-priority sites, develop a cleanup strategy, and justify cleanup budget requests.

Although BLM's state offices have completed portions of inventories and headquarters is beginning to electronically organize these portions, the data constitute a patchwork of inconsistent information. Environmental and abandoned mines specialists we talked with, representing six of BLM's state offices, have either attempted their own surveys or have relied on joint efforts with other federal agencies and states. For example, BLM's Nevada office participated in a small pilot program to identify environmental problems associated with abandoned mine sites but does not have an inventory of other sites, such as landfills and illegal dump sites.[18]

A lack of funds is the primary reason why BLM is reluctant to proactively survey its lands, according to BLM environmental managers at headquarters and in the field. The state field offices use much of BLM's annual hazardous materials budget—approximately $15 million in fiscal year 1998—to conduct emergency removals of hazardous materials. According to BLM, it accomplishes hundreds of such cleanup actions each year, ranging from the removal of debris that has been dumped on public lands illegally to the closure of water-polluting abandoned mines. As a result, developing an inventory is often not a high priority. In comparison, however, the Forest Service, with a similarly small environmental cleanup budget, was able to complete its inventory by funding it over several years, leaving some money for ongoing cleanups and removals on an annual basis.

Several of BLM's state offices have leveraged state funds to complete portions of inventories. For example, BLM's state offices in Wyoming, Colorado, and Montana have mine inventory data because the states paid

[17]BLM has 12 state offices, 11 in western states and 1 for the eastern states.

[18]Bureau officials said that BLM has started to fund a 5-year survey of California desert areas designed to identify illegal activities and contamination.

for surveys using a federal reclamation fund financed by coal-mining fees. Some BLM state offices have been able to develop information on abandoned mines by participating in several water quality initiatives.[19] For example, BLM works with other federal agencies and state and local authorities to obtain funding under the administration's Clean Water Action Plan to clean up watersheds selected by the state. As part of this effort, it is necessary to identify and survey surrounding abandoned mines as possible sources of the watersheds' contamination.

Another reason BLM is reluctant to identify potential hazardous substance release sites, according to both the manager of the hazardous materials management program and experts at BLM's National Applied Resource Sciences Center, is that BLM officials believe, once the sites are identified, BLM may be held financially liable for thousands of abandoned sites that it did not contaminate, particularly abandoned mine sites. Furthermore, these officials worry that once the hazardous waste sites are identified, EPA will place the sites on the federal facility docket and the sites will then be subject to what the officials perceive as the burdensome and costly requirements of a remedial action under CERCLA.[20]

BLM Has Not Developed a Comprehensive Cleanup Strategy Using CERCLA as a Tool for Completing Cleanups

BLM has no comprehensive strategy for managing the cleanup of its sites and has been reluctant to seek reimbursement for cleanup costs or issue orders to responsible parties to clean up sites under CERCLA as part of, or in conjunction with, other cleanup programs.[21] While the Forest Service has used these CERCLA authorities to get responsible parties to pay for or perform cleanups, BLM has not yet adopted a similar cleanup enforcement strategy.

BLM managers gave several reasons for their reluctance to get responsible parties to perform or pay for cleanups under CERCLA at more sites. First, BLM officials do not see the benefit of expending large portions of their

[19]A task force of federal land management agencies developed the Interdepartmental Abandoned Mine Lands Watershed Initiative in 1996 to address water quality problems caused by abandoned mines on federal lands. A participating state sets priorities among its watersheds and selects the one with the most serious water quality problems caused by abandoned mines. The federal agencies then take steps to clean up or treat the mining site's waste in order to meet the state's water quality standards in the watershed. In 1998, EPA and other federal agencies developed the Clean Water Action Plan, which provides additional funding to support, among other things, this watershed initiative.

[20]Cleanup actions under CERCLA fall into two broad categories: removal actions and remedial actions. Removal actions are usually short-term actions designed to stabilize or remove hazards, and remedial actions are usually longer-term and costlier actions aimed at permanent remedies.

[21]Although Bureau officials acknowledged their reluctance to use CERCLA authorities to pursue responsible parties, they emphasized that they comply with CERCLA's procedures for reporting hazardous spills and conducting removals and cleanups.

small cleanup budget on what they describe as the expensive and time-consuming investigations and analyses required for a remedial action under CERCLA. Agency officials contend that, unlike the Forest Service, BLM has less chance of finding responsible parties to pay the cleanup costs for most of these mines because BLM's mines are decades old.[22]

Second, BLM prefers to conduct short-term removals, rather than the longer-term and generally more expensive cleanups sometimes required for remedial actions under CERCLA, because in the vast majority of cases, the managers contend, these are sufficient for the types of sites and the level of risk they pose. While this could be true for a large portion of its sites, early BLM estimates still indicate that BLM may have a number of high-risk sites to address that may require more extensive cleanups.

Third, BLM has increased its use of watershed initiatives as the programmatic vehicle for conducting cleanups because they involve fewer detailed procedures and because funding is available for them. However, the disadvantage of these types of cleanups, according to an EPA environmental specialist for federal facilities, is that they focus on surface water and may ignore other problems, such as contaminated groundwater. In any case, BLM could still use its enforcement authority under CERCLA in conjunction with watershed initiatives, as the Forest Service does, to effectively get more cooperation from responsible parties, so that taxpayers' money can be more effectively used to clean up sites where no responsible parties can be found.

Interior Funds a Small Number of Risk-Based Cleanups at Large, Complex Sites

Since 1995, Interior has set aside approximately $10 million annually to fund relatively long-term and large-scale cleanup projects, and it allocates these funds according to the relative risks posed by the sites. A technical review committee consisting of staff from the Department and its bureaus meets annually to review and rank the sites the bureaus submit and monthly to monitor the cleanup progress at the sites that have been selected and funded. The committee considers four factors: (1) the risks posed to human health and the environment, (2) applicable legal and regulatory cleanup requirements, (3) the potential for responsible parties to participate in the cleanup, and (4) the estimated time and cost of the cleanup. According to officials in Interior's Office of Environmental Policy and Compliance, once the Department receives its annual appropriation, it allocates the $10 million to cleanup projects in accordance with priorities set by the committee. Interior funded cleanups at nine sites in 1997 under

[22]Agriculture and EPA officials stated that many of the Forest Service's sites are equally old and many are close in proximity to BLM's sites.

this process. In 1998, the Department continued funding seven of these sites and added three others.

Several BLM cleanup managers have not submitted sites to compete for these funds because they either did not know that the funding was available or had erroneous information about how the process works. For example, some cleanup managers were discouraged from submitting sites because they believed that most of the funds were already earmarked for a handful of large, complex sites on EPA's National Priorities List for several more years in the future. Although senior environmental program managers at Interior acknowledged that one National Priorities List site did consume most of the funding for a few years, Interior's cleanup responsibilities at this site are ending. Consequently, according to these managers, more funds are becoming available for other high-risk sites in the future. In addition, BLM cleanup managers stated that they thought only remedial cleanup actions qualified for funding and because the vast majority of their cleanups are removals, they rarely, if ever submit cleanups for consideration. Interior officials acknowledged that the distinction is not clear but said that the Department has sometimes funded large-scale removals.

Conclusions

EPA is setting risk-based funding priorities for cleanups at sites on its National Priorities List. EPA will not necessarily be listing the highest-risk sites in the future, however, because states are more frequently deciding which sites to ask EPA to list for Superfund cleanups and are basing these decisions on factors such as the technical complexities of a cleanup and the availability of responsible parties to share in the cleanup costs. Currently, it is uncertain who will take responsibility for cleaning up approximately 1,789 sites that are potentially eligible for the National Priorities List, 307 of which are considered among the highest-risk sites. Unless EPA regions work with their states to implement our earlier recommendation to determine who is responsible for each site's cleanup, as well as to better share information on the status of certain high-risk sites that were found eligible for the National Priorities List and are now being addressed by the states, the agency cannot manage its own workload in the event that the states seek EPA's assistance in the future. Nor can EPA respond to community and congressional inquiries about the cleanup status of some of the riskiest sites.

Each of Defense's services and agencies is also setting risk-based funding priorities for its sites nationwide. The Department is no longer setting

funding priorities nationwide across these services and agencies, in part because each of them now receives its own cleanup appropriation and has been receiving enough funds to complete planned cleanups in recent years, according to agency budget officials. To some extent, Defense did consider its nationwide priorities when it implemented its set of long-term goals for completing cleanups at all of its sites. It is also considering these priorities as it monitors its progress toward achieving these goals. However, we did find that Defense may not have fully coordinated its cleanup efforts with the Forest Service to address hazards that Defense may be responsible for on National Forest System lands. Until it does so, some federal waste sites may not be adequately addressed.

Energy has instituted a risk-based prioritization scheme for its operations offices but does not set priorities nationwide among these offices. Although the Department believes that local priority setting is more appropriate because each facility has unique local regulations, community concerns, and contamination problems, we continue to believe that unless Energy sets nationwide priorities, it cannot make the most informed budget decisions and support budget trade-offs among its facilities, as necessary.

Until the Bureau of Land Management and, therefore, the Department of the Interior, define the extent of their cleanup responsibilities, determine the strategies they will use to pursue cleanups, and consider how to use CERCLA as a tool in this strategy, they cannot present strong justification for more cleanup funds or effectively set priorities for using their current cleanup resources. As a result, thousands of sites on BLM lands could continue to pose risks to human health and the environment, and federal cleanup costs could rise if responsible parties are not found and made to pay for the sites' cleanup.

Recommendations

EPA

To help EPA regions better plan their cleanup workload and be responsive to local communities' concerns about hazardous waste sites in their areas, we recommend that the Administrator, EPA,

- task the agency's regional offices to work with the states in their regions to determine how to share information on the progress of cleanups at those sites of highest risk or concern considering any successful efforts currently under way in the regions.

Defense and Agriculture

To ensure that all federal waste sites are being adequately addressed, we recommend that the Secretary of Defense and the Secretary of Agriculture direct the Deputy Under Secretary for Environmental Security and the Chief of the Forest Service, respectively, to work together to clarify cleanup requirements for lands with former or current Defense activities that may pose risks to human health and the environment. Furthermore, we recommend that the Department of Defense, in consultation with the Department of Agriculture, work to ensure that these cleanup requirements are met.

Interior

To more effectively use its limited cleanup funds and better leverage funds from responsible parties to clean up its hazardous waste sites so as to protect the public and the environment, we recommend that the Secretary of the Interior direct the Assistant Secretary for Policy, Management and Budget; the Assistant Secretary for Lands and Minerals Management; and the Solicitor of the Interior to work together to ensure that

- the Bureau of Land Management (1) develops a national database for all of its known hazardous waste sites and abandoned mine sites; (2) develops and implements a strategy for updating its national database, which includes collecting new information on potential hazardous waste sites and abandoned mines in a consistent manner across all of its state offices; (3) develops and applies a mechanism for setting cleanup priorities among sites on a nationwide basis using risk and other factors, as appropriate; (4) develops a comprehensive cleanup strategy, including specific goals and time lines for cleaning up the sites, on the basis of their risk-based priorities; and (5) develops nationwide procedures for conducting

searches of potentially responsible parties and for using CERCLA authorities, where appropriate, to get more responsible parties to perform or pay for cleaning up contamination; and
- all of Interior's bureaus and regional offices understand the purpose and size of the Department's Central Hazardous Materials Fund and the criteria the Department uses to allocate dollars to cleanups, including both remedial and removal actions.

Agency Comments

We met with or obtained comments from cleanup program managers from EPA, Agriculture, the Forest Service, Defense, Energy, Interior, and the Bureau of Land Management, who generally agreed with our findings and recommendations, with one exception. The agencies also suggested several changes for technical accuracy and clarity, which we incorporated where appropriate. EPA agreed with our findings and acknowledged that it needed to work with the states to coordinate cleanups and obtain the information needed to track the status of state cleanups. Agriculture and Defense fully concurred with our findings and agreed to our joint recommendation to their agencies to better coordinate their efforts to clean up previously used Defense sites.

Energy disagreed that it needed to act on our earlier recommendation to adopt a nationwide risk-based process for setting priorities among its sites. The Department stated that all of its operations offices receive a relatively stable budget that is based on the general needs and risks of their environmental management activities. Once the operations offices' receive their budgets, they determine their own priorities for cleanup. Energy stated that local control of priority setting is preferable to a national strategy because each site has unique regulatory requirements, community concerns, and contamination. Nevertheless, we continue to maintain that developing nationwide cleanup priorities would help the Department to make informed budget decisions and analyze trade-offs among its facilities.

Interior and its Bureau of Land Management generally agreed with our findings and said they would develop a plan for addressing our recommendations. However, BLM provided several points of clarification. First, BLM did not think it was cost-effective to undertake a comprehensive inventory of sites, stating that it currently has more cleanups than it can fund and already knows its worst sites. We continue to maintain, however, that BLM cannot effectively use its limited cleanup funding until it determines the extent of its cleanup workload and sets risk-based

priorities for its cleanups. Furthermore, we determined that BLM state offices continue to find high-risk sites each year. Second, BLM stressed that it uses other authorities besides CERCLA, such as the Mining Law of 1872, to address some sites and has always had a policy that the polluter should perform the cleanup work wherever possible. We acknowledged BLM's use of these other authorities in our report but continue to recommend that the agency more effectively include CERCLA as one of the tools available for obtaining the full cooperation of parties potentially responsible for contamination in conducting and paying for cleanups. Third, BLM asked us to acknowledge that it has taken actions such as removing debris at sites and closing abandoned mines for safety reasons, and we added this information to the report.

Finally, BLM stated that another reason it rarely, if ever, nominates sites for funding from Interior's Central Hazardous Materials Fund is because it believes the proposed cleanup must be a remedial, not a removal, action. However, Interior officials stated that large-scale removals sometimes qualify for funding. We revised our report to include BLM's reason for not nominating sites for funding. However, we believe that BLM's uncertainty about whether removal actions qualify for funding underscores our finding and recommendation that Interior needs to more clearly communicate the criteria it uses to allocate cleanup funds.

EPA Is Not Seeking to Fully Recover Its Indirect Costs or Appropriately Evaluating Its Cost Recovery Efforts

The federal government has lost the opportunity to try to recover up to $2 billion from responsible parties because EPA has assessed them only a portion of the indirect costs that it incurred in operating the Superfund program. Although the ultimate goal of the program is to clean up sites, EPA may recover its costs, including indirect costs, from responsible parties. In response to new federal cost accounting standards, EPA is revising its indirect cost rate to more fully account for costs, but the agency has not applied the revised rate to parties for cost recovery purposes. In addition, EPA cannot evaluate how well it is recovering costs because it has not established performance measures that compare what it could have recovered with what it actually recovered. Finally, the agency is improving its information systems so that it can (1) better determine costs and locate key supporting evidence and (2) better track the status of recoveries.

EPA Continues to Lose Revenue by Excluding Some Indirect Costs From Recovery

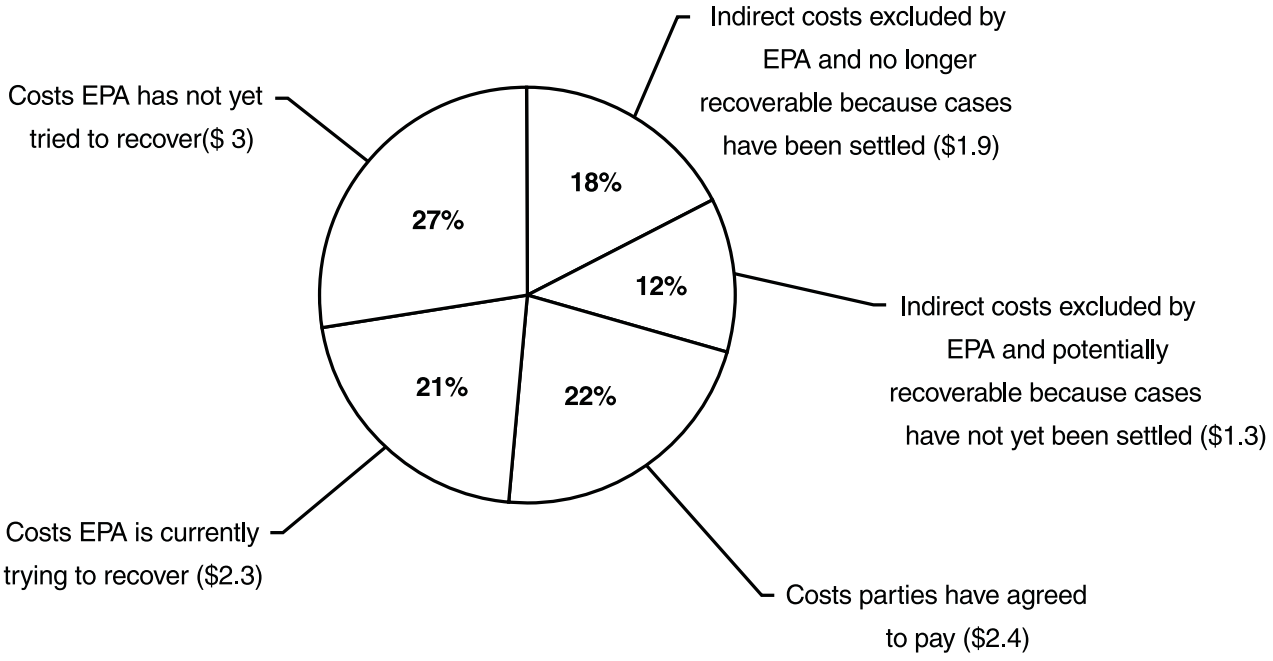
EPA has met one of its primary goals—getting responsible parties to pay—for more than 70 percent of the long-term cleanups conducted over the past few years. However, EPA has had less success changing cost recovery policies that exclude a significant portion of its indirect cleanup costs from its cost recovery efforts. When EPA pays for the costs of cleanups, it incurs both direct and indirect costs. Direct costs are those that can be attributed directly to a site, such as the cost to pay a contractor to remove hazardous waste from the site. Indirect costs are those that cannot be attributed to an individual site and, thus, are prorated across all sites, such as the administrative costs of operating the Superfund program. EPA's current method of calculating the indirect cost rate excludes significant portions of the agency's indirect costs.

EPA estimates that since the beginning of the Superfund program, responsible parties have agreed to perform cleanups worth $15.5 billion[1] and it has spent about $15.9 billion to clean up hazards caused by private parties. EPA considers about $5 billion of its costs unrecoverable because, for example, financially viable responsible parties could not be found or the agency reached final settlements with responsible parties to pay less than all of the past cleanup costs owed to the agency. Of the remaining approximately $11 billion in Superfund expenditures, EPA had entered into

[1]Data are as of the end of fiscal year 1998 and are the most recent available. According to EPA, its estimated value of work conducted by responsible parties is based on cleanup cost estimates at the time the cleanup method is selected, and it does not include any management, overhead, legal, or other costs the responsible party may incur in addition to the actual cleanup.

agreements to recover about $2.4 billion, or 22 percent, through the end of fiscal year 1998.[2] (See fig. 3.1)

Figure 3.1: Status of EPA's Efforts to Recover $11 Billion in Superfund Program Costs Through Fiscal Year 1998



Note: Dollars in billions.

Source: GAO's presentation of data from EPA.

Although EPA has obtained settlements to recover $2.4 billion, it has lost the opportunity to recover up to another $1.9 billion of indirect costs because it did not revise its indirect cost rate to include all appropriate costs. In the earlier years of the Superfund program, the agency took a conservative approach to allocating indirect costs to private parties because it was uncertain which indirect costs the courts would agree were recoverable if parties legally challenged EPA. Starting in 1989, we

[2]This 22-percent figure is higher than the 14-percent cost recovery figure in our prior report, High Risk Series: Superfund Program Management (GAO/HR-97-14, Feb. 1997), because in the past we included total Superfund expenditures in our calculation of this rate. Now, in response to EPA's comments, we have excluded from our calculation costs EPA has deemed unrecoverable.

expressed concerns about this approach because of the substantial dollar amounts EPA was not seeking to recover and return to the federal Treasury.[3] EPA recognized the need to revise this practice and, in 1992, proposed a rule that would have allowed it to expand the types of indirect costs it would attempt to recover. However, because it received so many negative comments on this proposed rule, EPA did not publish a final rule and did not increase its rate.

Now, however, EPA has the opportunity to address this issue. In response to updated governmentwide accounting standards, EPA began to implement a new cost accounting system. As part of this process, EPA's Financial Management Division developed a new indirect cost rate that will better account for the agency's indirect costs. The director of EPA's Program and Cost Accounting Branch, Financial Management Division, believes that the new rates, if implemented, could significantly increase the costs charged to responsible parties.

According to EPA's cost recovery program managers, they are waiting until the methodology used to develop the new rate is reviewed and approved by EPA management, the Department of Justice, and an independent accounting firm hired to review the methodology before adopting it for the Superfund program. According to EPA, the methodology could be approved by September 1999. If the program adopts the new rate, the agency could increase its recovery of indirect costs. For example, according to EPA's estimates, through fiscal year 1998, the agency excluded about $1.3 billion in indirect costs at sites where it had not yet agreed to a final settlement with the parties. The agency estimates it could recover $629 million, or 49 percent, of these costs. EPA estimates it will not recover the remaining $662 million, or 51 percent, because, for example, there may be no financially viable parties at some sites. In addition, EPA regions may decide, as is consistent with the agency's policy, not to pursue recoveries at sites where the total cleanup costs are less than $200,000 because such efforts may not be cost-effective.

EPA's Goals and Measures Do Not Fully Reflect Progress in Recovering Costs

EPA's existing cost recovery goals and measures do not facilitate effectively evaluating and improving the agency's cost recovery performance. EPA's cost recovery program managers stated that the agency's current goals for the program are to seek the recovery of all funds expended at sites, where appropriate, and to take cost recovery

[3] Superfund: A More Vigorous and Better Managed Enforcement Program Is Needed (GAO/RCED-90-22, Dec. 15, 1989).

actions at all cleanup sites before the agency's authority to do so expires. However, EPA cannot use these goals to effectively monitor its performance because the goals do not fully reflect its progress in recovering costs.

Need for Cost Recovery Performance Measures

Since 1991, we recommended additional goals and measures for the cost recovery program.[4] We and others, including EPA in its own past management review of the program,[5] recommended that the agency better track and compare the costs it actually recovers with the costs it could have recovered. Establishing performance measures to better track the outcome of cost recovery efforts is consistent with the Government Performance and Results Act of 1993, under which agencies must set such measures.[6] We also previously recommended that the agency establish a goal to take earlier action on cases, rather than focusing just on taking action before its authority expires, because early action reduces the probability that a responsible party's financial condition will decline, making cost recovery more difficult.[7]

Although EPA reports the amount of funds it obtains in cost recovery settlements in a given fiscal year, it does not compare this amount with the total amount of funds it could have recovered from this set of settlements. Such a comparison could allow the agency to better measure its performance on a consistent basis. Tracking its rate of recovery over time and the main reasons for fluctuations in the rate from year to year could help the agency better understand how well it is achieving recoveries and what improvements it could make in its recovery program.

In the past, we showed that it is possible to compute such a measure.[8] We reported that in fiscal year 1989 (the most recent year for which data were available at the time), responsible parties agreed to reimburse EPA for 59 percent ($116 million) of its program costs, leaving about $80 million in

[4]Superfund: EPA Has Opportunities to Increase Recoveries of Costs (GAO/RCED-94-196, Sept. 28, 1994) and Superfund: More Settlement Authority and EPA Controls Could Increase Cost Recovery (GAO/RCED-91-144, July 18, 1991).

[5]A Management Review of the Superfund Program, EPA (Washington D.C.: June 1989).

[6]Under this act, federal agencies must establish long-term strategic plans and set annual goals for programs and measure the programs' performance in achieving those goals.

[7]Superfund: EPA Has Opportunities to Increase Recoveries of Costs (GAO/RCED-94-196, Sept. 28, 1994).

[8]Superfund: More Settlement Authority and EPA Controls Could Increase Cost Recovery (GAO/RCED-91-144, July 18, 1991).

unrecovered costs. We recommended that EPA use this percentage as a performance measure to show the extent to which EPA has been reimbursed for its costs. However, the agency has raised two primary concerns about doing so. First, EPA is concerned that if it develops the percentage of dollars recovered, responsible parties may misinterpret the figure as the percentage EPA is willing to accept and not agree to pay a higher percentage during settlement negotiations. We believe that if EPA has an appropriate negotiation strategy and is willing to issue orders or pursue litigation when negotiations fail, then responsible parties' knowledge of EPA's performance measure should have little effect.

Second, EPA notes that an increase or decrease in the percentage of costs it recovers each year may be based on factors outside its control. For example, in a given year, EPA could have a proportionately larger number of cases with insolvent parties, decreasing the percentage of recoveries that year. However, we believe that tracking increases or decreases in the percentage of recoveries compared with what EPA defines as potentially recoverable costs would account for these fluctuations because factors outside EPA's control, such as insolvent parties, could be identified as not recoverable by EPA and taken out of the calculation. Without systematically tracking its rate of recovery and analyzing the reasons for differences in these rates, EPA cannot determine if the differences are due to internal factors that it can address, such as poor cost documentation or inexperience on the part of its negotiators, or external factors outside its control, such as the absence of financially viable parties.

EPA Does Not Track Whether Regions Are Taking Early Action on Cost Recoveries

Under CERCLA's statute of limitations, EPA must generally initiate cost recovery actions within 3 years after it completes a removal action or within 6 years after it begins the physical construction of a remedial action. EPA's goal is to take action on all cases with cleanup costs of $200,000 or more within these time frames. EPA took cost recovery actions before the limitations period expired at 100 percent of the sites in fiscal year 1997 and at almost all sites in fiscal years 1996 and 1995 as well. EPA's guidance encourages the regions to take action on cost recovery cases even earlier than this—either within 12 months after a removal action is completed or within 18 months after the construction of a remedy is initiated—but the agency does not regularly track how well the regions are meeting this guidance. Taking early action on cases is useful because the longer EPA waits to take an action, the greater is the likelihood it will lose evidence, the financial condition of the responsible parties will deteriorate, or the limitations period will expire.

Improved Information and Financial Systems Will Enable EPA to Retrieve Data More Efficiently and Accurately to Support Recoveries

In 1995, we reported that limitations in EPA's automated information and financial systems prevented cost recovery staff from relying on these systems to provide all of the data the agency needed to manage cost recovery actions.[9] EPA's ability to recover costs can be impaired if documentation of work performed and its costs cannot be located or if the information is inaccurate. To ensure that the information supporting cost recovery cases was accurate, staff had to perform excessively time-consuming and inefficient manual searches and reconciliations. For example, because EPA's financial system could not record cleanup costs for each subcomponent of a site, called an operable unit, EPA staff had to assign costs to operable units manually. Also, although EPA had a system to electronically capture and store certain financial documents, such as invoices, showing the costs of work performed at sites, it did not have the capability to electronically store documents showing the types of work conducted at sites in all of its regions.

Recently, EPA has taken actions to address these two issues. First, EPA updated its financial system in 1997. As a result, staff no longer have to manually assign costs to operable units. However, staff still have to manually assign costs entered into the system before the update. Second, EPA is implementing an imaging system—called the Superfund Document Management System—to electronically store and retrieve documents in all of its regions. This action will reduce the labor-intensive manual process staff use to compile hardcopy documents.

EPA also needs an accurate account of the costs it cannot recover, such as those spent at sites with no financially viable parties, in order to judge the success of its cost recovery efforts, forecast the amounts of future recoveries, and establish its budget requirements for the Superfund program. However, in 1994, we reported that the Superfund management information system[10] produced reports that did not present an accurate picture of the costs that EPA cannot recover.[11] In addition, we found that EPA could not regularly produce reports on the status of recoveries because the costs spent on cleanups were contained in the financial management system while the costs recovered were contained in the

[9]Superfund: System Enhancements Could Improve the Efficiency of Cost Recovery (GAO/AIMD-95-177, Aug. 25, 1995).

[10]EPA's Superfund information system is called the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS).

[11]Superfund: EPA Has Opportunities to Increase Recoveries of Costs (GAO/RCED-94-196, Sept. 28, 1994).

Superfund management information system and the two systems were not compatible.

According to EPA cost recovery managers, the management reports that EPA uses to forecast future recoveries and determine budget requirements can understate the costs that EPA cannot recover at sites. When EPA regions determine that costs at a site cannot be recovered, the regions enter these costs as unrecoverable into the information system. Yet after making these initial entries, EPA could still incur additional costs at the site. According to cost recovery managers in EPA's Policy and Program Evaluation Division, regional staff do not always include these additional unrecoverable costs in the system.

To fix this problem, EPA plans to use a link between the financial accounting system and the Superfund management information system to automatically update the unrecoverable costs expended at sites. Also, according to EPA cost recovery staff, using the link between the two systems will allow EPA to regularly produce cost recovery status reports as needed. EPA cost recovery staff said that information on direct costs is being transferred between the two systems, but the transfer of information pertaining to indirect costs may not be completed until early in fiscal year 2000.

Conclusions

EPA has not recovered billions of dollars because it has understated the amount of indirect costs it charges to responsible parties. Until EPA adopts a new method of allocating indirect costs to parties, it will continue to forgo federal funds that it could, in turn, use to accomplish more cleanups. Additionally, until EPA responds to our prior recommendation that it adopt a more meaningful performance measure that compares what it recovers with what it could have recovered in aggregate on an annual basis—tracks the measure over time, determines the major causes of significant fluctuations, and assesses the need for any actions to address identified problems, the agency cannot demonstrate its progress in recovering costs. Finally, EPA has responded to our past concerns and has modified its information systems to decrease its reliance on inefficient manual processes and provide better data on its recovery of costs. However, until the agency fully completes the transfer of cost data on site cleanups from its financial management system to its Superfund management information system, expected in early fiscal year 2000, the agency will not have all of the information it needs to determine the status of recoveries

and unrecoverable costs and to accurately project future budget needs for the Superfund program.

Recommendation

To improve EPA's ability to recover cleanup costs from private parties, we recommend that the Administrator, EPA, ensure that the Superfund cost recovery program applies the agency's new indirect cost rate as soon as it is approved as part of cost recovery settlements.

Agency Comments

We met with EPA officials, including the Director of the Policy and Program Evaluation Division within the Office of Site Remediation and Enforcement and the Chief of the Program and Cost Accounting Branch in the Financial Management Division, the offices responsible for managing the cost recovery program, to obtain their comments on our discussion of cost recovery issues. EPA generally agreed with the content and presentation of information regarding its recovery of indirect costs and is considering establishing a performance measure to better evaluate the progress of the program. EPA questioned the need for a more formal goal to take earlier action on cost recovery cases, however. The agency, in conjunction with the Department of Justice, and an independent accounting firm hired to review the methodology, expects to approve the new methodology for computing indirect costs by the end of September 1999. Subsequently, the agency could develop a new indirect cost rate to charge indirect costs to responsible parties. In relation to creating better performance measures to evaluate the program, the agency noted that currently, the recovery program managers annually make an estimate of the amount the agency expects to obtain as a result of cost recovery actions. The agency agreed to consider whether this estimate could serve as the basis of a performance measure for the program and whether EPA could track the amount obtained against this estimate. In addition, EPA provided us with more current cost recovery data through the end of fiscal year 1998 and we revised the relevant figures in our report accordingly. We also made several technical changes to the report based on EPA's comments.

EPA Has Improved Its Management of Superfund Contracts but Still Does Not Effectively Control Some Cleanup Contractors' Costs

EPA has responded to our past concerns—that it was not completing Superfund contract audits, using independent estimates to set the best contract prices for the government, and controlling some contractors' overhead costs. However, its actions have been slow and some have not gone far enough to protect the government from exposure to unnecessary costs. EPA has reduced its backlog of required contract audits and is more frequently using its own estimates of what cleanup actions should cost to negotiate contract prices. However, EPA regions have some poorly prepared cost estimates and do not always effectively use them to negotiate the best prices for the government, in large part because some managers lack cost-estimating experience and training, as well as historical data on actual cleanup costs to help them develop estimates. In addition, while EPA has taken steps to reduce contractors' high program support costs, these costs continue to be high for a majority of EPA's new Superfund contracts. EPA is addressing some of these concerns through its "Contracts 2000" improvement team, but it does not have a plan with milestones for implementing corrective actions.

Contract Audit Backlog Has Been Reduced

At the time of our 1997 review, EPA had a backlog of more than 500 required Superfund contract audits. The purpose of these audits is to evaluate the adequacy of contractors' policies, procedures, controls, and performance. The audits are necessary for effective management and are a primary tool for deterring and detecting fraud, waste, and abuse. An audit backlog increases the potential for problems to go undetected or uncorrected, especially if, for example, a contractor goes out of business before an audit is completed.

Since that time, both EPA's Office of Inspector General, which is responsible for periodically auditing the agency's contractors, and the Defense Contract Audit Agency (DCAA), which conducts audits of EPA contractors when EPA is not the primary agency providing work and funding to the contractor, have reduced their backlogs and are trying to perform audits within defined time periods. For instance, staff within the Office of Inspector General stated that the office has established a goal to perform an audit within 2 years of when EPA requests it. For contractors that submitted the necessary information, the office was able to perform almost all of the audits within this time frame, and it plans to perform the remaining audits during fiscal year 1999 to be in full compliance with this goal. EPA is also working with the remaining contractors to obtain complete information in a timely manner. DCAA officials said that the agency began an initiative in the early 1990s to address its backlog and

become current by 1997. It reached its goal and has been able to perform audits within 1 year of when larger contractors submit complete information and within 2 years of when smaller contractors do so. While we did not review the quality of these audits, conducting them in a more timely manner should help EPA to reduce the risk of fraud, waste, and abuse in the use of Superfund contract dollars.

EPA Cannot Ensure the Best Possible Price for Contracted Work

EPA is now generating independent estimates of what contract work should cost and is using them to negotiate lower contract costs. However, EPA's estimates are still often lower than the final contract price agreed to by EPA—an indication that the estimates are of poor quality, according to the agency's Financial Managers' Financial Integrity Act Report. In a number of other cases, the final contract price matched the contractor's estimate, an indication that EPA may not be negotiating for a better price. EPA has only recently begun to address the two barriers to better cost estimates that its contract managers identified: (1) their inexperience and insufficient training and (2) the lack of a database of past actual contract costs to help them better determine what future contracts should cost. EPA is designing corrective measures for these barriers but has had past problems in getting the regions to fully adopt such measures.

Regions Are Generating Some Inaccurate Estimates and Are Not Routinely Using Estimates to Control Costs

In our prior reports, we stated that EPA needed to develop its own estimates of what the work intended for its Superfund contractors should cost and use these estimates to negotiate the best contract prices for the government. This is a practice the U.S. Army Corps of Engineers (the Corps)—an agency with cost-estimating and contract management expertise—uses to manage environmental cleanup costs. In subsequent reviews of EPA's contract management, we found that the agency had begun to develop such estimates, but their quality and use varied among the regions.

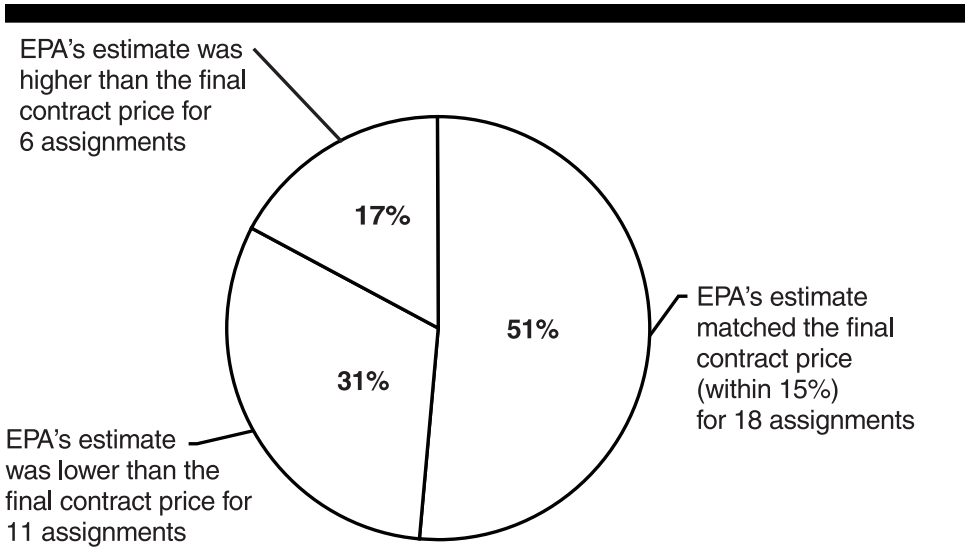
In 1997, we reviewed 26 work assignments that EPA had issued to contractors and found that EPA had prepared cost estimates for 21, or about 80 percent, but did not routinely use these estimates to negotiate lower contract prices.[1] EPA accepted the contractor's estimate as the final contract price for each of the 21 assignments. In our current review, we found that EPA was using its estimates more effectively. We reviewed the 35 highest-dollar-value work assignments in three regions and found that a

[1]Work assignments are the work plans EPA issues to contractors under large, previously awarded regional contracts that specify statements of work for defined products or services.

cost estimate had been prepared for all of the assignments and that EPA had accepted the contractor's estimate as the final price in 10, or 29 percent, of the cases.[2]

According to EPA's criteria, a key measure of the quality of EPA's cost estimates is the closeness of the estimate to the negotiated final contract price. As figure 4.1 illustrates, there was a close match (within 15 percent) between EPA's estimate and the final contract price for 18, or about half, of the assignments. (Percentages do not add up to 100 percent due to rounding.)

Figure 4.1: EPA's Estimate Compared With the Final Contract Price for 35 Work Assignments



For 11 assignments, EPA's estimate was lower than the final price, and for 6 assignments, its estimate was higher. For 6 assignments, EPA overestimated the final price by 17 to 36 percent and a total of $769,000. For 11 assignments, EPA underestimated the final price by 15 to 101 percent and a total of about $2 million. EPA work assignment managers did not always document reasons for the differences, as EPA requires, even

[2]We reviewed work assignments that EPA issued from Jan. 1 to Sept. 30, 1997. We selected this time period in order to be consistent with the methodology we used in our prior review. Most of these assignments—20, or 57 percent—were for contractors to oversee cleanup work for EPA or to assess the nature of contamination at a site. Another 7, or 20 percent, were for actual cleanup activities; 3, or 9 percent were to design a cleanup method; and the remaining 5, or 14 percent, were for study, security, or support activities.

though comparing and documenting differences could identify problems with cost-estimating practices and alternatives for improvement.

EPA Does Not Have the Staff Skills or Data Needed to Accurately Develop Cost Estimates

Of the 34 work assignment managers we interviewed, 15, or about 44 percent, said they lack sufficient experience to effectively and accurately develop estimates.[3] As a result, these managers said, EPA's estimators omit the costs of key work tasks, underestimate the experience and salary level of contractor personnel, and underestimate the extent to which subcontractors will be used. Six managers said they rely heavily on the contractors to determine what tasks should be included in a work assignment and how much the work should cost. Fifteen managers held the opinion that contractor personnel are better prepared and more qualified to estimate contract costs. One of the managers said that the contractor knows best and EPA will do whatever it takes to keep the contractor happy because the agency needs the contractor to perform the work. These attitudes raise questions about EPA's willingness and ability to ensure that the agency is paying the best price for the work performed.

These managers wanted more training on cleanups and cost estimating, as well as access to experienced estimators who could help the EPA managers improve their estimates. EPA's internal reviews and our reports have also identified the need to adequately train regional contracting personnel as effective cost estimators and enhance their negotiation techniques.[4] However, few of the managers we interviewed said they had received such training. Instead, most were using on-the-job experience to fill this training gap, but it was not effective because the managers develop only a few estimates each year. The director of EPA's Office of Acquisition Management noted that in the past, some regions hired trained estimators to develop cost estimates but had to discontinue this practice because of budget cuts.

To compensate for their lack of experience and training, several work assignment managers have worked as a team with both the EPA contract manager and the cleanup project manager to develop estimates for sites. Two of the three regions in our review had established such teams, and their estimates were closer to the final contract prices than the third

[3]We did not interview the manager for one work assignment because no significant problems were found in the assignment and the manager was not available because of extended leave.

[4]High-Risk Series: Superfund Program Management (GAO/HR-95-12, Feb. 1995; GAO/HR-97-14, Feb. 1997), and Acquisition Management: OMB Requested Review of EPA Contracting (OIG/E1SKF7-04-0037-7100301, Sept. 30, 1997).

region's estimates. In addition, some regions have made arrangements with other collocated federal agencies, such as the Corps and the Department of the Interior's Bureau of Reclamation, to have their work assignment managers seek assistance from staff at these agencies with experience in developing cost estimates. More widespread use of this resource by EPA regions could help managers gain the training and experience they need to improve the quality of their cost estimates.

In addition to inexperience, all 34 work assignment managers cited a lack of access to historical site-specific cost data as a problem that adversely affected their ability to develop accurate cost estimates. As early as 1992, an EPA contract management task force determined that the absence of a database of historical information on the types of cleanup tasks conducted at similar sites and the associated costs of those tasks hampered cost estimators. The task force concluded that EPA should develop such a database, and EPA's Office of Inspector General reiterated this conclusion in a 1997 study, recommending that the agency either develop such a database or obtain access to similar databases from the Corps or private agencies that conduct cleanups.[5]

To date, EPA has not established this database. When EPA awarded its Superfund contracts, beginning in 1995, it created a contract management information system. While the primary objective of the system was to collect the current data needed to monitor the Superfund program's overall resources, the agency subsequently decided that the system could also serve as the historical cost database that estimators need. However, at the time of our review, EPA was testing the system and had not determined how estimators would use it. In addition, EPA does not plan to enter historical data into this database; instead, it plans to start collecting data when the database becomes operational. Consequently, it will take several years to gather enough baseline data to support cost estimates. Furthermore, several work assignment managers noted that the system is designed to collect only summary statistical cost data on the contracts and not the detailed site-specific data they need for their estimates. According to several regional contract management staff, they need both current and historical site-specific task and cost information to develop quality estimates. The director of EPA's Office of Acquisition Management noted that a limited EPA analysis had indicated that it might be too costly to collect data at this level of detail.

[5]Acquisition Management: OMB Requested Review of EPA Contracting (OIG/E1SKF7-04-0037-7100301, Sept. 30, 1997).

Corps Superfund program managers reinforced the need for historical site-specific task information to support cost estimates. The Corps includes such data in its cleanup database, but this database may not be complete enough to meet EPA's needs. For example, the Corps primarily conducts construction activities at a cleanup, while EPA manages other types of activities, such as overseeing the cleanup. In addition, the Corps primarily uses fixed-price contracts for its cleanup work, so it is more certain of the tasks the contractor will conduct and the costs it might incur. EPA, on the other hand, has used primarily cost-reimbursable contracts for cleanups, so it is less certain of the tasks to be covered and the costs it will incur under such a contract. Nevertheless, the Corps managers believe a historical database would help EPA better manage these uncertainties and develop more accurate estimates.

EPA's Plans to Improve Cost Estimates May Not Address Recurring Problems Unless Implemented Agencywide

EPA has taken two actions to identify problems with its cost-estimating procedures and design corrective actions. First, in response to our reports and the Office of Inspector General's findings, in fiscal year 1998, EPA declared Superfund contract management, including independent government cost estimates, as an agency-level weakness to address and established a workgroup to develop corrective action plans and milestones. The group also identified other steps EPA could take, including conducting more in-depth reviews of regions' cost-estimating procedures, designing solutions to any problems identified, sharing any lessons learned from this review among the regions, and providing work assignment managers with more training.

Second, to implement some of the corrective measures, EPA, in June 1998, entered into an agreement with the Corps to conduct reviews of the region's cost-estimating practices and recommend potential improvements. The Corps plans to evaluate EPA's cost-estimating policies and procedures, as well as the automated systems that could support cost estimating, and assess the extent to which EPA's 10 regions are in compliance with these policies and procedures. As part of this effort, the Corps plans to determine the training needs of EPA's contracting personnel. The Corps expects to submit a final report to EPA by early spring 1999, and EPA hopes to begin implementing any recommendations in September 1999. The agency is also waiting for the Corps' report before it decides what types of historical information cost estimators need, whether and how to collect it, and how estimators can use it.

While EPA has taken similar actions in the past, we continue to find the same problems with some estimates, demonstrating that the regions do not uniformly make improvements. According to the director of Superfund Programs, the regions operate autonomously and do not always implement headquarters' directions in the same way. To illustrate, he pointed out that the newly developed Superfund contract information management system was created by the programmatic side of EPA, and now the contracting side of the agency is developing its own contract information management system. Because the two groups did not work together, the agency has to try to link the two systems. The Superfund Assistant Administrator also acknowledged that the regions may not sustain improvements in their estimating practices.

EPA Is Still Experiencing Some Contract Management Deficiencies

When EPA replaced its expiring Superfund contracts with the Response Action Contracts it now uses for cleanup actions,[6] it wanted to correct several contract deficiencies. In particular, it wanted to reduce both the number of contracts it awarded and the high program support costs it was paying to contractors for items such as managers' salaries, rents, computers, telephones, and reports.[7] In the past, EPA put too many contracts in place and did not have enough work to give all of the contractors. Even if the contractors were conducting relatively little cleanup work, they were continuing to incur monthly program support costs. As a result, a high percentage of the total contract costs was going to cover these administrative expenses rather than actual cleanup costs. Although EPA has awarded fewer new contracts, it may still have too many contracts in place compared with the current and projected future Superfund cleanup workload, and the program support costs for 10 of the 15 new contracts continue to be high.

These concerns, however, may be only symptoms of more systemic questions about the ways in which EPA establishes contracts for Superfund work. EPA's current "Contracts 2000" initiative may begin to address some of these questions. We are concerned, however, that EPA has not been able to provide documentation that clearly describes overall strategies and time frames for implementing changes from the initiative.

[6]In September 1992, EPA's Superfund Long-Term Contracting Strategy workgroup recommended integrating the agency's responsibilities to clean up sites or oversee responsible parties' cleanups into a single regional contracting mechanism–the Response Action Contract.

[7]Program support cost percentages are calculated by dividing the total non-site-specific costs by the total contract costs.

The New Contracts' High Program Support Costs Still Result, in Part, From Insufficient Contractor Workload

At the time of our current review, EPA had awarded 15 of its new Response Action Contracts, valued at a total of more than $60 million.[8] When EPA awards a contract, it specifies that the contractor will obtain up to a certain dollar amount of cleanup work over a given time period. As the contractor conducts work, it incurs costs—both direct costs that can be attributed to an individual site and indirect costs that are not site specific. EPA pays the contractor for both types of costs. EPA tracks the amount of non-site-specific costs it pays as a percentage, or rate, of the total contract costs that it covers.

In the past, we have expressed concern that contractors' program support costs, as a percentage of total contract costs, have been too high. Since the mid-1990s, EPA has used 11 percent as its target for program support costs. In our 1997 review, however, we found that the program support cost rates for expiring Superfund contracts ranged from 15 to 22 percent over the life of the contracts, in part because EPA did not control these costs in the early years of the contracts. We also reported that some of the new Response Action Contracts were continuing this pattern, with program support costs of 21 to 38 percent of total costs, making it more difficult for EPA to meet its target rate of no more than 11 percent over the life of these new contracts. In August 1998, we reported that EPA Superfund contractors were spending about 29 percent of their total contract costs for program support.[9]

During our current review, we found that the program support cost rates for a majority of the new contracts were still high. As of September 1998, EPA reported that the rates for only 5 of the 15 contracts were below EPA's target of no more than 11 percent, ranging from about 7 to 10 percent. The rates for the remaining 10 contracts ranged from about 16 to 59 percent of total contract costs. One of the primary reasons for these high program support cost rates continues to be that EPA has too many contracts in place compared with the available cleanup workload. According to several EPA contracting officers, the agency expects such high rates for new contracts until the agency has had time to award enough work to all of the contractors. The officials predict that as EPA awards more work assignments, these program support cost rates should decrease. However, our prior work demonstrated that although EPA made this same prediction for its expired contracts, their rates remain high.

[8]EPA plans to eventually award a total of 19 Response Action Contracts nationwide.

[9]Superfund: Analysis of Contractor Cleanup Spending (GAO/RCED-98-221, Aug. 4, 1998).

When EPA began replacing its expiring contracts with new contracts in 1995, it had to decide how many contracts to award. In September 1992, it used the number of work assignments under its 45 expiring contracts to project the number of work assignments it would have in the future. Because the agency expected the number of work assignments to remain steady, it believed that if it reduced the number of contracts it awarded, it could give these contractors more work, and the program support cost rates would decrease. EPA decided to reduce the number of contracts from 45 to 22. The agency had determined that it should have at least two contracts in each region, and perhaps three in large regions so that, among other things, contractors would have to compete for work, helping to keep costs down. In reality, however, contractors do not compete for work assignments; rather, EPA regional contracting officials attempt to distribute the work assignments so that each contractor receives a fair share of the work.

Subsequently, EPA decided to award only 19 of the 22 planned contracts–three regions will have only one contract—because it no longer thinks it will have the workload it originally predicted. However, EPA may still have more contracts in place than it needs. While uncertainty exists about how many sites will be included on the National Priorities List in the future, the agency has been listing fewer sites in recent years. For example, EPA proposed about 30 sites during fiscal year 1998, compared with an average of about 75 sites in earlier years. Thus, the likely number of cleanups will be significantly smaller than EPA originally estimated. Although EPA headquarters program managers have said that the agency hopes to add an average of about 40 new sites annually to the program beginning in fiscal year 1999, the four EPA regions with the highest Superfund workload indicated that, as the states take on greater cleanup responsibilities, fewer sites will enter the program. With fewer sites, contractors will have less work and EPA will have less chance to reduce its program support cost rate.

EPA will soon have an opportunity to review the number of contracts it should have in place. EPA designed the current Superfund contracts to last 5 years, with an option to renew them for another 5 years. Several of the current contracts will soon be 5 years old, and EPA will have to determine whether to renew them. A representative from EPA's Office of Acquisition Management said the office plans to consider a number of factors, including the uncertainty over the number of sites that will be placed on the National Priorities List, the contractor's performance, and the Corps'

involvement in cleanups when determining which contract options to renew.

Actual Program Support Costs Are Higher Than EPA Reports

In the past, EPA classified as program support costs the start-up costs that contractors incurred to prepare their personnel and administrative systems to perform the projects under their contract. These start-up costs are known as mobilization costs and are technically part of a contractor's overhead costs. Under the new contracts, EPA excluded reporting these costs (a total of more than $1 million) in the program support category, because it viewed them as one-time costs that should be tracked separately. Nevertheless, these costs are program support costs, and when they are included, the 15 new contracts have average program support costs ranging from about 7 to 76 percent, rather than the 7 to 59 percent reported by EPA. Several senior managers in EPA's Office of Acquisition Management agree that mobilization costs should be included in calculations of program support costs. As noted, the program support cost rate for 10 of EPA's 15 new contracts exceeds EPA's target rate of no more than 11 percent. The rates range from 16 to 76 percent, with a median of 28 percent and an average of 36 percent.

New EPA Tracking and Reporting Requirements Increased Program Support Costs

In part because of concerns about contractors' high program support costs, EPA has required the 15 contractors to provide more detailed breakdowns of their costs to help the agency better monitor and control costs. EPA has required the contractors to break down costs that it cannot assign to any one site, such as program support costs, into defined categories (e.g. program, administrative, and technical support) and track the costs by these categories. In implementing this requirement, EPA provided funds for the contractors to set up these categories and tracking mechanisms, and in doing so, took some actions that were inefficient and increased the support costs. First, rather than creating the software needed to set up and track the categories and providing it to each contractor, EPA paid each contractor to develop its own software. While EPA did not track the dollars devoted to developing software, senior officials in the Office of Emergency and Remedial Response told us that a substantial portion of the mobilization costs was devoted to this effort. Second, while several contractors have contracts in multiple locations, EPA typically paid each location to develop its own software, rather than just paying the parent contractor to develop one system and requiring the contractor to distribute the system. In some cases, however, EPA required the parent contractor to share the software it developed with its various

regional offices. For example, Region III was able to save up to $90,000 on one contract by requiring that the parent contractor, which had received funds from another EPA region, to develop the software in that location, and in turn, provide the software to its office within Region III.

Problems Raise Broader Questions About Superfund Contracting That Could Be Addressed Through EPA's Contracts 2000 Initiative

While assessing EPA's progress in correcting these past contract management problems, we determined that the problems may be symptoms of more systemic issues associated with EPA's Superfund contracting practices. The problems raise the following questions:

- Could the agency more quickly and aggressively test and implement alternative types of contracts in addition to or instead of using cost-reimbursable contracts as it now does? Cost-reimbursable contracts, under which EPA agrees to pay all of a contrator's allowable costs, place most of the financial risk on the government because the work that needs to be performed is, to varying degrees, uncertain. This uncertainty prevents EPA from accurately predicting the costs involved in performing the work. To a limited extent, EPA has effectively used fixed-price contracts for clearly defined and more routine cleanup actions. These contracts reduce the financial risk to the government because the parties agree on a price for the contractor's activities and the contractor bears the risk of accomplishing the activities at this price. Because of its success to date, according to the director of EPA's Office of Acquisition Management, the agency plans to use more fixed-price contracts in the future. Meanwhile, the Office of Management and Budget has also been urging EPA and other federal agencies to make a more concerted effort to use performance-based contracts. These contracts establish a price structure for a contractor's services that rewards the contractor for superior performance, allowing the government to better ensure the receipt of high-quality goods and services at the best price. EPA has a few ongoing performance-based demonstration contracts that appear to be achieving positive results.
- Is it cost-effective for EPA to duplicate the infrastructure necessary to manage contracts in each of its 10 regional offices?
- Are there new and more effective ways to build more competition into EPA's contracting process as a means to better control costs and ensure quality, such as competing each work assignment?
- Has EPA lowered its costs by using the Corps for more of its cleanup work, and, if so, how much of the cleanup workload should the Corps assume? Because the Corps specializes in and conducts a significant amount of

construction contracting for the federal government, it may be better equipped than EPA to manage Superfund construction contracts.

EPA's Contracts 2000 initiative—an outgrowth of the Long-Term Contracting Strategy that the agency has been using to put in place necessary contracts as well as to assess and update its contract management practices—may address some, but not all, of these questions. EPA has identified various contracting issues, including the type and number of contracts used, that it needs to address. However, the initiative does not consider opportunities for making more use of competition and of the Corps, nor does it address the need for a contract management office in each of the 10 regions. Furthermore, EPA has not been able to provide us with documentation that clearly describes (1) the strategy for evaluating these areas and (2) the time frames for implementing the Contracts 2000 team's decisions about improvements. As a result, we are concerned about whether EPA will move quickly enough before it extends the existing contracts for another 5 years and develops a strategy for ensuring that any changes become permanent. Our progress reviews over the years have consistently shown that without sustained high-level management attention, EPA has not always succeeded in implementing and sustaining past contracting reforms.

Conclusions

EPA's and DCAA's progress in reducing the contract audit backlog will reduce the government's risk of contractor fraud, waste, and abuse of Superfund dollars. EPA's more frequent use of independent government estimates to negotiate the final prices for contracted work should help to ensure that the government gets the best possible prices for this work. However, until EPA addresses its cost estimators' lack of experience and training in developing estimates, the government is at risk of paying too much for some cleanup work. Enlisting the Corps to assess the EPA regions' cost-estimating practices and data needs and to recommend training and other improvements has the potential to correct the recurring problems that we find. Sustaining such improvements in the regions over the long term has also been a problem. Unless EPA establishes some system to monitor the regions' implementation of such changes—by, for example, routinely testing the regions' cost-estimating and price-negotiating practices during formal regional reviews—we may continue to find problems.

Also, cost estimators still do not have access to historical site-specific cost data, and until they do, they cannot generate the most accurate estimates

possible. Because EPA's contract management information system most likely will not provide the detailed historical site-specific cost data estimators say they need and will not be available in the near future, the agency will have to consider other cost-effective alternatives for providing these data. To generate estimates, broader use of regional teams that include the cost estimator, contract manager, and program manager for a site, as well as access to experienced estimators and historical databases provided by other agencies within a region's geographical area, could be effective interim measures that the agency could take.

The agency has also taken important steps to reduce the program support costs that it pays contractors, particularly reducing by more than half the number of contracts that it has in place. However, without taking additional steps, such as deciding not to renew some contracts because the contractors have performed poorly or not enough work is available for the remaining contractors, the agency will continue to pay these high administrative expenses, making less funding available for cleanup. Finally, EPA's Contracts 2000 initiative offers the agency the opportunity to assess and improve its overall contracting practices, allowing it to make wider use of the Corps in cleanup work and enter into more fixed-price or performance-based contracts. However, without an implementation strategy with milestones to make needed improvements agencywide, EPA will not establish and sustain better contracting practices.

Recommendations

To build on EPA's momentum to address the contract management concerns we have identified, we recommend that the Administrator, EPA, instruct the director of the Office of Acquisition Management to work with the Assistant Administrator for Solid Waste and Emergency Response to

- develop procedures to ensure that the corrective actions EPA implements in response to recommended actions from the Corps result in improved cost estimates;
- periodically review whether the regions have consistently implemented the corrective actions;
- identify a cost-effective method of providing estimators with access to the detailed historical site-specific cost data they need to generate more accurate estimates;
- complete a review of the number of contracts the agency needs to keep in place, given the future cleanup workload, and do so before it loses the opportunity to close out some of the contracts whose base periods are

expiring, allowing the agency to choose whether to exercise its option to renew these contracts for another 5 years; and
- ensure that the Contracts 2000 initiative results in a comprehensive strategy, with specific tasks and milestones for their completion, for improving the agency's contract management practices.

Agency Comments

We met with officials from EPA's Office of Acquisition Management and Office of Solid Waste and Emergency Response, including the director of Superfund Programs and the director of Contract Management, who generally agreed with the basic findings and recommendations of the report. The agency provided various clarifying and technical corrections, which we incorporated in the report as appropriate. EPA agreed with our recommendations to periodically review the regions' implementation of cost-estimating corrective actions and noted that teams from both the Office of Solid Waste and Emergency Response and the Office of Acquisition Management could monitor implementation during their regional reviews.

In response to our recommendation to use historical data to improve cost estimates, EPA expressed concern that some estimators relied too much on outdated historical data, leading to inaccurate estimates. The agency stated that it was more critical to focus on helping estimators learn to develop a more detailed breakdown of site-specific tasks and activities to be conducted and to cost out these activities, rather than spending the resources to build a nationwide database. We agree that EPA estimators need to develop detailed site-specific tasks to improve their estimates because our work demonstrated that they often leave out key steps when developing their estimates, as we point out in this report. However, because the estimators themselves and the Corps identified historical data as a critical component for accurate cost estimating, we continue to call on the agency to also provide historical data that estimators can use as a baseline to cost out these specific tasks once estimators have developed them. Furthermore, our recommendation calls on the agency to identify a cost-effective method for providing these data but does not prescribe that the agency build a nationwide database.

In regard to our concerns about contractors' high program support costs, EPA recommended that we exclude two relatively new Superfund contracts from our analyses of program support costs because the agency has not had enough time to assign work to these contracts. Including such contracts makes program support costs high as a percentage of cleanup

costs. EPA expects these percentages to decrease over time as contractors obtain work assignments. We did not adjust our program support cost analyses in response to EPA's comments but did note the agency's point about new contracts in our report. We believe it is critical that EPA seek to reduce contractors' program support costs from the beginning of a contract. As our 1997 report demonstrated, EPA was not able to meet its target of 11 percent for many of the expiring Superfund contracts, in part because the percentage of program support costs was so high for contracts in the early stages and EPA did not have enough cleanup work to award to contractors to decrease these costs over time. As we have noted in this report, the likely number of future cleanups could be significantly smaller than the number EPA originally estimated, making it difficult to reduce the program support cost percentages for its current contracts over time.

Finally, the agency agreed with our recommendation that it use its Contracts 2000 initiative to improve contract management and provided examples of various efforts the agency has undertaken. These included (1) exploring the use of different types of contracts, (2) having each region use a performance-based contract for a pilot Superfund cleanup project, and (3) evaluating contractors' performance before assigning them work.

Objectives, Scope, and Methodology

Because the Environmental Protection Agency (EPA) has not always taken actions to address the concerns about the Superfund program's management that we identified in our prior work, the objectives of this review were to determine if the agency had more fully addressed these concerns since we issued our last report. Specifically, we wanted to know if the agency (1) uses relative risk factors to set cleanup funding priorities, (2) is more effectively managing its cost recovery program, and (3) has improved its efforts to manage cleanup contract management costs.

Objective 1: Assessing How Agencies Use Relative Risk to Set Cleanup Funding Priorities

To respond to this first objective, we conducted interviews with EPA site assessment managers—officials responsible for assessing sites and determining which ones to place on the National Priorities List—and remedial managers–officials responsible for overseeing the cleanup process—in 4 of EPA's 10 regions: regions I (Boston), II (New York), IV (Atlanta), and V (Chicago). We selected these regions because they have the largest number of sites that are awaiting consideration for listing and are already listed. To understand the agency's overall approach and priorities in assessing and listing sites, we interviewed and obtained relevant documents from the director, deputy director, and staff of the State, Tribal, and Site Identification Center within the Office of Solid Waste and Emergency Response (OSWER). We also interviewed the chair and 4 of 10 regional representatives on EPA's National Prioritization Panel—the panel that ranks all of the sites ready for construction of the cleanup remedy nationwide for funding on the basis of their relative risks—to understand how the panel uses relative risk to allocate funds among these sites. We obtained and reviewed documents that describe the criteria and weights the panel uses to score and rank sites. In addition, we examined the panel's funding decisions for fiscal year 1997, confirming that they were based on the panel's ranking. EPA provided us with updated information on the panel's decisions for fiscal year 1998.

To understand EPA's responsibilities and approach to federal facility cleanups, we met with the associate director of OSWER's Federal Facilities Restoration and Reuse Office–the office charged with responsibility for working with federal agencies to facilitate fast, protective, and cost-effective cleanups. To understand the role of EPA's regions in the federal facilities cleanup process and to learn whether and how the regions could influence cleanup funding priorities at federal facilities, we interviewed managers who oversee federal facility cleanups in regions IV (Atlanta), V (Chicago), VIII (Denver), IX (San Francisco), and X (Seattle).

We also met with officials of the departments of Agriculture, Defense, Energy, and the Interior. We selected these agencies because they are the agencies responsible for the largest number of federal facility cleanups. First, to determine each department's overall policies and procedures for using relative risk in funding decisions, we talked with headquarters personnel in charge of environmental cleanup programs. Then, as necessary, we visited regional offices to test how field offices implemented these relative risk policies and used relative risk to make cleanup funding decisions.

Department of Agriculture

To obtain information on overall policies and procedures for Agriculture's cleanup program and on the Department's use of relative risk to set cleanup funding priorities, we selected the Forest Service from among Agriculture's five services with sites on EPA's federal facilities docket for a more detailed review. The Forest Service has the largest number of potential hazardous waste sites to date. We met with officials from the Hazardous Waste Management Group in Agriculture's Office of the Deputy Under Secretary for Natural Resources Management and Environment. We also met with the chief engineer for environmental restoration within the Forest Service's Engineering Office because the engineer oversees the Forest Service's ranking system for cleanup activities and is responsible for allocating the Forest Service's hazardous waste management budget to its regional offices.

To test the Forest Service's progress in using relative risks to set priorities for funding decisions, we visited one of nine regions, the Intermountain Region in Ogden, Utah. We selected this region because of its large number of planned cleanup activities, hazardous waste management budget, and potential number of abandoned mine sites. To assess the Forest Service's progress in developing an inventory of potential hazardous waste sites and in characterizing the risks at those sites, we met with the environmental engineer in charge of that region's hazardous waste cleanup program and a staff member in charge of developing an inventory of abandoned mines. We also interviewed the engineer about the priorities for cleanup activities in the region and reviewed relevant budget and progress reports to determine the extent to which funding decisions were based on a consideration of relative risk.

Department of Defense

To gather information on Defense's overall policies and procedures for setting funding priorities for cleanups, we met with officials in the Office

of the Deputy Under Secretary of Defense for Environmental Security. These officials are responsible for the Defense Environmental Restoration Program, which is designed to clean up hazardous substances associated with past activities on the Department's lands and on lands that the Department formerly owned or used. We also reviewed relevant policies and procedural documents, including ones addressing relative risk evaluation procedures, data quality assurance plans, and management guidance for the Restoration Program. To understand the Department's overall budgeting process for environmental restoration, we spoke to a senior budget analyst in the Department's Office of the Comptroller in charge of reviewing all environmental budget submissions throughout the Department of Defense.

To examine Defense's progress in implementing its relative risk policies, we reviewed the Restoration Program's annual reports to the Congress. We also incorporated data from our 1998 report on Defense's implementation of its relative risk evaluation process.[1] For this report, we analyzed data on more than 6,000 sites from 97 installations and obtained detailed information from an additional 7 military installations to determine the usefulness of the relative risk data in setting priorities.

We also spoke to a senior program analyst in the Office of the Deputy Under Secretary of Defense for Environmental Security in charge of coordinating the Inter-Agency Military Land Use Coordination Committee and reviewed documents provided to obtain information on the current status of working agreements between Defense and the land management agencies for coordinating cleanups on public lands that were previously used by Defense.

Department of Energy

For information on Energy's overall policies on the use of relative risk to set cleanup funding priorities, we met with officials responsible for environmental budget management and the director of the Office of Science and Risk Policy within the Office of the Assistant Secretary for Environmental Management. To test Energy's progress in using relative risk to set funding priorities, we visited two facilities–Oak Ridge, Tennessee, and Rocky Flats, Colorado. We selected these offices from among Energy's 11 field locations to represent two different types of cleanups. Rocky Flats is operating on a "fast-track" to clean up and close

[1]Environmental Cleanup: DOD's Implementation of the Relative Risk Site Evaluation Process (GAO/NSIAD-99-25).

a nonoperating facility, while Oak Ridge is performing cleanups at an active facility.

We met with staff who were responsible for risk determination and the budget process from both facilities' Environmental Management offices and discussed the extent to which they used risk to establish cleanup funding priorities. At Oak Ridge, we compared a sample of the top-ranked cleanup projects for fiscal year 1999 with the project funded that year to verify that the funding decisions considered projects' risks. We conducted a similar comparison at Rocky Flats. We also reviewed documents describing both facilities' methods of ranking risks and budget processes. In addition, we met with regional EPA officials responsible for the interagency agreements with these two sites to obtain their views on the extent to which the priorities for projects established in these agreements are based on relative risk and Energy is fulfilling these agreements.

Department of the Interior

To determine Interior's overall approach to setting priorities and funding cleanups, we met with the director of the Office of Environmental Policy and Compliance and officials responsible for setting guidance for the Department's solid and hazardous materials management programs. We selected the Bureau of Land Management for a more detailed review because it has the largest number of potential hazardous waste sites among Interior's eight bureaus and services. To obtain information on the Bureau's use of relative risk to set cleanup funding priorities, we met with the manager of its Protection and Response Group and officials responsible for the Bureau's hazardous materials cleanup program.

We obtained information on the Bureau's overall progress in developing an inventory of its sites and cleaning them up from the Bureau's National Applied Resource Sciences Center, a support organization that does work at the request of the Bureau's field offices, supplying technical specialists to aid with the development of an inventory and cleanup efforts.

To test the Bureau's progress in using relative risk to set priorities for funding decisions, we visited 1 of its 12 state offices, the Nevada state office in Reno. We selected Nevada because the Bureau manages approximately 63 percent of the lands in the state, as well as, cleanups on these lands. Abandoned mines, illegal dumping, and formerly used Defense sites represent the wide array of problems the Bureau must address. To assess the Bureau's progress in inventorying its hazardous waste sites and characterizing the risks at those sites, we interviewed the

environmental protection specialist in charge of the state office's hazardous waste cleanup program and the division chief of Minerals Management, who was responsible for a past effort to develop an inventory of abandoned mines in Nevada. In addition, we met with the regional environmental protection specialist about priorities for the cleanup program to determine whether cleanup funding priorities and decisions were based on a consideration of relative risk.

To better understand joint efforts by EPA, Agriculture, and Interior to develop an inventory of abandoned mine lands and clean them up, we attended the Federal Mining Dialogue Conference, held in Frisco, Colorado, on October 20-22, 1998. We met with EPA representatives from Region VIII's Superfund Remedial Response Program and from the headquarters Office of Site Remediation Enforcement to discuss federal facilities enforcement issues. Additionally, we met with environmental protection or abandoned mine specialists from 6 of the Bureau of Land Management's 12 field offices to discuss their approaches to clean up hazardous waste on their lands.

Objective 2: Assessing EPA's Cost Recovery Program

To assess EPA's effectiveness in managing its cost recovery program, we met with and obtained data from cost recovery program managers in headquarters and two of EPA's regional offices. In EPA headquarters, we met with the director of the Policy and Program Evaluation Division and the chief of the Program Evaluation and Coordination Branch, within the Office of Site Remediation and Enforcement, located in turn within the Office of Enforcement and Compliance Assurance. Both the division and the branch are responsible for monitoring the agency's progress in recovering costs, developing recovery policies, and overseeing regional cost recovery actions. We obtained data on the amounts EPA has and has not recovered, information on the status of improvements to information systems supporting recovery actions, and EPA's cost recovery guidance and other related documents. In addition, to determine the status of EPA's efforts to implement a new indirect cost rate for recovering such costs, we interviewed and obtained relevant documents from the chief of the Program and Cost Accounting Branch of the Financial Management Division, the office that is developing the new rate, and relevant staff located in the Office of the Chief Financial Officer within the Office of the Comptroller. Also, to determine EPA's progress in implementing goals and performance measures for the cost recovery program, we reviewed the sections of EPA's 1999 annual plan for the Government Performance and Results Act and the Fiscal Year 1997 Audited Financial Statements report

from EPA's Office of the Chief Financial Officer, which contain EPA's goals and performance measures for the cost recovery program.

We also spoke with EPA officials in regions IV (Atlanta) and V (Chicago). We selected Region IV because it is unique in pursuing cost recovery at sites with cleanup costs below $200,000. According to EPA's policy, the regions have discretion in deciding whether to pursue cases with cleanup costs under $200,000 because such cases may not be cost-effective to pursue. Therefore, we wanted to test Region IV's experiences. There, we spoke with the director of the Regional Enforcement Division and the section chief for Cost Recovery, who are responsible for overseeing cost recovery actions, in order to determine the region's role in recovering indirect costs from responsible parties, tracking goals and performance measures, and using information systems in cost recovery. We selected Region V because it is one of EPA's largest regions and has the largest number of cost recovery actions. There, we spoke with the section chief for Cost Recovery and Enforcement and relevant staff, attorneys in the Office of Regional Counsel, who are the chief legal advisers and negotiators in cost recovery cases, and staff in the Program Accounting and Analysis Section, whose function is to manage financial information, such as billings related to cost recovery actions.

Objective 3: Assessing EPA's Superfund Contracts Management

To respond to our third objective, addressing contract management issues, we conducted work at EPA headquarters and three EPA regions. At headquarters, we met with Superfund program managers in OSWER, including the deputy director of the Office of Emergency and Remedial Response—the office responsible for providing policy, guidance, and overall direction for the agency's solid waste and emergency response program and the cleanup of hazardous waste sites. We also met with the director and senior managers in the Office of Acquisition Management —the office responsible for managing regional Superfund procurement operations through contracts and grants. To test how regions were implementing headquarters' contract management policies and procedures, we met with Superfund program and contracting managers in regions III (Philadelphia), V (Chicago), and VII (Kansas City). We selected regions III and V because we had included them in our prior contract management review and could, therefore, determine their progress in correcting problems and implementing improvements that we had previously identified. We also selected regions III and VII because they were among the first EPA regions to award the new Superfund contracts, beginning in mid-1995. This selection allowed us to evaluate the extent to

which these new contracts solved problems we had identified under the old contracts, such as contractors' high program support costs.

To test the quality and use of independent government cost estimates to set contract prices, we conducted a detailed analysis of 35 Superfund contract work assignments initiated in the three EPA regions, from January 1, 1997, through September 30, 1997. We had used a similar 9-month time period in our prior reviews; the time period allowed us to review a significant number of work assignments in order to identify cost-estimating practices and potential problems. Under the new Superfund contracts, in Region III, we analyzed all 7 work assignments initiated; in Region V, we analyzed 15 of 32 assignments; and in Region VII, we reviewed 7 of 20 assignments. We selected the cases with the highest dollar value for our review. For one contractor in Region VII, we selected only 2 of the 10 work assignments because the total dollar value for the remainder was not significant. We also included all six assignments awarded under the expiring Superfund contracts, all of which were in Region V.

We used a structured data collection instrument to review the case file for each assignment to determine the basis for the estimates, and we obtained information on the contractor's proposed and final approved price, as well as the results of any price negotiations. For 34 cases, we also discussed the basis for EPA's cost-estimating decisions, the reasons for significant differences between the contractor's estimate and the final contract price, and any noted errors with (1) the work assignment manager, who develops EPA's estimate; (2) the project manager, who reviews the estimate and supervises the work assignment manager; and (3) the contracting officer, who also reviews the estimate, leads the cost negotiations, and awards the work assignment.[2]

We also met with the U.S. Army Corps of Engineers in Washington, D.C., to compare their cost-estimating practices with EPA's. We met with the Superfund program manager and other Superfund program officials and reviewed relevant documents detailing the Corps' effort to develop a historical cost database and the EPA regional offices' use of the Corps' expertise. In addition, we met with a private Superfund contractor in Region III to get a general understanding of how contractors estimate costs for Superfund cleanup activities.

[2]We did not contact one work assignment manager because we found no significant problems with the estimates and the manager was on extended leave while we were conducting our audit work.

To evaluate the extent to which EPA has taken action to reduce program support costs; we met with EPA's Office of Acquisition Management in Washington, D.C., to discuss its policies, procedures, and practices. From the responsible program officials, we obtained quarterly progress reports, which report costs through September 1998 for each of the 15 Response Action Contracts issued to that point. To calculate the program support cost percentages, we divided the program support costs by the total contract costs. We also included contractors' start-up costs (mobilization costs) in our definition of program support costs, even though EPA now tracks them separately, because they are considered to be program support costs and we had included these costs when calculating the percentages in our prior reports.

To determine if the backlog of contract audits had been eliminated, we met with officials in EPA's Office of Inspector General in Washington, D.C. We also met with the Defense Contract Audit Agency (DCAA) in Fort Belvoir, Virginia, and discussed the backlog with the chief of Policy Auditing Standards and DCAA audit officials. DCAA and EPA's Office of the Inspector General have responsibility for conducting audits of EPA's Superfund contractors. We also obtained data from both agencies documenting the audits the agencies had completed to reduce the audit backlog.

We conducted our work from May 1998 through April 1999 in accordance with generally accepted government auditing standards.

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