United States General Accounting Office

GAO

Performance and Accountability Series

January 1999

Major Management Challenges and Program Risks

Environmental Protection Agency

GAO/OCG-99-17

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

Comptroller General
of the United States

January 1999

The President of the Senate
The Speaker of the House of Representatives

This report addresses the major performance and management challenges that have limited the effectiveness of the Environmental Protection Agency's (EPA) efforts to implement an integrated, cost-effective approach to environmental protection. It also addresses the corrective actions that the agency is taking to try to resolve these challenges. We and others have reported over the years on the challenges the agency faces in (1) obtaining the critical information it needs to assess the quality of the environment; (2) designing and effectively implementing alternative ways to regulate the environment; and (3) improving the agency's relations with states, which are critical partners in implementing many of EPA's programs. We have also raised concerns about EPA's management of the contractors it uses to evaluate and clean up abandoned hazardous waste sites so as to reduce the risk of fraud, waste, and abuse in its multibillion-dollar Superfund program.

EPA is taking actions to address these challenges. For example, the agency is developing a strategic action plan to improve the quality of its environmental data. The agency has tried several regulatory reinvention initiatives and is now assessing ways to improve their implementation. EPA is also implementing the National Environmental Performance Partnership System to

improve its working relationship with the states. In addition, EPA is now setting priorities for a portion of its limited cleanup funds based on the relative risk of waste sites and has reduced a long-standing backlog of cleanup contract audits. However, because the agency has not resolved other management problems, the Superfund program continues to pose a high risk of fraud, waste, and abuse. Although EPA is making progress in addressing these management challenges, they have been long-standing, and overcoming them will require the agency's long-term commitment. The agency could also more effectively use its strategic and annual performance planning process under the Government Performance and Results Act to better set priorities, establish specific objectives, and assess progress in meeting each of these challenges.

This report is part of a special series entitled the Performance and Accountability Series: Major Management Challenges and Program Risks. The series contains separate reports on 20 agencies—one on each of the cabinet departments and on most major independent agencies as well as the U.S. Postal Service. The series also includes a governmentwide report that draws from the agency-specific reports to identify the performance and management challenges requiring attention across the federal government. As a companion volume to this series, GAO is issuing an update to those government operations and programs that its work has identified as "high risk" because of their greater vulnerabilities to waste, fraud, abuse, and mismanagement. High-risk

government operations are also identified and discussed in detail in the appropriate performance and accountability series agency reports.

The performance and accountability series was done at the request of the Majority Leader of the House of Representatives, Dick Armey; the Chairman of the House Government Reform Committee, Dan Burton; the Chairman of the House Budget Committee, John Kasich; the Chairman of the Senate Committee on Governmental Affairs, Fred Thompson; the Chairman of the Senate Budget Committee, Pete Domenici; and Senator Larry Craig. The series was subsequently cosponsored by the Ranking Minority Member of the House Government Reform Committee, Henry A. Waxman; the Ranking Minority Member, Subcommittee on Government Management, Information and Technology, House Government Reform Committee, Dennis J. Kucinich; Senator Joseph I. Lieberman; and Senator Carl Levin.

Copies of this report series are being sent to the President, the congressional leadership, all other Members of the Congress, the Director of the Office of

Management and Budget, the Administrator of the Environmental Protection Agency, and the heads of other major departments and agencies.

David M. Walker
Comptroller General of
the United States

Contents

Overview

The Environmental Protection Agency's (EPA) $7 billion budget funds diverse regulatory, research, enforcement, and technical assistance programs directed at controlling pollution of the air, land, and water. The nation's annual costs to comply with environmental regulations are estimated at over $120 billion and growing. While the United States has made considerable progress in cleaning up the environment, the problems that remain are complex and challenging.

We, EPA's Inspector General, the National Performance Review, the National Academy of Public Administration, and the agency itself have documented management challenges that have limited the agency's ability to implement an integrated, cost-effective approach to environmental protection that focuses on reducing the greatest risks to human health and the environment. Although EPA has taken action to address these concerns, significant management challenges remain.

The Challenges

EPA Needs More Comprehensive Information on the Environment

EPA needs more comprehensive information on the condition of the environment to effectively set priorities, assess progress in achieving its goals and objectives, and report on its accomplishments in a credible way. Although EPA and the states collect a considerable amount of data, the agency's data systems are often outmoded and difficult to integrate in order to produce comprehensive environmental information. Important gaps in the data also exist.

EPA Faces Challenges in Reinventing Environmental Regulation

Although the current regulatory system for environmental protection has had its successes, it has proven to be costly and, at times, inflexible. Noting that complex future environmental challenges will require fundamentally different regulatory approaches, EPA has initiated a variety of actions aimed at reinventing environmental regulation. However, the agency faces several challenges, including helping its rank-and-file employees to understand and support changes to the current regulatory system and obtaining consensus among the agency's varied stakeholders on what these changes should be.

A Good Working Relationship With the States Has Been a Long-Term Challenge for EPA

As authorized by environmental statutes, EPA has increasingly delegated responsibilities for environmental protection activities to the states. The states have become important EPA partners as they have assumed the responsibility for implementing most national environmental programs on a daily basis. Despite the importance of this partnership, the relationship has often been characterized by fundamental disagreements over roles, priorities, and the extent of federal oversight that potentially limit the effectiveness of these programs.

EPA Has Not Fully Resolved Superfund Management Challenges

EPA has improved its management of the Superfund program—the agency's $1.5 billion effort to clean up the nation's most hazardous waste sites—since our 1990 designation of the program as being at high risk of fraud, waste, and abuse. Additional actions are still needed to (1) ensure that limited resources are used to clean up sites that pose the greatest risk to human health and the environment, (2) recover billions of dollars in cleanup costs from those responsible for the contamination, and (3) control site cleanup costs through the efficient and effective administration of cleanup contracts.

Progress and Next Steps

EPA is aware of the importance of meeting these management challenges and has various initiatives under way to address them. For example, the agency plans to reorganize its information management and policy efforts to provide a single point of accountability. EPA is also developing a strategic action plan to improve the quality of the data in its major information systems and a strategy to identify and fill significant gaps in the available environmental data. In addition, EPA is implementing the National Environmental Performance Partnership System, which agency and state leaders initiated to improve the EPA/state working relationship. The new system is intended to focus EPA's and states' efforts more on results and less on administrative management and oversight. The system involves the increased use of environmental goals and indicators, state assessments of environmental and program performance, and the negotiation of performance partnership agreements between EPA and individual states. These agreements are to provide the means for EPA and the states to negotiate such matters as which problems will receive priority attention within the state programs and how states' progress in achieving clearly defined program objectives will be assessed.

Although EPA is making progress in addressing its management challenges, they have been long-standing, and overcoming them will require the agency's long-term commitment and, in some cases, additional resources. The reorganization of the agency's information management and policy efforts, the data quality action plan, and the data gaps strategy are in development. The agency is improving the implementation of its regulatory reinvention initiatives. The National Environmental Performance Partnership System is still evolving—33 states have signed performance partnership agreements with EPA—and the agency is working to improve its management of the Superfund program. EPA's current strategic plan generally recognizes these management challenges and makes a commitment to address them; however, the strategic plan does not clearly establish what progress is expected over the plan's time frame. The strategic and annual performance planning process under the Government Performance and Results Act can serve as EPA's mechanism for setting priorities, establishing specific objectives, and assessing progress in meeting each of the challenges.

Key Contact

Peter F. Guerrero, Director
Environmental Protection Issues
Resources, Community, and Economic Development Division
(202) 512-6111
guerrerop.rced@gao.gov

Major Performance and Management Issues

With a $7 billion annual budget and about 18,000 employees, EPA is a relatively small agency. However, the agency has the critical mission of implementing various laws and regulations aimed at protecting human health and the environment. The leadership that EPA provides and the decisions it makes in support of this mission have a substantial effect beyond the success of efforts to protect the quality of the nation's air, land, and water. The nation's cost of complying with environmental regulations was estimated over $120 billion in 1994 (the date of the latest available data).[1]

Over the years, we, EPA's Inspector General, and others, such as the National Academy of Public Administration and the National Performance Review, have documented needed improvements in EPA's performance and management and have recommended reforms. This report summarizes our more recent findings on the effectiveness of the agency's efforts to (1) obtain comprehensive information on the environment, (2) improve the efficiency of the current regulatory system, (3) establish a better working relationship with the states—its partners in implementing environmental programs, and

[1]See Survey of Current Business, Bureau of Economic Analysis, Department of Commerce (Vol. 70, No. 9, Sept. 1996).

(4) better manage the Superfund program for cleaning up the most hazardous waste sites. The report also discusses, where applicable, how EPA has responded to the National Performance Review's recommendations—which address problems such as the need for a greater emphasis on pollution prevention, economic and market-based approaches to reduce water pollution, greater flexibility for local governments, improving the regulatory and statutory climate for innovative technologies, and reforms in EPA's contract management process—and how the issues we have identified are addressed in the agency's strategic plan developed in response to the Government Performance and Results Act (the Results Act).

EPA Needs More Comprehensive Information on the Environment

EPA and the states collect a wealth of environmental data under various statutory and regulatory authorities, including reports on air emissions under the Clean Air Act, wastewater discharges under the Clean Water Act, and pollutant levels in drinking water under the Safe Drinking Water Act. However, the agency's existing data management system is outmoded in many ways. It continues to rely heavily on paper-based reporting, and its many separately designed databases are generally

not technically compatible with one another. For example, it has been difficult, if not impossible, for EPA to aggregate data from the many different databases to present comprehensive information on chemicals, industrial sectors, localities, and environmental conditions because basic data elements are not standardized across these databases. Data in individual databases also are often difficult to compile in a meaningful way. For example, the state water quality reports under section 305(b) of the Clean Water Act are a key source of information for measuring progress in cleaning up the nation's lakes, rivers, and streams. However, inconsistencies in the water quality assessments and in the assessment methodologies from state to state make it difficult to aggregate the data and to use the information to conclusively determine whether the quality of rivers, lakes, and streams is getting better or worse over time.

Important gaps in the data also exist. Overall, data obtained from the detailed monitoring of environmental conditions and of human exposures to toxic pollutants are limited, and the human health and ecological effects of many chemical pollutants are not well understood. An example of these gaps is the available information on toxic air

pollution. EPA's Toxic Release Inventory requires annual reporting by manufacturing facilities on their emissions to the environment of over 600 toxic chemicals, including about 173 of the 188 hazardous air pollutants regulated under the Clean Air Act. However, the emissions of the facilities that are required to file reports for the Toxic Release Inventory account for less than 10 percent of the estimated total air emissions of these pollutants. Furthermore, EPA's Integrated Risk Information System, which is a database of the agency's consensus on the potential health effects from chronic exposure to various substances found in the environment, has toxicological data on only one-third of the hazardous air pollutants. Only a few ecological effects are reported in the database.

EPA needs comprehensive information on environmental conditions and changes over time to identify problem areas that are emerging or that need additional regulatory action or other attention. This information also informs EPA's decisionmakers, the Congress, the public, and other stakeholders of the progress that the agency is making in carrying out its mission to protect human health and the environment. Absent this information, it is difficult for EPA to set

priorities, evaluate the success of its programs and activities, and report on its accomplishments in a most credible and informed way.

EPA's strategic and annual performance plans under the Results Act recognize EPA's need to improve its collection, management, and dissemination of environmental data. For example, one of the strategies under EPA's "effective management" strategic goal is to implement best practices for information resources management and to integrate information technology investments with the agency's overall strategic-planning process. Another strategy is to support electronic reporting by the highest-volume submitters of data to reduce their reporting burden and facilitate EPA's acquisition of key information in determining environmental conditions across the country. The strategic plan further describes EPA's plans to develop an agencywide accountability process to evaluate and report on progress toward the agency's strategic goals and objectives.

Since the issuance of its strategic plan in September 1997, EPA has initiated several actions to improve information management. For example, in February 1998, the EPA Administrator and Deputy Administrator

approved the Reinventing Environmental Information Action Plan. A major initiative under this effort is to standardize basic data elements—that is, adopt common or core data standards—so that data from various information systems can be pulled together to present comprehensive information on geographical locations, chemicals, industrial sectors, and environmental conditions. The action plan also calls for the expanded electronic reporting of environmental data. EPA has set specific deadlines to incorporate these improvements into its databases and work with the states to integrate EPA's and the states' data systems around common data standards. According to the plan, EPA is to implement core data standards and make electronic reporting available in the agency's 13 major data systems within 5 years.

In April 1998, EPA's Deputy Administrator announced that the agency's Chief Information Officer would lead an effort to implement an agencywide approach to ensuring the quality of EPA's data—particularly a process for correcting errors in the agency's databases. EPA is also developing a strategy to identify major gaps in environmental information and to set priorities and establish a schedule for action to address the gaps. The strategy is to focus

on meeting the data needs of external users or audiences—for example, by enhancing the agency's ability to report on its goals and objectives under the Results Act and ability to respond to the public's questions about conditions in the environment. According to agency officials, the data quality plan was completed and sent to the EPA Administrator for final approval on December 30, 1998. With regard to the data gaps strategy, EPA has developed priority-setting criteria and is using the criteria to rank data gaps in 26 broad environmental problem areas. According to an EPA official, the agency will perform an in-depth analysis of data gaps and develop options to address the first three priority data gaps by the spring of 1999, in time to be incorporated into EPA's budget for fiscal year 2001.

In October 1998, the EPA Administrator announced plans to create a new office responsible for information management, information policy, and technology stewardship. This office would be responsible for developing and implementing goals, standards, and accountability systems to manage and improve the quality of information used within the agency and for the public. To this end, the office would (1) ensure that the quality of data collected

and used by EPA is known and appropriate for its intended uses, (2) reduce the information collection and reporting burden, (3) fill significant data gaps, and (4) provide the public with integrated environmental and public health information and statistics. The office would also have the authority to carry out functions, such as implementing standards and policies for information resources management and operating and purchasing information technology and systems. The new office may consolidate all or parts of the existing Office of Information Resources Management, the Center for Environmental Information and Statistics, and other components, such as the Toxic Release Inventory program.

Although these efforts are steps in the right direction, collecting and managing the data that EPA needs have been a long-standing challenge for the agency. Achieving these improvements will require long-term commitment and resources. In noting EPA's plans to implement an agencywide approach to ensuring the quality of its data, a June 1998 report of the Senate Committee on Appropriations stated that it expects EPA to invest sufficient funds for improving the quality of data and to ensure that the issue is

accorded high priority within the agency.[2] The report also directed EPA to report quarterly on its progress in addressing the quality of data. This quarterly reporting and the Results Act's requirement for annual performance reports—starting with a report on fiscal year 1999 by March 2000—offer EPA the opportunity to monitor the progress of its various initiatives and to reconsider whether its current strategic and performance plans adequately set out its environmental information objectives and strategies.

EPA Faces Challenges in Reinventing Environmental Regulation

The current regulatory system for environmental protection has proven to be costly and, at times, inflexible. Noting that complex future environmental challenges will require fundamentally different regulatory approaches, EPA, in March 1995, announced a series of high-priority and significant actions aimed at improving the current regulatory system and laying the groundwork for a new system of environmental protection. According to EPA, these efforts are designed to (1) achieve better environmental results through the use of innovative and flexible approaches to

[2]See S. Rept. 105-216 accompanying the Departments of Veterans Affairs and Housing and Urban Development and Independent Agencies appropriations bill for fiscal year 1999.

environmental protection; (2) encourage states, tribes, communities, and citizens to share in environmental decisionmaking; (3) make it easier for businesses to comply with environmental laws by offering them compliance assistance and incentives to prevent pollution at its source; and (4) eliminate unnecessary paperwork. While EPA has made progress in implementing its reinvention initiatives, it has to resolve internal and external obstacles if environmental regulation is to be truly reinvented.

Many of EPA's reinvention efforts are consistent with the Results Act's goal of focusing on achieving results and with the National Performance Review's past recommendations to achieve a more integrated, cost-effective approach to environmental protection. However, we have identified a number of broad issues that need to be addressed to create a climate in which regulatory reinvention can succeed.

- Key stakeholders in the reinvention process, such as the states, industry, and other parts of the regulated community, have expressed concern over the large number of complex and demanding initiatives that EPA has

undertaken.[3] Some participants have suggested that the large number of initiatives under way may be diverting attention and resources from the high-priority efforts most in line with the agency's reinvention objectives. Stakeholders have also expressed confusion over the underlying purpose of some of the major initiatives, especially their specific objectives and expectations.

- EPA has had difficulty in achieving "buy-in" among the agency's rank and file, who have grown accustomed to prescriptive, medium-specific (air, land, or water) regulation during the agency's almost 30-year history. Both headquarters and regional EPA management have acknowledged that achieving full commitment to reinvention by the agency's rank and file is a challenge and that it will take time for changes to the organization's culture to filter down to EPA line staff.
- The agency has also had difficulty in achieving agreement among external stakeholders, including other federal and

[3]These initiatives include Project XL, which allows individual facilities to test innovative ways of achieving environmental protection if they can demonstrate that the proposed changes will yield superior environmental performance, and the Common Sense Initiative, which seeks to identify innovative environmental regulatory practices for different industrial sectors (e.g., the printing and metal-finishing industries). Other initiatives have included efforts to consolidate federal air rules for individual industries, encourage chemical industries to develop more environmentally friendly practices, and promote "effluent trading" in watersheds.

state regulators and environmental organization representatives—particularly, when these stakeholders perceive that unanimous agreement is required before decisions can be made. For example, stakeholders in EPA's Common Sense Initiative—termed the "centerpiece" of the agency's regulatory reinvention efforts—spent considerable time on process-related issues, such as how consensus is defined, rather than on working to reach agreement on objectives or approaches for addressing important reinvention issues and policies.

- The agency's process for resolving miscommunication and other problems involving EPA headquarters staff, regional staff, and other stakeholders has not distinguished between problems that require the attention of senior managers and those that should be resolved at lower levels within the agency. Stakeholders have cited the need for a sustainable process that focuses senior EPA managers' intervention in problem resolution on those problems that cannot otherwise be resolved at lower management levels.
- EPA has had an uneven record in evaluating the success of many of its initiatives. Evaluation is needed both to show EPA managers what does and does not work and

to provide external stakeholders with convincing evidence that an alternative regulatory strategy is worth pursuing. EPA officials have acknowledged that the agency has had neither sufficient performance data nor an evaluation component for many of its initiatives.

EPA recognizes the importance of overcoming the obstacles to its regulatory reinvention efforts and the need to work effectively with governmental and nongovernmental stakeholders if its efforts are to succeed. For example, consistent with the National Performance Review's recommendations and the Results Act's requirements, EPA has taken steps to address these concerns under the goals and action items established in its strategic plan. The plan highlights the importance of stakeholders' involvement and notes other external factors beyond EPA's direct control that are important to the plan's and regulatory reinvention initiatives' success. In addition, EPA established an Office of Reinvention to help focus and centrally manage agencywide reinvention initiatives and has taken steps to address the need for an improved operating framework and to measure the progress of its various initiatives. According to EPA officials, the

agency is also taking action to set priorities for its reinvention activities, clarify how different initiatives fit together, provide guidance on the issue of consensus among stakeholders, and evaluate the initiatives' results.

While these actions will help EPA to strengthen its ability to manage agencywide reinvention initiatives and to influence the external factors on which their success depends, successfully meeting the challenges we identified will be difficult. Of particular concern, as we and other organizations have noted in the past, is the agency's limited ability to achieve major changes in environmental regulation under the current statutory framework. This framework, composed of largely prescriptive, medium-specific laws, imposes requirements that have led to, and tend to reinforce, many of the existing practices and behaviors that EPA is seeking to change. Although there is wide disagreement on whether the current environmental statutes must be revised for reinvention to succeed, many state and industry officials believe that legislative changes are needed to encourage experiments in alternative methods for achieving environmental compliance. EPA's strategic and annual performance plans

required under the Results Act provide an opportunity for the agency to assess its progress and reevaluate its strategies for achieving regulatory reinvention goals.

A Good Working Relationship With the States Has Been a Long-Term Challenge for EPA

As authorized by environmental statutes, EPA has delegated the responsibility for the day-to-day implementation of most federal environmental programs to the states. EPA provides the states with financial and technical assistance and continues to remain responsible for overseeing the programs. Although a good working relationship between EPA and the states is important to the success of environmental programs, the relationship has often been characterized by fundamental disagreements over such issues as EPA's and state environmental agencies' respective roles, appropriate priorities among state environmental programs, and the appropriate degree of federal oversight. For example, in 1988, we found that states said they wanted flexibility to tailor programs to meet local needs, opportunities to participate in decisions affecting implementation, and EPA's trust in their ability to make day-to-day program decisions. More recently, in 1995, we found that financial constraints were impeding states' efforts to perform key functions

required to implement environmental programs, such as monitoring environmental quality, setting standards, issuing permits, and enforcing compliance. We also found that other factors were affecting the EPA/state relationship, including, states' concerns that EPA (1) was inconsistent in its oversight across regions, (2) was sometimes micromanaging state programs, (3) did not provide sufficient technical support for increasingly complex state program requirements, and (4) often did not adequately consult states before making key decisions affecting them.

Our May 1998 report on EPA's and states' enforcement programs suggested continuing problems in the EPA/state relationship. The report, which addressed EPA's and states' efforts to focus state enforcement programs on achieving environmental results, cited unanimous concerns among the 10 states contacted that different EPA offices convey an inconsistent message on the appropriate use of compliance tools. Oregon officials, for example, cited "internal battles" between EPA's Office of Enforcement and Compliance Assurance and the agency's program offices, noting that the two tend to have different initiatives and priorities, which has led to confusion for both the regions and the

states. Officials of Colorado, Massachusetts, and Pennsylvania cited similar problems.

EPA and the states are pursuing a new initiative that may address many of these past concerns. The National Environmental Performance Partnership System (NEPPS), which was developed by EPA and state leaders, is intended to focus their efforts more on results and less on administrative management and oversight. States with strong environmental programs are to have more leeway in setting environmental priorities, designing new strategies, and managing their own programs, while EPA concentrates its oversight and technical assistance on weaker programs. The system's major components are to include the increased use of environmental goals and indicators, state assessments of environmental and program performance, and the negotiation of performance partnership agreements between EPA and individual states. These agreements are to provide a means for EPA and the states to negotiate such matters as (1) which problems will receive priority attention within the state programs, (2) what EPA's and the states' respective roles will be, and (3) how the states' progress in achieving clearly defined program objectives will be

assessed. After an initial pilot year in 1996, in which six states entered into performance partnership agreements, broader implementation of the system began in fiscal year 1997.

EPA's September 1997 strategic plan under the Results Act calls for EPA, in collaboration with the states, to (1) develop policies, guidance documents, and training as needed to enhance the agency's and states' capacity to implement elements of NEPPS; (2) negotiate with states performance partnership agreements that define roles and responsibilities; (3) award to interested states performance partnership grants that provide for flexibility in how environmental programs are carried out, with increased accountability for results; (4) continue to refine and use improved measures of environmental and program performance and strive to reduce the states' reporting burden; (5) foster EPA's and the states' efforts to make environmental and health information more available and understandable to the public; and (6) evaluate and report nationally on the progress in meeting the goals and objectives of performance partnerships.

The details of how NEPPS will work are still evolving as the system is being implemented and refined. An important component of the new system is the use of results-oriented performance measures for the states. EPA and the states will need to incorporate more of these measures in the partnership agreements as they are developed to assess the results of national environmental programs. In addition, the full extent of state participation in NEPPS remains to be seen—as of July 1998, for example, 33 states had entered into some form of performance partnership agreements with EPA.

EPA Has Not Fully Resolved Superfund Management Challenges

EPA's Superfund program began in 1980 as a relatively short-term project to clean up abandoned hazardous waste sites. Since then, tens of thousands of waste sites have been discovered, including many owned by the federal government, and cleaning them up has proved to be far more complicated and costly than anticipated. Estimates are that cleanup costs could exceed $300 billion for the federal government and billions more for the private sector. Given this backlog of sites and potential investment, federal agencies must use the limited cleanup funds available each year as efficiently as possible.

Under the Superfund law, EPA can compel the private parties responsible for contamination at hazardous waste sites to clean them up, or it can conduct the cleanup and seek reimbursement of its costs from the responsible parties. Many states have passed laws establishing state enforcement cleanup programs similar to the federal program.

Since the early 1990s, we have identified certain Superfund management challenges that put the program at risk. First, EPA did not have systems in place that allowed the agency to fund the worst sites first—that is, to give funding priority to those sites that posed the highest health and environmental risks. Second, EPA lost the opportunity to recover billions in cleanup costs from those parties responsible for the contamination at waste sites because it did not assess them for certain costs of operating the Superfund program or effectively monitor its cost-recovery performance. Finally, EPA had problems in controlling the costs of contractors that it used to conduct cleanups, which is especially significant, given that EPA spends about half of its annual budget of up to $1.5 billion on contractors. This combination of vulnerabilities inherent in the program's design and EPA's implementation has led us since 1990 to

designate the program as high-risk, that is, vulnerable to waste, fraud, abuse, and mismanagement. While EPA has taken corrective steps, we continue to find areas of concern and additional actions that it could take to limit the federal government's financial risks and achieve more cleanups for the money appropriated. Because of these continuing concerns, we are maintaining the high-risk designation for the Superfund program.

EPA Is Partly Using Risk to Set Superfund Priorities

EPA generally provides funding for sites in the program until they progress to the point where they are ready for construction of the remedy. The agency has a backlog of sites at this stage and cannot fund them all. In 1995, EPA created the National Prioritization Panel to help it set funding priorities for these sites. The panel, which is composed of regional and headquarters cleanup managers, ranks all of the sites ready for construction nationwide on the basis of health and environmental risks and other project considerations, such as cost-effectiveness. EPA then approves funding for projects on the basis of these priority rankings. Those sites not selected in one year can compete again for funding the following year.

EPA, however, does not use relative risk as a major criterion when deciding which of the eligible sites to include in the Superfund program.[4] In our discussions with EPA headquarters officials and managers responsible for assessing sites for Superfund consideration in 4 of EPA's 10 regions,[5] we found that the agency relies on the states to choose which of the eligible sites to forward to EPA for Superfund consideration after the states have selected which sites they will address through their own enforcement or voluntary cleanup programs.[6] The EPA cleanup managers whom we talked to expect that sites coming into the Superfund program in the future will not necessarily be the most risky but, rather, large, complex, and, therefore, costly sites or those with responsible parties that are not willing or able to pay for the cleanup.

Because EPA does not usually track the status of cleanups that take place outside of

[4]A site is eligible for the Superfund program if it meets the criteria of EPA's Hazard Ranking System, which evaluates a site's potential risk to public health and the environment.

[5]These four regions were selected because they had the largest number of sites currently awaiting consideration to be included in the Superfund program.

[6]Most states have set up their own voluntary cleanup programs. Voluntary state cleanup programs offer parties incentives to voluntarily clean up sites.

the Superfund program, EPA does not know if the worst sites are being addressed first. One of the four regions in our review is trying to induce its states to voluntarily provide EPA with information on the cleanup status of the sites that they are addressing and that EPA considers as potentially posing significant risk.

EPA Has Not Recovered Billions of Dollars of Cleanup Costs

EPA historically has not been charging responsible parties for certain portions of its costs of operating the Superfund program. More specifically, the agency used an understated, conservative rate for charging its indirect costs, which include such items as personnel and facilities costs, to responsible parties. As a result, the agency has excluded approximately $3 billion—about 20 percent of the $15 billion spent on Superfund to date—in indirect costs from final settlements with responsible parties.[7] As early as 1992, EPA proposed regulations to expand the recovery of indirect costs but abandoned the effort after receiving significant negative industry comments on the draft rules. Now, in response to a governmentwide requirement to adopt new cost-accounting standards,

[7]This $3 billion figure represents indirect costs excluded from final settlements with responsible parties through fiscal year 1997, the year of the most current information available.

EPA's Financial Management Office is developing a more complete indirect-cost rate that should be available early in 1999. Cost-recovery managers in the Superfund program stated that they are waiting until the methodology used to develop the rate is approved by the Department of Justice before adopting it for the Superfund program. According to EPA, adopting the new rate could significantly increase the indirect costs charged to responsible parties.

Adopting the new rate becomes even more critical because relatively new EPA policies and other factors may otherwise lower cost recoveries. For example, EPA now does not charge parties that agree to cleanups for some of the "orphan shares" of cleanup costs—those portions of costs attributable to parties that no longer exist or are no longer financially viable. For fiscal years 1996 and 1997, EPA estimates that it did not charge responsible parties for $49.1 million in orphan share costs.

We, as well as others, including EPA in its management review of the Superfund program,[8] have recommended that the agency needs to better track the amount of

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

costs it actually recovers compared with the amount that it potentially could have recovered, determine the underlying factors for differences in the amounts recovered each year, and identify any actions it may need to take to improve performance. Establishing performance measures to better track the outcome of EPA's cost-recovery efforts is consistent with the Results Act, which calls for agencies to set measures to assess their programs' performance. On the other hand, EPA has consistently argued that (1) publicizing annual rates of recovery as a goal would jeopardize its ability to negotiate the maximum recoveries possible from individual parties by signifying a willingness to settle for less than 100 percent of recoverable costs and (2) many factors outside of the agency's control can affect the amount recovered in a given year, such as the number of sites for which financially viable responsible parties do not exist.

However, we have recommended that EPA use annual cost-recovery rates as a performance measure—not as a performance goal. EPA's goal would still be to achieve settlement for 100 percent of the recoveries. Calculating annual recovery rates would let the agency know how it and its regional offices are doing in meeting the

goal. Without systematically analyzing the reasons for its rate of cost recovery, EPA cannot really tell if its cost-recovery performance is due to internal factors that it can control, such as poor cost documentation or inexperienced negotiators, or external factors, such as financially nonviable parties.

EPA Still Has Challenges Controlling Cleanup Contract Costs

EPA has had long-standing challenges with controlling the costs of the contractors it uses to clean up sites or to monitor private-party cleanups for EPA. In the past, we found that EPA (1) relied too heavily on the contractors' own cost proposals to determine the final price for cleanup activities performed by the contractors; (2) had made little progress in improving the timeliness of auditing contractors, thus increasing the risk for fraud, waste, and abuse by contractors; and (3) continued to pay contractors a high rate to cover their administrative support costs. Since then, EPA has increased its use of independent government cost estimates to set better contract prices for the government, but some estimates are still of questionable quality. In addition, according to EPA officials, the agency has almost eliminated the backlog of contractor audits, thus

improving their timeliness. However, program support costs remain high.

In our previous reviews of these issues, we found that EPA was not preparing independent cost estimates and that most of the final prices awarded for work closely matched the contractor's—not EPA's—estimate. In our ongoing work, we found that EPA has improved in these areas. Of the 35 contractor work assignments that we reviewed in three of EPA's regions, the agency generated independent cost estimates for each of them. Furthermore, in about half of the cases, the final price awarded for the work closely matched EPA's independent cost estimate, which, according to EPA's criteria, suggests that the estimates were fairly accurate.

However, additional improvements are needed. In nearly half of the cases, the final price varied significantly from the cost estimate. The final prices were below the estimates in 5 cases by as much as 36 percent and were higher than the estimates in 12 cases by as much as 101 percent. EPA estimators often left critical work steps out of their estimates, and about half of EPA's program contract management staff for these cases questioned their own

ability to generate accurate estimates because of their lack of experience and historical data on actual cleanup costs as a reference point for their estimates. EPA acknowledged these concerns and has designed a set of corrective measures to address them. As of November 1998, the agency was in the first steps of implementing these measures—assessing each region's cost-estimating practices.

EPA continues to experience high program support costs related to contractors. In our ongoing review of these management issues regarding the Superfund program, we found that the program support costs for 9 of 13 contracts exceeded EPA's goal of 11 percent. These costs ranged from 19 to 92 percent when we included initial contract start-up costs, such as setting up local offices and designing computer programs to accommodate EPA's financial reporting requirements. The costs of the remaining four contracts ranged from about 6 to 10 percent. A major reason for continued high support costs is that EPA has more contract capacity in place than work available for the contractors, even though the agency has significantly reduced the number of new contracts.

These continuing concerns suggest that EPA may need to evaluate whether it needs to overhaul some of its contracting practices. Comprehensively assessing issues, such as whether the agency needs multiple contracts in each of its regions or whether it needs to use contracting vehicles that reimburse contractors on the basis of their performance—not just on the costs they incur—offers the potential to improve the effectiveness and efficiency of Superfund contracting. Under its "Contracts 2000" initiative, EPA proposes to consider some of these issues for the next several years through its contracts management team, although it could not provide us with a detailed plan and milestones to implement this initiative.

Related GAO Products

Environmental Information

Environmental Information: Agencywide Policies and Procedures Are Needed for EPA's Information Dissemination (GAO/RCED-98-245, Sept. 24, 1998).

Environmental Protection: Key Management Issues Facing EPA (GAO/RCED-98-153R, Apr. 23, 1998).

Results Act: Observations on EPA's Draft Strategic Plan (GAO/RCED-97-209R, July 30, 1997).

Managing for Results: EPA's Efforts to Implement Needed Management Systems and Processes (GAO/RCED-97-156, June 18, 1997).

Environmental Protection: EPA's Problems With Collection and Management of Scientific Data and Its Efforts to Address Them (GAO/T-RCED-95-174, May 12, 1995).

Regulatory Reinvention

Environmental Protection: EPA's and States' Efforts to "Reinvent" Environmental Regulation (GAO/T-RCED-98-33, Nov. 4, 1997).

Regulatory Reinvention: EPA's Common Sense Initiative Needs an Improved

Operating Framework and Progress Measures (GAO/RCED-97-164, July 18, 1997).

Environmental Protection: Challenges Facing EPA's Efforts to Reinvent Environmental Regulation (GAO/RCED-97-155, July 2, 1997).

EPA/State Working Relationship

Environmental Protection: EPA's and States' Efforts to Focus State Enforcement Programs on Results (GAO/T-RCED-98-233, June 23, 1998).

Environmental Protection: EPA's and States' Efforts to Focus State Enforcement Program on Results (GAO/RCED-98-113, May 27, 1998).

Environmental Protection: Status of EPA's Initiatives to Create a New Partnership With States (GAO/T-RCED-96-87, Feb. 29, 1996).

EPA and the States: Environmental Challenges Require a Better Working Relationship (GAO/RCED-95-64, Apr. 3, 1995).

Superfund Program Management

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

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

Superfund: State Voluntary Programs Provide Incentives to Encourage Cleanups (GAO/RCED-97-66, Apr. 9, 1997).

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

Federal Facilities: Consistent Relative Risk Evaluations Needed for Prioritizing Cleanups (GAO/RCED-96-150, June 7, 1996).

Superfund: More Emphasis Needed on Risk Reduction (GAO/T-RCED-96-168, May 8, 1996).

High-Risk Series: Superfund Program Management (GAO/HR-95-12, Feb. 1995).

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

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

Performance and Accountability Series

Major Management Challenges and Program Risks: A Governmentwide Perspective (GAO/OCG-99-1)

Major Management Challenges and Program Risks: Department of Agriculture (GAO/OCG-99-2)

Major Management Challenges and Program Risks: Department of Commerce (GAO/OCG-99-3)

Major Management Challenges and Program Risks: Department of Defense (GAO/OCG-99-4)

Major Management Challenges and Program Risks: Department of Education (GAO/OCG-99-5)

Major Management Challenges and Program Risks: Department of Energy (GAO/OCG-99-6)

Major Management Challenges and Program Risks: Department of Health and Human Services (GAO/OCG-99-7)

Major Management Challenges and Program Risks: Department of Housing and Urban Development (GAO/OCG-99-8)

Major Management Challenges and Program Risks: Department of the Interior (GAO/OCG-99-9)

Major Management Challenges and Program Risks: Department of Justice (GAO/OCG-99-10)

Major Management Challenges and Program Risks: Department of Labor (GAO/OCG-99-11)

Major Management Challenges and Program Risks: Department of State (GAO/OCG-99-12)

Major Management Challenges and Program Risks: Department of Transportation (GAO/OCG-99-13)

Major Management Challenges and Program Risks: Department of the Treasury (GAO/OCG-99-14)

Major Management Challenges and Program Risks: Department of Veterans Affairs (GAO/OCG-99-15)

Major Management Challenges and Program Risks: Agency for International Development (GAO/OCG-99-16)

Major Management Challenges and Program Risks: Environmental Protection Agency (GAO/OCG-99-17)

Major Management Challenges and Program Risks: National Aeronautics and Space Administration (GAO/OCG-99-18)

Major Management Challenges and Program Risks: Nuclear Regulatory Commission (GAO/OCG-99-19)

Major Management Challenges and Program Risks: Social Security Administration (GAO/OCG-99-20)

Major Management Challenges and Program Risks: U.S. Postal Service (GAO/OCG-99-21)

High-Risk Series: An Update (GAO/HR-99-1)

The entire series of 21 performance and accountability reports and the high-risk series update can be ordered by using the order number GAO/OCG-99-22SET.

Ordering Information

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

Orders by mail:

U.S. General Accounting Office
P.O. Box 37050
Washington, DC 20013

or visit:

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

Orders may also be placed by calling (202) 512-6000 or by using fax number (202) 512-6061, or TDD (202) 512-2537.

Each day, GAO issues a list of newly available reports and testimony. To receive facsimile copies of the daily list or any list from the past 30 days, please call (202) 512-6000 using a touchtone phone. A recorded menu will provide information on how to obtain these lists.

For information on how to access GAO reports on the INTERNET, send an e-mail message with "info" in the body to: info@www.gao.gov

or visit GAO's World Wide Web Home Page at: http://www.gao.gov

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

Official Business
Penalty for Private Use $300

Address Correction Requested

Bulk Rate
Postage & Fees Paid
GAO
Permit No. G100