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Report to Congressional Requesters

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SUPERFUND

Integrated Site Assessments May Expedite Cleanups

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Congressional Requesters

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 created the Superfund program to clean up the nation's most severely contaminated hazardous waste sites. Since the program began, the Environmental Protection Agency (EPA) has identified thousands of sites that need to be evaluated for possible cleanup. As we discussed in our recent report on the duration of Superfund cleanups,[1] these evaluations, typically conducted in several phases over several years, have lengthened the time required to complete cleanups.

To expedite its cleanups of hazardous waste sites, EPA introduced the Superfund Accelerated Cleanup Model in 1992. According to EPA headquarters officials, this model was fully assimilated into the agency's regional structure by 1995. One component of the model, the integrated site assessment, was designed to streamline the evaluation of selected sites by merging assessments of their conditions and risks. Previously, these assessments were performed separately and often sequentially by various Superfund units in EPA's regional offices. Through this approach, EPA expected to shorten the duration of cleanups by years and to improve coordination among cleanup units.

Interested in the efficiency of the Superfund process, you asked us to (1) determine whether integrated site assessments have the potential to expedite hazardous waste cleanups, reduce their costs, and improve coordination among various Superfund units; (2) assess EPA's implementation of this approach; and (3) identify any factors that could limit the use of integrated site assessments.

Results in Brief

Integrated site assessments have the potential to expedite the Superfund process. In pilot tests conducted from about 1991 to 1995 in seven EPA regions, integrated assessments made data collection significantly more efficient, reducing the time for processing and study by 3 months to 4 years. Three of the pilot tests also quantified cost savings, which ranged from almost $3,000 to $300,000. EPA has not fully evaluated the effects of integrated assessments on its cleanup operations, but an internal agency study concluded that certain integrated assessments produced 20 percent

[1]Superfund: Times to Complete the Assessment and Cleanup of Hazardous Waste Sites (GAO/RCED-97-20, Mar. 31, 1997).

time savings. In addition, according to regional officials we interviewed, the integrated approach, though not suited to all sites, can improve the Superfund process by reducing sampling, duplication of effort, and inactive periods between steps in the process. The officials also reported that the approach promotes coordination among EPA's cleanup units, thereby improving decisions on the selection and timing of cleanup actions and focusing resources on the sites that pose the greatest risks to human health and the environment.

Despite the potential benefits of the integrated approach, EPA's regions have not yet fully or consistently implemented it. Some regions have used it extensively, while others have very little experience with it. The regions have also varied in their implementation of the approach, consolidating different data collection steps and reorganizing their programs to varying degrees to improve coordination and streamline data collection. In addition, some regions have developed written guidance on implementing integrated assessments, while others have not.

Two principal factors may be impeding the wider, more consistent use of integrated site assessments. First, EPA headquarters has not followed through to ensure the effectiveness of the regions' implementation of the approach. For example, although the agency developed initial implementing guidance and published summaries of the regional pilot tests' findings, it has not systematically measured the impact of the approach on the time and costs of Superfund cleanups or examined differences in the regions' use of the approach to identify best practices that could be implemented elsewhere. According to EPA headquarters officials, the agency has not had the resources to provide more extensive oversight. Second, the integration of site assessments can be difficult because of varying data requirements and operating methods among the separate Superfund units that conduct assessments.

Background

After discovery, a potential hazardous waste site may proceed through one or more of three Superfund programs. If the site may need long-term cleanup, it goes through the preremedial program, which evaluates and ranks sites to determine whether they should be placed on the National Priorities List (NPL), EPA's list of sites presenting the greatest threats to human health and the environment. After being placed on the NPL, a site proceeds through the remedial program, where it is further evaluated and, if necessary, cleaned up in a process that often lasts for several years or more. Sites that require cleanups under the remedial program typically are

contaminated by many different types of chemicals, have contamination in more than one medium (e.g., soil, surface water, or groundwater), and may encompass acres or even square miles. A third Superfund program, the removal program, is used at sites with hazardous waste problems that do not require long-term cleanup and can be addressed with quicker, more limited actions.[2] For example, the removal program can be used to quickly dispose of leaking hazardous waste containers at sites. In EPA's regions, each of these programs may operate in a separate organizational unit with separate staff. The state in which a site is located may also take responsibility for cleaning up the site, either on its own authority or under an agreement with EPA. When the preremedial program determines that the risks at a site are not serious enough to warrant placement on the NPL, the site may be referred to the state for possible action.

The preremedial program begins with a preliminary assessment—a limited-scope investigation that includes the collection of readily available information about a site and a site reconnaissance. The preliminary assessment is designed to distinguish between sites that pose little or no threat to human health and the environment and sites that require further investigation. If the assessment shows no evidence of hazardous substances at the site or no likelihood of off-site injury, the site may not proceed further in the preremedial program. If the preliminary assessment indicates that the site may contain hazardous substances that could threaten human health or the environment, EPA proceeds with a site inspection—a more in-depth examination of the site and its surroundings that may include the sampling of soil or water to test for contamination. In some instances, EPA may need to continue with a more detailed investigation—an expanded site inspection—that may also involve sampling. Using this information, EPA then applies a numerically based scoring system to evaluate the site's potential risk to public health and the environment. This system uses information from the preliminary assessment, site inspection, and expanded site inspection (if performed) to assign the site a score ranging from 0 to 100, depending on the severity of the threat posed by the site's contamination. A site with a score of 28.5 or higher is considered for placement on the NPL. As of December 1996, this list included 1,210 sites, and thousands more remained to be evaluated for possible listing.

After being listed, a site is assigned to the remedial program, which is responsible for conducting long-term cleanups. A remedial cleanup starts with a remedial investigation, which assesses in detail the contamination

[2]The hazardous waste problems at a site can require both remedial and removal cleanups.

and related environmental and health risks, and a feasibility study, which determines and evaluates the alternatives for cleaning up the site. After EPA selects an alternative, EPA or the parties responsible for contaminating the site design and implement the cleanup remedy.

In addition to, or instead of, going through the remedial program, a site may go through the removal program.[3] This program, which is designed to mitigate immediate threats, may use some of the same cleanup methods as the remedial program but is typically faster because it uses a simpler site assessment and remedy selection process. For example, compared with the remedial program—which selects a remedy through a multiyear analysis of a site's conditions and cleanup alternatives (the remedial investigation/feasibility study) and publishes the proposed remedy for public comment (in the record of decision), the removal program performs a shorter study of the site (the engineering evaluation/cost analysis) and explains the selection of a particular removal action in an action memorandum. Table 1 shows the key steps for site evaluation and cleanup in the remedial and removal programs.

Table 1: Key Steps in Site Evaluation and Cleanup

Phase	Key steps	
Evaluation	**Removal program**	**Preremedial program**
	Preliminary assessment	Preliminary assessment
	Site inspection if necessary	Site inspection
		Expanded site inspection if necessary
		Application of hazard ranking system
		Proposal for placement on the NPL
		Placement on the NPL
Cleanup		**Remedial program**
	Engineering evaluation/cost assessment	Remedial investigation
		Feasibility study
	Action memorandum	Record of decision
		Remedial design
	Removal action	Remedial action

[3]EPA may perform a removal action at a site regardless of whether it has been placed on the NPL. Under EPA's regulations, the agency may perform a remedial action only at a site that has been placed on the NPL.

To streamline the assessment of sites, in 1992, EPA introduced the integrated site assessment as part of a larger initiative, the Superfund Accelerated Cleanup Model. EPA developed guidance for the regions on integrating site assessments (1) within the preremedial program, (2) between the preremedial and remedial programs, and (3) between the preremedial and removal programs. For example, under the integrated approach, the preliminary assessment and site inspection may be combined; any of the preremedial steps may be combined with the removal program's assessment; and the expanded site inspection may be combined with the site inspection, remedial investigation, or both. The object of this new approach was to collect the data needed for two or more assessments at one time, rather than at several different times.

EPA anticipated that, by using the integrated approach, the regions could reduce the amount of sampling needed, avoid the rework and delays often associated with sequential site assessments, break down institutional barriers by bringing together officials from different units of the Superfund program, and shorten the time from discovery to cleanup by years. In addition, through better coordination among different units, EPA hoped to identify early the sites that could benefit from removal actions.

Integrated Approach Has the Potential to Improve the Assessment Process

Pilot tests conducted by 7 of EPA's 10 regions have shown that using integrated site assessments can streamline Superfund cleanups. The tests indicate that by consolidating the collection of data for evaluations within and across separate EPA programs, the integrated approach eliminates unnecessary sampling and inactive periods between steps in the process. In addition, most of the pilot tests indicate that using integrated site assessments can reduce cleanup costs. Apart from the results of the pilot tests, data on the results of integrated assessments are limited. However, a 1997 EPA headquarters analysis of some integrated assessments, as well as the experience of several regional officials, indicates that the assessments have been effective. Furthermore, several regional officials told us that using the integrated approach can improve coordination between or among programs, allowing for the more effective screening of sites. Better screening, in turn, allows EPA to focus its limited resources on the sites that present the greatest risks to human health and the environment.

Pilot Tests Indicate That Integrated Approach Can Expedite Assessments

From about 1991 to 1995, seven EPA regions performed nine pilot tests that focused on combining various assessment steps. These tests showed that, compared with the traditional approach, the integrated approach can

reduce the time required to evaluate contamination at sites. In one of the pilot tests, a region integrated the first two steps in the preremedial program—the preliminary assessment and site inspection—and saved almost 2 years, on average, from the time the tested sites were discovered through the end of the site inspections.[4] In other pilot tests, six regions integrated the preremedial program with the remedial investigation, reducing processing and study time by between 3 months and 4 years. Three more regional pilot tests combined evaluations for the removal and preremedial programs and concluded that the approach can save time. One of these pilot tests documented savings of between 3 and 18 months.

According to regional officials and the documentation we obtained, these savings are due primarily to the following factors:

- By meeting multiple sampling needs at one time early in the process, the integrated approach can eliminate the need for sampling later in the process. Under the traditional approach, samples are collected at many steps, often by different contractors. In some instances, the additional sampling is redundant; in other instances, updated information is needed to offset the effects of delays. When the process itself moves faster, additional sampling may not be necessary.
- By meeting multiple sampling needs at one time early in the process, integrated site assessments can reduce or eliminate delays between steps in the process. The available data suggest that a substantial portion of the time between a site's discovery and placement on the NPL—which can be several years or more—elapses while the site is awaiting the next step in the assessment process.
- By improving coordination between the preremedial and removal programs, integrated assessments avoid the duplication of effort that often occurs when staff from the two programs work at the same site.

Pilot Tests Indicate That Integrated Site Assessments Can Reduce Costs

Seven of the pilot tests concluded that the integrated approach has the potential to reduce costs. But only three of these pilot tests quantified cost savings. First, a test in Region IV, which integrated certain preremedial activities with the remedial investigation at three sites, indicated savings ranging between $100,000 and $300,000. Second, a test in Region V, which combined the removal and preremedial assessments at four sites, showed average savings of almost $3,000 per site. Third, a test in Region IX, which integrated the preliminary assessment and site inspection at 15 sites,

[4]Many of the time savings reported for the pilot tests are estimated on the basis of assumptions about how long the tested sites would have taken to move through the traditional assessment process.

showed average savings of almost $8,000 per site. Another test combined the preremedial evaluation and remedial investigation at three sites in Region VI. This test produced estimated savings of 30 percent, even though, by moving forward sampling and other work, it required up to twice as many resources initially. The estimate of long-term savings assumed subsequent reductions in the time required for remedial investigations.

Experience With Integrated Assessments Has Generally Been Positive

Although EPA has not comprehensively measured the impact of integrated site assessments on its operations, a 1997 EPA headquarters analysis concluded that the use of certain integrated assessments was saving time. According to this analysis, the assessments completed between October 1992 and December 1996 that combined the first two steps of the preremedial assessment process resulted in 20 percent time savings compared with the traditional sequential assessments that took place during the same period. Officials in several regions indicated that their experience with the integrated approach outside the pilot tests supported the test's results. They said that using integrated site assessments can significantly streamline the Superfund process and cut projects' overall costs. However, data on these benefits were not available.

Region VI officials cited their experience at the Stoller Chemical site in Texas as proof of the integrated approach's benefits. At this site, the use of a comprehensive assessment integrating the preremedial and removal assessments showed that a removal action was necessary because 20 drums of contaminated material were found at the site. The assessment also found that the removal action could satisfactorily manage the contamination so that the site would not need to be placed on the NPL, as expected. As a result, EPA stopped the preremedial assessment and began a removal action. Under the traditional approach, a Region VI official said, the region would have completed the preliminary assessment and site inspection separately and in sequence; only after completing these steps, at an estimated cost of about $40,000, would the region have decided not to place the site on the NPL. In addition, by improving communication between the preremedial and removal programs, the integrated approach may have enabled EPA to remove the 20 drums of contaminated material sooner.

While generally supporting the use of integrated assessments, the regional and headquarters EPA officials we interviewed agreed that integrated assessments are not always appropriate. For example, they said that

assessments that integrate preremedial and removal steps should take place only at sites that have both remedial and removal characteristics—not at sites that are obvious candidates for only one program or the other. They also noted that combining a preliminary assessment with a site inspection would make sense only for a site that was likely to undergo a site inspection. In addition, EPA headquarters officials said that merging a preliminary assessment with a site inspection for one site might delay the start of a site inspection at another site where a preliminary assessment had already been completed.

Integrated Approach Can Improve Coordination

Regional officials told us that the use of integrated site assessments can foster cooperation among representatives of the preremedial, remedial, and removal programs, as well as between federal and state officials. For example, officials in most regions said that representatives of the various Superfund units review common lists of potential hazardous waste sites to decide on a course of action for each site. Under the traditional approach, each program maintained its own list of new sites and did not share its list with other programs. Under the integrated approach, closer working relationships can improve the screening of sites, resulting in their earlier assignment to the removal or remedial program or to a state program, as appropriate. EPA can then focus its remedial resources on the worst sites and try to expedite cleanup actions.

For example, Region V and its states used the integrated approach to jointly screen the region's backlog of sites that were awaiting evaluation. As a result of the cooperative effort, the region was able to eliminate from its backlog about 1,400 low-risk sites not requiring EPA cleanup before investing resources in unnecessary assessments. Similarly, Region IX is working with its states to integrate assessment efforts. For example, the region expected to sign an agreement with Hawaii to integrate assessments for all newly identified hazardous waste sites in the state. In the past, the region and the state ran parallel screening efforts, but under this agreement, potential sites will be evaluated using criteria that reflect both the Superfund program's and the state's requirements. As the sites move through the assessment process, EPA officials expect that most will be removed from consideration for the Superfund program.

In addition, through the coordinated consideration of sites made possible by the integrated approach, sites that could benefit from early removal actions can be identified. At such sites, the nature and extent of the contamination may be fairly clear, and extensive evaluation may not be

required. By assigning these sites to the removal program, EPA can either clean them up completely without going through the lengthier remedial program or clean them up partially and then assign the remainder of the cleanup to the remedial program. This strategy can not only cut the costs of cleaning up these sites but also reduce their risks sooner.

Regions' Use of Integrated Approach Has Been Limited and Uneven

Despite the integrated approach's potential for streamlining the Superfund process, EPA's regions have not fully or consistently implemented it. Although some regions adopted the approach as soon as EPA introduced it and have acquired a fair amount of experience with it, others still have very limited experience. The regions have also implemented the integrated approach in different ways, choosing different assessment steps to integrate. Finally, the regions vary in the extent to which they have developed written guidance and made organizational changes to accommodate integration.

Regions' Implementation Has Been Limited and Varied

According to EPA's data, the regions have used the integrated approach at only a small portion of their sites. From fiscal year 1994 through fiscal year 1996, the regions reported that they combined the preliminary assessment and site inspection in 196 cases, while the total numbers of preliminary assessments and site inspections completed during the same period were 2,284 and 1,447, respectively.[5] Two EPA regions (V and IX) performed almost 60 percent of these integrated assessments, while three regions (I, III, and VIII) together performed under 4 percent of the total. Additionally, the regions reported combining the preremedial assessment with the removal assessment in 266 instances. Two regions (IV and V) performed over 80 percent of these integrated assessments. The integration of the expanded site inspection with other assessment steps was the least frequently reported combination. Table 2 presents the numbers and types of assessments reported by each EPA region.

[5]Not every preliminary assessment completed during fiscal years 1994-96 could have been combined with a site inspection. For example, a combined study could not have been done at a site where the preliminary assessment indicated that no further action was necessary. Similarly, a combined study could not have been done at a site where the preliminary assessment was started before EPA introduced the integrated approach. Because of the limitations of EPA's data, the exact number of sites that would have been eligible for a combined preliminary assessment/site inspection is not known.

Table 2: Regions' Use of Integrated Site Assessments, Fiscal Years 1994-96

	Region										
Assessment phase	**I**	**II**	**III**	**IV**	**V**	**VI**	**VII**	**VIII**	**IX**	**X**	**Nation**
Preliminary assessment	78	116	312	503	148	256	281	173	310	107	2,284
Site inspection	181	154	59	302	210	140	122	88	134	57	1,447
Preliminary assessment/site inspection	1	32	3	15	59	6	17	3	56	4	196
Expanded site inspection	7	14	41	82	141	24	22	4	18	4	357
Site inspection/expanded site inspection	0	1	0	1	0	5	0	0	0	0	7
Expanded site inspection/remedial investigation	0	0	1	1	0	0	1	0	0	0	3
Integrated removal and preremedial assessment	21	0	0	61	158	0	0	0	25	1	266

EPA regional officials commented on the apparently limited use of integrated assessments reflected in the table. According to officials from regions VI and VIII, the data from EPA headquarters may understate their use of integrated assessments because they often report integrated assessments as traditional assessments, since such reporting is simpler. However, the officials said that data on the number of unreported integrated assessments were not readily available. Officials from Region III said that their numbers of integrated assessments were low because they did not have many new sites. Specifically, they said that they seldom combined the preliminary assessment and site inspection because they had already started or completed traditional assessment steps at most of their sites.

Regions' Efforts to Develop Guidance and Make Organizational Changes Vary

EPA's regions differ in the extent to which they have developed written implementation procedures and made organizational changes to promote the use of integrated site assessments. While EPA headquarters issued general written guidance on the integrated approach, it provided the regions with considerable flexibility to implement integrated assessments as they saw fit. More than 4 years after EPA introduced the integrated approach, only 4 of its 10 regions (IV, V, VII, and IX) have developed comprehensive written guidance on their own policies for integrating assessments. Four other regions (I, II, III, and VI) reported being in the preliminary stages of formulating formal integration policies. Two regions (VIII and X) had not begun drafting written policies.

The regions have also reorganized their programs to varying degrees to promote integration. According to regional officials, three regions merged the preremedial and removal programs, two regions put the two programs in the same division, and one region merged its preremedial and remedial programs. In addition, most regions have established a "one-door" policy for screening new sites instead of screening some sites through the removal program and others through the remedial program. For example, in Region I, the preremedial program will screen all new sites, and in Region V, the removal program is responsible for this task. This consolidated approach will enable the regions to establish a single list of sites needing assessment instead of maintaining separate lists of remedial and removal sites. The approach should also facilitate proper action earlier in the program.

Two Principal Factors May Limit the Use of Integrated Site Assessments

Two principal factors are limiting the wider, more consistent use of integrated site assessments. First, EPA headquarters has not followed up to ensure that the regions implement the integrated approach. Second, differences between the data needs and operational methods of the removal and preremedial programs may make removal and preremedial assessments difficult to integrate effectively.

EPA Has Not Followed Up on the Regions' Implementation

Although EPA introduced the integrated approach to the regions, it has not followed up to ensure successful implementation. EPA headquarters organized a number of conferences on the Superfund Accelerated Cleanup Model and published several documents that described regional pilot tests of the model and summarized the tests' results. However, EPA has not taken steps such as the following to foster the use of integrated assessments or to evaluate the regions' implementation:

- EPA has not determined whether the regions are using integrated assessments effectively or could use them more extensively. Also, the agency has not established goals for the regions' use of these assessments. In addition, beyond developing limited information through pilot tests, the agency has not formally studied the impact these assessments may have had on the length and costs of Superfund cleanups.
- EPA has not investigated differences in the regions' use of integrated assessments. For example, it has not formally evaluated why different types of assessments (e.g., preliminary assessments, site inspections, expanded site inspections, or removal assessments) have been merged in different regions. In addition, some regions have eliminated the regional

decision team, a tool that EPA introduced in its guidance to ensure better coordination between the removal and remedial programs. By examining such regional differences, EPA might identify best practices that could be implemented elsewhere.

- EPA has not updated its training to promote the use of integrated assessments and to encourage regional officials in the preremedial, remedial, and removal programs to work together.

A headquarters Superfund official acknowledged that even though the regions should be able to adapt the integrated approach to their individual needs, closer headquarters oversight and management would probably promote wider use of the approach. He added, however, that EPA has reduced its budget for preremedial activities in recent years by over 50 percent as its focus has switched to other areas, particularly to completing cleanups at sites already in the remedial program. He further noted that a headquarters reorganization eliminated the section responsible for monitoring preremedial activities. Currently, according to this official, EPA headquarters has not assigned the resources needed to adequately oversee the regions' implementation of the integrated approach because of competing demands by other parts of the Superfund program.

Differences Between Programs Inhibit Integration

Officials from most regions told us that historical differences between the preremedial and removal programs inhibit the full integration of the two programs' assessments. They said that officials in the two programs are trained to respond to different problems. As noted, removal program officials deal with sites posing imminent threats and needing quick responses, while preremedial program officials deal with sites requiring longer-term cleanups. Also, the two programs time their work differently. Removal officials visit their sites and start sampling as soon as they become aware of contamination, while preremedial officials do not start sampling until they have developed work plans and completed other tasks. These differences affect the types and quality of the data that the two programs require. Whereas the preremedial program requires extensive data for use in applying the hazard ranking system, the removal program has less demanding data requirements. Because of these differences, preremedial officials may often regard the removal program's data as inadequate and removal officials may regard the preremedial program's data collection process as excessive and inefficient. These conflicts, according to EPA officials, can discourage the integration of preremedial and removal assessments.

Several regions have taken steps to address the differences between the two programs. As mentioned, some regions have reorganized to bring the removal and preremedial programs closer together. Regions I and VI, for example, have set up training programs to bring officials from the two programs together. In Region I, officials from the preremedial program are also expected to shadow removal program officials to obtain a better understanding of the removal process. Region VI has established a cross-training program that trains preremedial officials to perform removal tasks and vice versa. In addition, several regions have developed forms for use in performing assessments to make sure that integrated assessments meet both programs' needs.

Conclusions

Preliminary results from EPA's regions suggest that integrated site assessments have the potential to streamline and expedite Superfund cleanups and reduce costs. However, the regions' implementation has, overall, been limited and uneven, and EPA headquarters has not done enough to guide, assess, and follow up on the efforts that the regions have made. Additional experience with the approach is needed, and additional data are required to demonstrate the impact of the approach on the Superfund process. Furthermore, because EPA has not satisfactorily followed up on the regions' implementation of integrated site assessments, the regions may not be able to take advantage of "best practices." Specifically, the regions with limited experience may be missing out on valuable lessons that other regions with more experience have already translated into comprehensive guidance on the integrated approach.

Recommendations

To encourage the full, appropriate use of integrated site assessments, we recommend that the Administrator, EPA, evaluate the regions' implementation of the integrated approach to determine why some regions have made little use of it and how its use has affected the time and costs of the Superfund process. If the assessment shows that the integrated approach has improved the Superfund process, then the Administrator should

- consider establishing goals for the wider use of integrated assessments;
- identify best practices in regional offices and share them with all of the regions so that the other regions can incorporate the best practices in their own guidance and policies; and

- provide regional officials with updated training on the integrated approach to ensure its effective use and to improve coordination among regional officials in various programs.

Agency Comments

We provided a draft of this report to EPA for its review and comment. EPA provided written comments, which are reproduced in appendix I. Overall, EPA observed that this report has the potential to provide useful information for managing the Superfund program. EPA said that it strongly supported the use of integrated site assessments as a means of making the Superfund program more efficient. However, EPA said that over the past several years, the agency has been unable to invest resources for its headquarters office to oversee the regions' implementation of the integrated approach because it has focused on sites that were ready for cleanup work and on new initiatives involving state cleanup programs. EPA said that it intended to increase its oversight resources to better determine what is needed in this area.

In addition, EPA thought that the statistics from its Superfund database that we presented in our report may understate the number of instances in which integrated assessments have been used. EPA indicated that as many as 9 of its 10 regions use integrated assessments. As we noted in our report, officials in two regions said that EPA's Superfund database may understate their use of this approach. However, these regions could not readily provide data on any additional use. In addition, we supplemented our analysis of information from the database with interviews of officials in all 10 regions. In these discussions, officials in several regions said that their regions have had very limited experience with integrated assessments.

EPA also provided some technical and editorial changes to the report, which we incorporated where appropriate.

Scope and Methodology

Our objectives for this assignment were to (1) determine whether integrated site assessments have the potential to expedite hazardous waste cleanups, reduce their costs, and improve cleanup decisions; (2) assess EPA's implementation of this approach; and (3) identify any factors that could limit the use of integrated site assessments.

To determine the potential benefits of the integrated approach, we reviewed EPA's original guidance on and documentation of the regions'

pilot tests of the Superfund Accelerated Cleanup Model. We then talked to officials in all 10 EPA regions to obtain more information on the results of the pilot tests and on the regions' experiences with integrated assessments beyond the pilot tests. We also examined sites where integrated assessments had been used and discussed with regional and headquarters officials the limitations on their use. In addition, we obtained an analysis from an EPA official of the time savings achieved by combining certain steps of the preremedial process.

To assess the regions' implementation of the integrated approach, we obtained Superfund data from EPA headquarters and analyzed information on the regions' use of both integrated and traditional assessments at nonfederal sites. We also contacted officials in all 10 EPA regions to obtain their views on the regions' use of integrated assessments. We visited four EPA regions (III, IV, V, and IX) to obtain detailed information on their use of the integrated approach and on differences in their use of it. In addition, we obtained and analyzed documents on integrated assessments from EPA headquarters and the regions.

To identify barriers to using integrated assessments more often or more effectively, we interviewed officials in all 10 EPA regions and studied documentation on the pilot tests. We also interviewed EPA headquarters officials in the Office of Emergency and Remedial Response.

We conducted our review in accordance with generally accepted government auditing standards from January through August 1997.

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days after the date of this letter. At that time, we will send copies of the report to other congressional committees; the Administrator, EPA; the Director, Office of Management and Budget; and other interested parties. We will also make copies available to others upon request.

Should you need further information, please call me at (202) 512-9692. Major contributors to this report are listed in appendix II.

Lawrence J. Dyckman
Associate Director, Environmental
Protection Issues

List of Requesters

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

The Honorable Robert C. Smith
Chairman
Subcommittee on Superfund, Waste
Control, and Risk Assessment
Committee on Environment and
Public Works
United States Senate

The Honorable Christopher Bond
Chairman
Subcommittee on VA, HUD, and
Independent Agencies
Committee on Appropriations
United States Senate

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

The Honorable Dan Burton
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House of Representatives

The Honorable David McIntosh
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Committee on Government Reform
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The Honorable Bud Shuster
Chairman
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and Infrastructure
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The Honorable Sherwood L. Boehlert
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Infrastructure
House of Representatives

The Honorable Jerry Lewis
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Subcommittee on VA, HUD, and
Independent Agencies
Committee on Appropriations
House of Representatives

Contents

Abbreviations

EPA	Environmental Protection Agency
NPL	National Priorities List

Comments From the Environmental Protection Agency

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
THE ADMINISTRATOR

JUL 3 1997

Lawrence J. Dyckman, Associate Director
Environmental Protection Issues
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441 G Street, Northwest, Room #2056
Washington, DC 20548

Dear Mr. Dyckman:

Thank you for the opportunity to comment on the draft report No. GAO/RCED-97-181, Superfund: Integrated Site Assessments May Expedite Cleanups. As your report indicates, the Office of Emergency and Remedial Response (OERR) strongly supports the use of integrated assessments in the Superfund program as a means of improving efficiency. You have focused on an area where OERR has been unable to invest headquarters oversight resources for the past several years, and the report has the potential to provide useful program management information. Attached are some specific comments directed towards improving the accuracy and clarity of the report.

OERR also has some more general comments directed towards placing the report in the broader context of general program directions. First, overall Superfund appropriations have declined by $105,000,000 over the past three years. Moreover, as more sites become ready for construction of remedial actions, the shortfall of response funding has increased -- the shortfall is projected to approach $600,000,000 in the coming year. As a consequence, OERR has shifted resources from assessments to remedial actions to reduce that deficit. In addition, over the past several years the focus of assessment work has shifted towards Brownfields and promoting economic redevelopment as well as towards supporting State voluntary cleanup programs. While the assessment budget has been cut by fifty percent, resources have also been directed towards those new initiatives. As a consequence of these general developments, OERR made the conscious decision to focus our guidance and oversight resources on the emerging initiatives and leave the regions in charge of maximizing the use of integrated assessments. We are confident that the regions and States have the incentives and the ability to maximize their resources through use of integrated assessments.

The report draws heavily on data from the CERCLIS database, and as you note the regions have not reported all of the integrated assessments they have performed. Thus, it is difficult to draw conclusions regarding the use integrated assessments. Based on recent conversations with the regions and States at the 1997 National Site Assessment Conference, it would appear that integrated assessments are in use in nine of the ten regions, and the other region is doing very little work where integrated assessments would be appropriate. Consequently, OERR is uncertain whether the issues identified in the report are largely the result of under reporting or whether a substantial increase in oversight is warranted. We do, however, intend to increase our oversight resources some over the next fiscal year to better determine what is needed.

Again, we appreciate the opportunity for comment. If you have any questions on these comments or other issues raised by the report, don't hesitate to call me at (703) 603-8833.

Sincerely,

Steve Caldwell, Deputy Director
State & Tribal Programs and Site Identification Center

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