

Testimony

Before the Committee on Environment and Public Works, U.S. Senate

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SUPERFUND

Progress and Challenges

Statement for the Record by David G. Wood, Associate Director, Environmental Protection Issues, Resources, Community, and Economic Development Division





Mr. Chairman and Members of the Committee:

As you deliberate possible legislative changes to the Superfund hazardous waste cleanup program, we appreciate the opportunity to present this statement for the record, which discusses (1) the progress, cleanup pace, and accomplishments of the program; (2) trends in the amount of funds that EPA spends on administrative and support activities in the program and the amount of these costs that it recovers from parties contributing to contamination at Superfund sites; (3) the number and types of waste sites that may be cleaned up by the program in the future; and (4) barriers to the redevelopment of brownfields—abandoned and idled industrial properties, often located in economically distressed urban areas—and federal efforts to remove these barriers.

In summary, our work has shown that:

- The Superfund program has made progress in cleaning up a number of our nation's hazardous waste sites. Preliminary results from our ongoing work to assess the status of cleanups are consistent with EPA's statements about the number of sites that have completed, or will soon complete, construction of the cleanup remedy. EPA credits this progress in part to its administrative reforms, such as those intended to improve the selection of cleanup remedies at sites, which were intended to result in a fairer and more efficient and effective program. The agency has stated that recent cleanups are faster, with some sites spending 8 years in the program. We last reported on the pace of cleanups in March 1997, when we found that the most recently-completed sites had spent an average of 10.6 years in the Superfund program.¹ Because we have not recently done work assessing the pace of cleanup activities, we cannot validate EPA's statements that cleanups are completed more quickly. However, we also reported in 1997 that EPA had difficulties measuring the results achieved by most of its administrative reforms, including whether they made the program fairer, more efficient, or more effective.²
- EPA has been spending more of its Superfund dollars on cleanup support, including administrative and support activities, in recent years. From fiscal years 1996 to 1997, spending for support activities increased from about 51 to 54 percent of total Superfund expenditures, while spending for cleanup activities decreased from about 48 to 46 percent. At the same time, EPA has not recovered large portions of its administrative costs from responsible

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

²Superfund: Information on EPA's Administrative Reforms (GAO/RCED-97-174R, May 30, 1997).

parties. EPA lost the opportunity to collect almost \$2 billion since the program began because it did not assess parties more of the costs the agency incurred to run the program, called indirect costs. To increase the amount of indirect costs recovered, we recommended in an April 1999 report that EPA use new indirect cost rates that the agency has developed.³ Cost recovery program managers stated that they plan to use the rates as soon as they are approved within the agency, which they expect to occur by September 30, 1999.

- The future Superfund cleanup workload depends largely on the number and types of sites that states decide to manage within their own cleanup programs, rather than refer them to EPA for Superfund consideration. In recent years, EPA decreased the number of sites it proposed to clean up under Superfund, while many states were simultaneously taking on more sites under their own cleanup programs. EPA officials expect future Superfund sites to be ones that the states cannot address, such as large, complex, and costly sites, or those where no responsible party is available to pay for cleanup. Our recent survey of EPA's inventory of potential Superfund sites indicated that about 1,800 sites still need cleanup, but the states and EPA have not determined who will manage these sites. We recommended that EPA work with the states to assign responsibility for these sites and to better share information on the status of state cleanups at sites posing high health and environmental risks. The agency agreed with our recommendation and is taking actions to implement it.
- Fears of being held liable under Superfund law for extensive cleanup costs and facing high costs to assess a site for possible contamination are major barriers to the cleanup and redevelopment of brownfields. States want both (1) the authority to relieve parties that clean up sites under state programs from Superfund liability and (2) federal financial support to address brownfields. Federal agencies have provided limited liability relief and hundreds of millions of dollars in financial support, most recently through an initiative called the Brownfield National Partnership Action Agenda. However, the agencies do not have the comprehensive data needed to measure the extent to which the Partnership achieved its intended economic outcomes of increased jobs, private sector investment in brownfields, and acres of preserved green space.

Background

In 1980, the Congress passed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), creating the Superfund program to clean up highly-contaminated hazardous waste

³Superfund: Progress Made by EPA and Other Federal Agencies to Resolve Program Management Issues (GAO/RCED-99-111, Apr. 29, 1999).

	sites. CERCLA authorizes EPA to compel the parties responsible for the contaminated sites to clean them up. Under CERCLA, parties are liable regardless of fault, and at some sites, each party involved can be held responsible for the entire cost of the cleanup. The law also allows EPA to pay for cleanups and seek reimbursement from the parties. EPA places sites that it determines need long-term cleanup actions, called remedial actions, on its National Priorities List (NPL). EPA or private parties then study the sites for risks and select, design, and construct cleanup remedies. Beginning in 1993, EPA began three rounds of administrative actions it could take to reform the program, short of legislative changes, partly in response to criticisms that cleanups were long and costly.
	All states have established their own enforcement cleanup programs similar to Superfund and many have created voluntary programs that handle sites ranging from smaller, less contaminated sites, including brownfields, to more highly contaminated sites that could qualify for a Superfund cleanup. States maintain that these programs accomplish site cleanups more quickly and efficiently than Superfund.
	To help states and localities clean up and redevelop more brownfields, in July 1996 EPA created the Interagency Working Group on Brownfields, with staff from more than 20 federal departments and agencies. In developing a national strategy for brownfields, agencies identified specific actions they would take to support brownfield redevelopment and the funding they would provide for these activities during fiscal years 1997 and 1998. On May 13, 1997, the administration publicly announced that agencies planned to take more than 100 actions and provide about \$469 million for brownfields under its new Brownfield National Partnership Action Agenda.
Superfund Has Made Progress Cleaning Up Sites	In May 12, 1999, testimony before the Subcommittee on Water Resources and the Environment, House Committee on Transportation and Infrastructure, EPA's Administrator reported considerable progress in completing cleanups at those sites already in the Superfund program. Specifically, the Administrator noted that EPA had made final cleanup decisions for 990, or 80 percent, of the 1,233 sites already on the NPL. She further noted that 90 percent of NPL sites had begun or completed cleanup construction: construction had begun at 464 sites, construction was complete at 599 sites, and shorter-term cleanup actions, called removals, were underway at an additional 208 sites. Earlier EPA projections indicated that it would complete construction of cleanup remedies at almost all sites

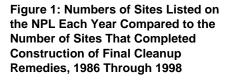
by 2005, although some remedies, such as systems to pump and treat groundwater, would continue to operate for a number of years until all contamination had been addressed. Finally, according to the Administrator's testimony, the Superfund program has cleaned more than 132 million cubic yards of hazardous soil, solid waste, and sediment and more than 341 billion gallons of hazardous liquid waste, groundwater, and surface water. The program has also provided hundreds of thousands of people with alternative drinking water supplies. EPA credits much of this success to its administrative reforms of the program.

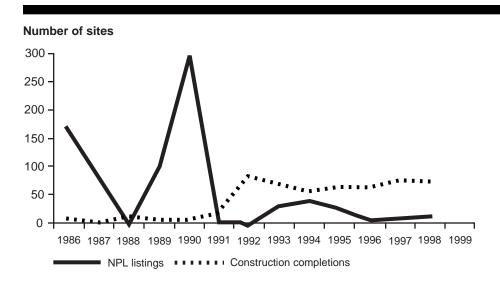
Our recent reports and ongoing work show similar rates of progress in the program. For example, last year, we reported that EPA expected to have final cleanup decisions in place at 95 percent of nonfederal sites by the end of fiscal year 1999.⁴ In ongoing work, we have obtained information on the status and accomplishments of all nonfederal NPL sites at which the construction of cleanup remedies is not yet complete.⁵ We asked the EPA cleanup managers for each of the sites to provide information on the site's cleanup status, the number and types of cleanup actions taken, and the amount of contamination they addressed. While we have not fully analyzed this data, our preliminary results show progress in the program similar to EPA's recent statistics.

One reason for this progress may be EPA's decision, in 1993, to make the completion of construction at existing sites the Superfund program's top priority and to reduce the number of sites it brought into the program, as shown in figure 1.

⁴Superfund: Information on the Status of Sites (GAO/RCED-98-241, Aug. 28, 1998).

⁵At the request of Representative John Dingell, Ranking Minority Member, House Commerce Committee.





Source: Compiled by GAO from Environmental Protection Agency data.

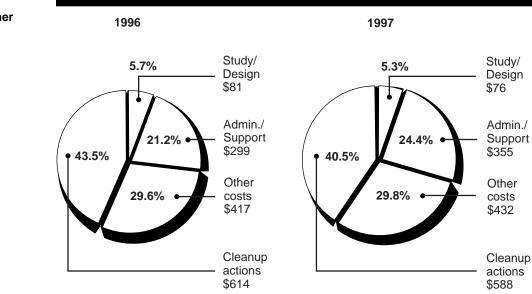
The agency also attributes this progress to its administrative reform efforts that were intended to make the program faster, fairer, and more efficient and effective. We reviewed these reform efforts and, in a 1997 report, found that for most of them, EPA had not identified specific, measurable accomplishments to be able to determine if the program had achieved these results. At that time, EPA reported estimated cost savings and other measurable benefits for only 6 of its 45 reforms. EPA could fully document these accomplishments for only 3 of these 6 reforms, including establishing the National Remedy Review Board. The agency could partially document that it achieved cost savings from one other reform—using more advanced cleanup technologies. However, EPA could not document the extent to which the final two of the six reforms had the intended effect of reducing cleanup costs for responsible parties. Furthermore, EPA officials told us that they did not expect to be able to quantify the accomplishments attributable to many of the remaining reforms. We anticipate reviewing the administrative reforms in the near future to determine if these limitations in measuring their results continue.

Despite the progress in the program, the Congress has been concerned that it takes too much time for sites to complete construction of their cleanup remedies. In March 1997, we reported that the sites that

	completed construction in 1000 had been added to the year of the
	completed construction in 1996 had been added to the NPL an average of 10.6 years previously. We also found that much of the time taken to complete cleanups was spent during the early planning phases of the cleanup process, including the selection of the cleanup remedies to be used at the site, with relatively less time spent on construction work.
	The Administrator's May 12 testimony included information on the 175 sites that completed construction in 1997 and 1998 combined. According to the testimony, 111 of these sites, or about two-thirds, were added to the NPL during the 1990s and had completed construction in less than 8 years indicating that the pace of the Superfund cleanups had improved. However, we note that this is likely a minimum average; 447 sites were added to the NPL between 1990 and 1998, inclusive, and it is not possible today to calculate an average duration time for all of these sites because most of them have not yet reached the construction complete milestone. Conclusive data on how the average durations of Superfund sites may have changed over time will not be available until definitive completion dates are available for all sites.
EPA Is Incurring More and Recovering Less Administrative Costs	Based on our detailed analyses of spending in the Superfund program, ⁶ we have reported that the share of Superfund expenditures that go to cleanup contractors for the study, design, and implementation of cleanups increased from fiscal years 1987 through 1996, but declined in fiscal year 1997. We also reported that between fiscal years 1996 and 1997, EPA's Superfund costs for administrative and support activities correspondingly increased (see fig. 2).

⁶Superfund: Trends in Spending for Site Cleanups (GAO/RCED-97-211, Sept. 4, 1997) and <u>Superfund:</u> <u>Analysis of Contractor Cleanup Spending (GAO/RCED-98-221, Aug. 4, 1998).</u>

Figure 2: Superfund Spending for Contractor Cleanup Work and Other Program Activities, Fiscal Years 1996-97, Dollars in Millions



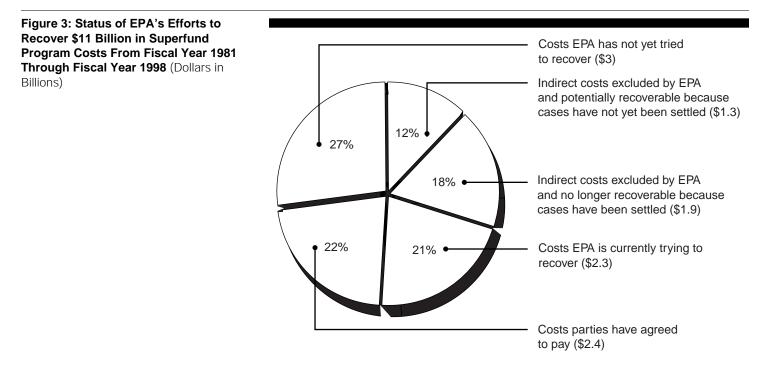
Note: "Other costs" includes costs for enforcement activities, research and development/laboratories, and other directly related costs.

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

At the same time, we reported that EPA has lost the opportunity to recover about \$2 billion of its indirect costs—the administrative costs of operating the program—from responsible parties. This is because the methodology that EPA used to calculate the amount of indirect costs it would charge parties excluded a large portion of these costs.

For the past several years, EPA has consistently succeeded in getting responsible parties to conduct cleanups at about 70 percent of Superfund sites. Since the beginning of the Superfund program through fiscal year 1998, EPA estimates that responsible parties have committed to perform \$15.5 billion worth of cleanups, not counting their administrative expenses, and the agency has spent about \$16 billion in the Superfund program. EPA considers about \$5 billion of its costs as unrecoverable because, for example, the agency could not find any financially viable responsible parties or had agreed during settlement negotiations that parties did not have to pay all past costs owed to the agency. Of the remaining approximately \$11 billion that the agency spent, parties had

agreed to reimburse EPA about \$2.4 billion, or about a quarter of its expenditures, as of the end of fiscal year 1998 (see fig. 3).



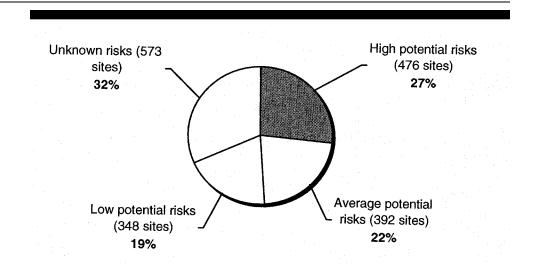
Source: GAO presentation of EPA data

However, EPA lost the opportunity to recover \$1.9 billion of indirect costs because it did not revise its indirect cost rate to include all appropriate costs before it entered into a final recovery settlement with these parties. Now, in order to comply with federal accounting standards, EPA has developed a new methodology that more accurately accounts for these indirect costs. Cost recovery program managers estimate that if EPA used the new methodology, the agency could recover about \$629 million of the \$1.3 billion in indirect costs that are still potentially recoverable because EPA has not entered into final settlements. According to cost recovery program officials, they have not yet implemented the new methodology because they are awaiting approval from EPA; the Department of Justice, which litigates cost-recovery cases; and an independent accounting firm

	hired to review the methodology. Until EPA uses the new methodology, it will continue to lose the opportunity to recover these funds.
Number and Type of Future Superfund Sites Is Uncertain	More than 3,000 potential Superfund sites in EPA's inventory have been waiting several years or more for the agency to decide whether it will add them to the NPL. EPA and state officials believe that more than half of these sites need cleanup work, but they have not divided cleanup responsibilities for these sites between them. Whether EPA adds these sites to the NPL depends on how risky they are and whether EPA or the states have cleanup plans for them, have already taken some cleanup actions at them, and states agree to add them.
	In November 1998, we reported on the results of a survey that we conducted with EPA regions, other federal agencies, and the states, asking them about the characteristics of the 3,036 potential NPL sites, the status of any cleanup actions at them, and respondents' opinions on whether they would be added to the NPL. ⁷ We determined that 1,789, or more than one half, could still be added, and that many of them presented human health and environmental risks. For example, respondents reported that about one-third of the 1,789 sites are already contaminating drinking water and another half could contaminate drinking water in the future. About 96 percent of the sites are located in populated areas within a half-mile of residences or places of regular employment. The remaining 1,234 sites were not likely to be listed because they already have final cleanup actions underway or they aren't risky enough.
	When we asked respondents to rank the overall risk of these sites, the respondents judged that for about 17 percent, the current risks posed to human health and the environment were high and for another 10 percent, the sites may pose high risks in the future if they are not cleaned up. For another third of these sites, respondents could not or did not provide information on the type or severity of the risks that they posed, as shown in figure 4.

⁷Hazardous Waste: Unaddressed Risks at Many Potential Superfund Sites (GAO/RCED-98-8, Nov. 30, 1998).

Figure 4: Number of Sites Potentially Eligible for the NPL With High, Average, and Low Potential Risks

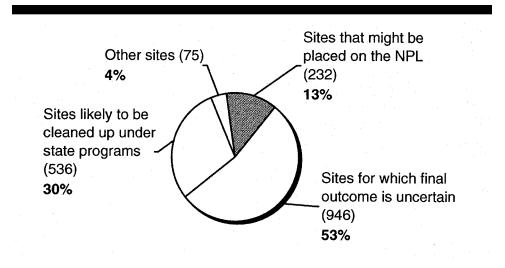


Source: Hazardous Waste: Unaddressed Risks at Many Potential Superfund Sites (GAO/RCED-99-8, Nov. 30, 1998).

According to respondents, interim cleanup actions have been taken at 686, or more than a third, of the 1,789 sites, and more often at sites considered to pose high risks. For the remaining two-thirds of the sites, either no cleanup actions have been taken or respondents did not provide information on such actions. Many of the sites with no cleanup actions have been in either EPA's or a state's inventory for a long time, as much as 10 years or more.

As to whether cleanup actions will be taken in the future at these sites and whether EPA, states, or responsible parties would take them, we are not forecasting how many of the 1,789 sites EPA would address by adding them to the NPL. However, for 232, or 13 percent of them, either EPA or a state respondent believed that they might be added to the NPL. Only 26 of the 232 sites were cited by both the EPA and state officials as likely to be placed on the NPL (see fig.5).

Figure 5: Estimates of the Likely Final Cleanup Outcome for 1,789 Potentially Eligible Sites



Note: "Other sites" includes sites likely to be cleaned up under other EPA programs (43), sites that either EPA or state programs may clean up (13), and sites that are reportedly unlikely to be cleaned up (19).

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

For another one third of the 1,789 sites, respondents estimated that states would take responsibility for them but did not know to what extent responsible parties would participate in the cleanups at most of these sites. Such participation is important because about half of the states reported that they did not have sufficient financial capability to address many additional sites. However, about 20 percent also reported that they did not have sufficient authority to get private parties to pay either. We did not receive enough information on one half of the sites to determine whether future cleanup actions would be taken and who would take them.

In our April 1999 report, we discussed the changing role of states in Superfund. According to cleanup managers in 4 of EPA's 10 regions, the states have taken on a greater role in determining which sites will be added to the NPL. First, some state cleanup programs have extensive experience at managing more cleanups. Furthermore, voluntary programs get around states' limited financial capabilities because in most cases, parties must pay a fee to clean up a site under a voluntary program. In

	some states, the fees are high enough so that the programs are self financed. Therefore, some states more often prefer to use their own programs to address sites, including sites risky enough to qualify for the NPL. Furthermore, as a matter of policy, EPA now seeks concurrence from the relevant state governor before proposing to add a site to the NPL. Since adopting this policy in 1995, EPA proposed to add another 154 sites to the NPL through February 1999, but governors did not agree to add 31, or one-fifth, of these sites.
	The regions also stated that if EPA anticipates that the state will clean up the site, the agency usually assigns the site a low priority for Superfund consideration. Also, EPA will not take further action at the site unless the state asks the agency to do so. As a result, the regions expect that states will turn sites over to EPA if the states have difficulty in getting responsible parties to pay for the cleanup, for example, or when the states encounter a complex, and, therefore, costly cleanup, such as one addressing groundwater problems.
	Recognizing the changing role of states and the resulting need for EPA and the states to better coordinate cleanups, we recommended that EPA review its inventory of potential NPL sites to determine which of them need immediate action and which will require long-term cleanup action. We further recommended that EPA, in consultation with the states, develop a timetable for taking these actions. Finally, we recommended that EPA regions work with the states to determine how to share information on the progress of state cleanups at high-risk sites. In this way, EPA regions can better plan their cleanup workload and be more responsive to local communities' concerns about sites in their areas. EPA agreed with these recommendations and has initiated activities in response.
Federal Efforts Have Removed Some Barriers to Brownfield Redevelopment Posed by Superfund	Reforming the stringent liability provisions governing Superfund cleanups has been a key issue in the reauthorization debate, especially because these provisions can make it difficult for communities to clean up and redevelop brownfields. To some extent, the provisions serve as an incentive for parties to clean up sites, especially under state programs. Parties don't want to face what they perceive to be a longer and more costly cleanup under CERCLA, so they initiate cleanups either in compliance with a state enforcement action or under state voluntary programs. But states reported that these liability provisions can also be a barrier to the cleanup and redevelopment of brownfields, especially since these sites are typically less contaminated than sites that qualify for Superfund. Investors

are wary of purchasing properties and owners of selling them because these parties could be held liable for cleanup costs.⁸ In addition, the substantial expenditure parties may need to make to establish whether any contamination is present at a brownfield can also discourage redevelopment. Site assessments can cost on average \$60,000 to \$85,000 and as much as \$200,000 or more for complicated sites.

To help remove these liability and cost barriers, we found that states want to be able to relieve parties that clean up sites under state programs from further CERCLA liability. States would also like federal financial assistance to help pay for site assessment and cleanup costs and to support their voluntary programs. In response, the Congress and EPA have provided limited liability relief to some parties and hundreds of millions of dollars in financial support, but states do not think the assistance goes far enough.

In terms of liability, the Congress passed a law providing lenders protection from liability as a means to encourage investments in brownfields.⁹ In addition, prospective purchasers can now reach agreements with EPA that limit their liability at a site, although the costs of obtaining such an agreement may be too high for some brownfield sites, according to EPA's brownfield program manager. However, states continue to seek authority to relieve volunteers from further liability under CERCLA. So far, EPA, the states, and other stakeholders have not been able to agree on criteria that state voluntary cleanup programs should meet in exchange for a memorandum of agreement with EPA. Such an agreement tells volunteers that if they successfully complete a cleanup under the state's program, EPA most likely would not have any further interest in the site. We know from our work that state voluntary programs vary considerably in the extent to which they would meet draft criteria that EPA proposed.¹⁰ For example, some programs, partly as a means to achieve faster and cheaper cleanups, relaxed requirements for community involvement, cleanup oversight, and long-term monitoring of cleanups that did not permanently remove contamination. EPA argues that even though it is authorized to take enforcement action at voluntary cleanup sites, to date, it has not done so; therefore, parties should not be concerned about federal Superfund liability when undertaking cleanups under state

⁸Superfund: Proposals to Remove Barriers to Brownfield Redevelopment (GAO/T-RCED-97-87, Mar. 4, 1997). Superfund: Barriers to Brownfield Redevelopment (GAO/RCED-96-125, June 17, 1996).

⁹The Asset Conservation, Lender Liability, and Deposit Insurance Protection Act of 1996, contained in the Omnibus Appropriations Act, 1997 (P.L. 104-208).

¹⁰Superfund: State Voluntary Programs Provide Incentives to Encourage Cleanups (GAO/RCED-97-66, Apr. 9, 1997).

programs. Furthermore, EPA maintains that parties should not fear being held further liable for cleanups if they complete thorough cleanups under state programs. However, states argue that this is not sufficient protection and that the parties in their voluntary programs want full release from federal liability.

In terms of financial assistance, we found that federal agencies have provided considerable assistance to support voluntary programs and brownfield cleanup and redevelopment.¹¹ Agencies—primarily EPA, the Department of Housing and Urban Development (HUD), and the Economic Development Administration (EDA) within the Department of Commerce—could track that they provided overall about \$413 million in assistance to voluntary programs and brownfields during fiscal years 1997 and 1998, the time span of the Brownfield National Partnership Action Agenda, compared to their plan to provide \$469 million under this Partnership, as table 1 shows.

Table 1: A Comparison of Agencies'Planned Assistance in the PartnershipAgenda and Reported AssistanceProvided for Brownfields During FiscalYears 1997 and 1998

Federal agency	Planned assistance for brownfields as stated in the Partnership Agenda	Reported assistance agencies provided for brownfields
EPA	\$125	\$128
HUD	155	26
EDA	17	114
Other federal agencies ^a	7	4
Subtotal	\$304	\$272
HUD's loan guarantees ^b	\$165	\$141
Total	\$469	\$413

^aThe other federal agencies are the Department of Commerce's National Oceanic and Atmospheric Administration; the departments of Energy, Health and Human Services, and Transportation; and the General Services Administration.

^bUnder HUD's Section 108 loan guarantee program, the agency may guarantee loans to local governments to conduct large-scale economic revitalization projects. Local governments must pledge the other HUD grants they have received, such as community development block grants, as security when obtaining the loans.

Sources: Agencies' documentation supporting the Partnership Agenda and their brownfield managers.

¹¹Environmental Protection: Agencies Have Made Progress in Implementing the Federal Brownfield Partnership Initiative (GAO/RCED-99-86, Apr. 9, 1999). As a result of this federal financial assistance, agencies reported that they are better coordinating their actions to address brownfields, are more aware of each other's brownfield resources, and can better direct communities to the right agency, depending on the type of assistance the communities need. The most evident example of improved coordination is through the Showcase Communities project where agencies are providing 16 select communities with federal funding and technical support for brownfield redevelopment. City managers and professional associations representing state and local governments we talked with said that they are more aware of available federal resources and how to access them now. However, they also noted that little has been done to reduce the burdensome administrative processes involved in obtaining federal financial assistance. While coordination has improved, the extent to which this federal financial assistance will result in the long-term economic outcomes set out for the Partnership-increased jobs, private investment in brownfields, and acres of green space protected from development—cannot be determined because federal agencies generally do not have the comprehensive data necessary to measure these outcomes.

Contact and Acknowledgement	For future contacts regarding this testimony, please contact David G. Wood at (202) 512-6111. Individuals making key contributions to this testimony included Eileen R. Larence and Vincent P. Price.
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