



UNITED STATES GENERAL ACCOUNTING OFFICE  
WASHINGTON, D C 20548

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COMMUNITY AND ECONOMIC  
DEVELOPMENT DIVISION

JUNE 2, 1982

B-205704

The Honorable Anne M. Gorsuch  
Administrator, Environmental  
Protection Agency

Dear Ms. Gorsuch:

Subject: Environmental Protection Agency's Progress in  
Implementing the Superfund Program (GAO/CED-82-91)

On October 26, 1981, the Chairman of the Subcommittee on HUD-Independent Agencies, Senate Committee on Appropriations, and the subcommittee's Ranking Minority Member asked us to review the Superfund program (established by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, Public Law 96-510) to identify issues or problems concerning the selection of candidate sites for Superfund attention; the extent and cost effectiveness of removal, remedy, and other measures at candidate sites; and the ability of State governments to carry out their Superfund responsibilities. On April 20, 1982, we testified on these matters before the subcommittee. This report is based on our testimony presented at that hearing.

Overall, we found that

- the program's implementation during its first 15 months has been hampered by a lack of final policies and guidance,
- a limited number of sites are currently eligible for remedial action and problems were encountered in developing the list of eligible sites,
- a national hazardous waste site inventory does not exist and thousands of identified sites have not been assessed or examined,
- the cleanup of sites is expected to be a lengthy and flexible process, and
- the funding obligated for program activities lags behind approved spending levels.

OBJECTIVES, SCOPE, AND METHODOLOGY

To fulfill the subcommittee's request, we conducted our review at the Environmental Protection Agency (EPA) headquarters

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in Washington, D.C.; EPA Region II in New York, New York; and EPA Region VI in Dallas, Texas. We obtained and analyzed documents from EPA headquarters concerning the development of a site priority list, including guidance to the EPA regions, quality control reports, lists of the candidate sites, the hazard ranking system for scoring sites, the methodology for selecting sites, and the October 23, 1981, interim priority list. We discussed these concerns in detail with EPA headquarters officials. We chose EPA Regions II and VI because of the high activity in States in these regions. These two regions had 33, or 29 percent, of the 115 top priority sites announced by EPA. They also had 3,120, or 33 percent, of the national total of 9,598 potential sites. Furthermore, in region II, New Jersey created in 1977 its own fund to finance site investigation, evaluation, compensation, and clean-up activities. At the regional offices we reviewed documentation supporting each site submitted to EPA headquarters as a Superfund candidate. We discussed issues with regional offices, including the process the region used in deciding which sites should be scored using the hazard ranking system model; the usefulness, value, and ability of the model to predict a site's hazard potential; the total number of potential hazardous waste sites in the region; and the capabilities of the States to carry out their Superfund responsibilities.

We visited the States of New York, New Jersey, Texas, and New Mexico to discuss various Superfund issues. We also held discussions with officials from the National Governors' Association, the National Conference of State Legislatures, the Association of State and Territorial Solid Waste Management Officials, the Chemical Manufacturers Association, and the Environmental Defense Fund. These discussions were held to obtain an overview of the Superfund program's implementation and status from the perspective of State, industry, and environmental groups.

The review was performed in accordance with our "Standards for Audit of Governmental Organizations, Programs, Activities, and Functions."

## BACKGROUND

The Superfund legislation was enacted on December 11, 1980, to confront the cleanup problem posed by uncontrolled hazardous waste sites. The act provides for a \$1.6 billion fund to be accumulated from taxes on petroleum and certain chemicals and from Federal appropriations over the fiscal year 1981-85 period. The fund is to be used by the Federal Government, primarily by the Environmental Protection Agency, or a State government when authorized, to clean up spilled toxic wastes and hazardous waste sites where the responsible party does not take appropriate action. Efforts to recover cleanup costs from the responsible party may be made subsequently. The legislation is structured to complement existing laws governing hazardous waste and encourages

responsible parties to voluntarily mitigate the damage from this waste.

The legislation also directs that the existing national contingency plan for removing oil and hazardous substances be revised by June 1981. The revised plan is to include several items, such as methods and criteria for determining the appropriate extent of cleanup actions; a listing of national priorities for cleanup attention; and roles and responsibilities for the various Federal, State, and local governments involved in implementing the legislation.

Before authorizing a Superfund-financed remedial action, EPA must obtain assurances from the affected State that it will (1) assume operations and maintenance responsibility for all removal and remedial measures that are implemented, (2) provide, if necessary, an offsite disposal facility, and (3) share in the costs of the remedial action.

#### PROGRAM IMPLEMENTATION PROBLEMS

Implementation of the Superfund program has been hampered by a lack of final policies and guidance. For example, the congressionally mandated due date of June 1981 for publishing the revised national contingency plan and the list of national priorities for remedial action was missed. In early February 1982, EPA officials estimated that neither the revised plan nor the list would be finalized until December 1982, or 18 months after their due date. The U.S. District Court for the District of Columbia has ordered EPA to publish the plan in final form by May 28, 1982. EPA published the draft plan on March 12, 1982. On April 7, 1982, EPA filed an appeal of the court order seeking additional time to finalize the plan. EPA is now estimating a January 1983 issue date for the national priority list.

On March 11, 1982, EPA issued final guidance describing the assurances that States must provide before Superfund moneys can be obligated for remedial actions. Although draft interim guidance, dated August 3, 1981, existed before then, officials from State groups and the four States we visited considered the delay in revising the contingency plan and providing the final guidance to be the main factor hampering cleanup efforts to date. For example, just before the March 1982 publication of the draft plan and final cooperative agreement guidance, the National Governors' Association issued a resolution stating that,

"\* \* \* due to the absence of program guidelines and clean-up standards, the national program is stalled. States, many of whom had active clean-up programs before Superfund was enacted, are reluctant to take action."

The National Conference of State Legislatures also estimated that funding for Superfund actions may be a problem for the immediate

future since many State legislatures have already adjourned without allocating specific sums for their share of Superfund-financed remedial action costs.

LIMITED NUMBER OF SITES ARE  
ELIGIBLE FOR REMEDIAL ACTION

Although the Superfund legislation required a national priority list of at least 400 sites by June 1981, EPA was able to provide an interim list of only 115 sites and then only by October 1981. EPA decided to develop the interim priority list because it realized that the legislatively mandated deadline would not be met. In EPA's view, the interim list was beneficial in that it started the Superfund site cleanup program moving and provided valuable experience in implementing a systems to set site priorities.

To determine which sites would make the interim list, EPA developed a hazard ranking system. The system is designed to characterize the site's hazard potential by scoring a set of factors, such as potential contamination of ground water or surface water and the amount and toxicity of hazardous waste at the site.

Problems in developing list of eligible sites

The process EPA used to develop this list demonstrated a lack of nationwide consistency in applying the scoring system to sites. The problems could be compounded in the future when EPA expects to more than triple the number of candidates to be considered for the legislatively mandated national priority list. The problems in the scoring system could be largely alleviated by proper training of EPA and State personnel.

States and EPA regions were allowed wide discretion in selecting sites for scoring. Because time to gather data was limited, the sites selected were generally those for which data was already available. EPA officials could not estimate the total number of sites actually considered for the interim list. The States and/or EPA regions applied the hazard ranking system to about 282 sites and submitted the scores to EPA headquarters. Those sites became candidates for the interim list. Most of the 282 sites are ones the States believed should be considered for Superfund attention.

When EPA uncovered problems concerning inconsistent application of the scoring system nationwide, the top 175 sites were rescored and then reconsidered for the interim list. EPA did not rescore all 282 sites since the list was already late and it believed that the top 175 would yield a good top 100. Examples of the problems found included measuring and documenting waste quantity at a site and determining the affected target population.

Of the 115 sites selected, 94 were selected on the basis of score alone, while 21, which scored too low to make the list, were added as State-designated top priority sites. The Superfund act allows EPA the latitude to make such additions. The scoring/selection process showed that the interim list does not necessarily represent the worst sites in the Nation or the States. Rather, it represents high-scoring problem sites plus State top-priority sites. Until the national priority list of at least 400 sites is finalized, the number of facilities eligible for Superfund-financed remedial action is limited to the 115 sites on the interim list.

The problems which affected the nationwide consistency of the scoring for the interim priority list sites could be compounded later this year when the national priority list sites are scored. As of April 7, 1982, the EPA regional offices had listed 926 sites as candidates for the national list. Assuming all sites are scored, this would be more than a threefold increase over the 282 sites scored for the interim list. The Director, Office of Emergency and Remedial Response, and other EPA officials told us that the scoring system problems can be alleviated by additional training, guidance, and possible changes to the scoring system. They said that EPA plans to address such issues before site scoring for the national priority list is performed later this year.

NATIONAL HAZARDOUS WASTE SITE INVENTORY  
DOES NOT EXIST AND THOUSANDS OF SITES  
HAVE NOT BEEN ASSESSED OR EXAMINED

Although EPA has two primary data bases on uncontrolled, abandoned, or inactive hazardous waste sites, it lacks a national inventory of the total number of such sites existing in the Nation. Furthermore, EPA has not assessed or examined thousands of sites which have been identified or reported to it to determine if a hazardous waste problem actually exists.

As of February 28, 1982, EPA listed about 10,300 sites in its Site Tracking System data base. At the same time EPA also listed in another data base some 9,200 sites that were reported under section 103(c) of the Superfund legislation, which required certain persons to notify EPA by June 1981 of the existence of sites where hazardous wastes had been stored, treated, or disposed of. Although these data bases had not been reviewed to determine whether any sites were duplicated, EPA officials estimated that by the end of May 1982 both data bases would be screened and merged to arrive at the overall number of sites known or reported to EPA. This number will not represent the total number of such sites existing in the Nation since a comprehensive, State-by-State inventory has not yet been compiled.

In our November 1980 report entitled "Hazardous Waste Disposal Methods: Major Problems With Their Use" (CED-81-21), we recommended that EPA initiate such a comprehensive national inventory.

EPA agreed with the recommendation in its March 1981 response and said that it would develop techniques to conduct such an inventory.

The Congress authorized \$20 million for such an inventory in its 1980 amendments to the Resource Conservation and Recovery Act (Public Law 94-580). Under section 3012, the States are to:

"\* \* \* as expeditiously as practicable, undertake a continuing program to compile, publish, and submit to the Administrator [of EPA] an inventory describing the location of each site within such State at which hazardous waste has at any time been stored or disposed of."

This section also specifies what type of information the inventory is to include and allows EPA to carry out the inventory program in the States if the Administrator determines that any State program is not providing adequate information. The administration has not requested the Congress to appropriate funds to implement this requirement. EPA did request \$5 million as part of its fiscal year 1982 budget appeal to the Office of Management and Budget, but this was denied. State officials believe funding is needed to adequately inventory and assess sites as to their potential for becoming Superfund candidates.

According to the Site Tracking System data base, over 3,500 of the nearly 10,300 sites identified or reported as of February 28, 1982, lacked a preliminary assessment. These assessments involve collecting available background information without actually visiting the site. EPA estimates that such assessments cost \$1,000 per site.

EPA also estimated that 8,000 preliminary assessments would be conducted during fiscal year 1982. As of February 28, 1982, the Site Tracking System data base showed that only 352 preliminary assessments had been conducted during the first 5 months of the fiscal year.

#### SITE CLEANUP--A LENGTHY AND FLEXIBLE PROCESS

As of April 9, 1982--nearly 16 months after Superfund was enacted--few Superfund-financed remedial actions had been accomplished. EPA planned to spend about \$43.1 million (\$36.8 million from Superfund, \$5.8 million under the Resource Conservation and Recovery Act, and \$0.5 million from other sources) for remedial action activities at 40 of the 115 sites on the interim priority list. Cooperative agreements between EPA and the States had been signed for 11 of those sites--5 were Superfund financed while the remaining 6 were funded with Resource Conservation and Recovery Act moneys--and 25 others were under negotiation. EPA reports showed that \$15.4 million from all funding sources had been obligated for site remedial activities. This included 27 investigation/feasibility studies, seven engineering designs, and one construction project.

Based on EPA's estimate that it will take 3 years or longer to complete the necessary investigation/feasibility and design studies and actual construction for a typical site, the Superfund program will be approaching its fifth year in 1985 before at least a sizable portion of the interim priority list sites will be cleaned up. Using the same EPA estimate, it would be January 1986 or later before many of the 400 or more sites on the national priority list are cleaned up. EPA estimates that only 170 Superfund-financed cleanups will be performed during the life of the fund.

EPA intends to use a flexible approach in determining the degree of cleanup required at sites. This approach is outlined in the current draft of the national contingency plan but is subject to change as a result of public comments. According to the draft plan, any appropriate standard or criteria will be considered in determining cleanup levels, along with other technological and environmental factors.

We believe that EPA will have few cleanup experiences to report by December 1984 when it is required to provide such information to the Congress. Areas to be discussed in the report include a projection of any future funding needs remaining after September 30, 1985, when the authority to collect taxes expires.

OBLIGATIONS LAG BEHIND APPROVED SPENDING  
LEVELS--TRUST FUND BALANCE GROWING

Lack of available funding for Superfund activities is not a cause of limited program accomplishments. In fact, Superfund obligations lag far behind the spending levels appropriated by the Congress. As of March 31, 1982, EPA reported cumulative obligations of \$83.9 million for all Superfund activities financed in fiscal year 1981 and the first 6 months of fiscal year 1982, including emergency removal and remedial actions and other program costs. EPA's appropriation for this period was nearly \$265 million (\$74.7 million for fiscal year 1981 and \$190 million for fiscal year 1982). EPA therefore has about \$181 million available for the remaining 6 months of fiscal year 1982. Of course, unused funds can be carried forward to the next fiscal year.

As of March 31, 1982, the Treasury Department estimated that Superfund had a credit of about \$303 million from tax revenues and other receipts, such as general revenue appropriations and interest income. Actual EPA expenditures were \$38.3 million, leaving a fund balance of about \$265 million. During the first 6 months of this fiscal year, the fund balance increased an average of over \$21 million each month.

CONCLUSIONS

During the first 15 months of the Superfund program's implementation, few Superfund-financed remedial actions were accomplished. Although substantial funding was available to take action, Superfund obligations lagged far behind the levels the Congress appropriated. The lack of final policies and guidance was cited as the main factor hampering cleanup efforts. Now that EPA has either finalized or is in the process of finalizing these policies and guidance, such as the revised national contingency plan, we believe that future implementation efforts will improve.

Currently, only the 115 sites on the interim priority list are eligible for Superfund-financed remedial action. The process EPA used to develop this list demonstrated a lack of nationwide consistency in applying the scoring system to sites. The problems could be compounded in the future when EPA expects to more than triple the number of candidates to be considered for the legislatively mandated national priority list. We believe that both EPA and State personnel need additional training and guidance in applying the scoring system to sites before the national priority list is developed. EPA officials plan to address these issues later this year.

EPA lacks a national inventory of existing uncontrolled, abandoned, or inactive hazardous waste sites. The Congress authorized \$20 million for such an inventory, but the administration has not requested the funding. In addition, thousands of sites which have been identified or reported to EPA have not been assessed or examined. It is critical that such assessments be conducted since they represent merely the first step in determining whether a site may be a problem or a potential problem. Until the national inventory is compiled and all identified or reported sites are assessed or examined, the full extent of the Nation's uncontrolled hazardous waste site problem will remain unknown.

RECOMMENDATIONS

We recommend that the Administrator, EPA:

- Direct that EPA and State personnel receive planned additional training and guidance in applying the scoring system to hazardous waste sites before such sites are scored for the national priority list.
- Request the funding authorized under section 3012 of the Resource Conservation and Recovery Act to initiate, in conjunction with the States, a national hazardous waste site inventory program.
- Conduct preliminary assessments at all identified or reported hazardous waste sites lacking such assessments.



Although written comments were not obtained, we discussed these matters with officials at EPA's Office of Emergency and Remedial Response and Office of Solid Waste. The officials believe the program is just starting to gain momentum and are optimistic about future progress. Where appropriate, their comments were considered in preparing the report.

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As you know, section 236 of the Legislative Reorganization Act of 1970 requires the head of a Federal agency to submit a written statement on actions taken on our recommendations to the Senate Committee on Governmental Affairs and the House Committee on Government Operations not later than 60 days after the date of the report and to the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of the report.

We are providing copies of this report to the Chairman, Subcommittee on HUD-Independent Agencies, Senate Committee on Appropriations; the Chairmen, House Committee on Energy and Commerce and Senate Committee on Environment and Public Works; Senator Walter D. Huddleston; other congressional committees and individual Members of Congress; the Director, Office of Management and Budget; and your Director, Office of Emergency and Remedial Response.

Sincerely yours,



Henry Eschwege  
Director