United States General Accounting Office

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Report to the Chairman, Committee on Environment and Public Works, U.S. Senate

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SUPERFUND

Number of Potentially Responsible Parties at Superfund Sites is Difficult to Determine

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Resources, Community, and
Economic Development Division

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March 27, 1996

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

Dear Mr. Chairman:

The Environmental Protection Agency (EPA) maintains a register, called the National Priorities List (NPL), of the nation's worst known hazardous waste sites.[1] These sites are commonly referred to as Superfund sites. Under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the parties responsible for contaminating these sites are liable for the costs of cleaning them up. Responsible parties can also incur substantial legal costs to allocate the cleanup expenses among themselves, to settle with the government, and to litigate the liability for cleanups. De minimis parties—parties who have contributed only a relatively small amount of low-toxicity waste to a site—can incur legal costs that may exceed their share of a site's cleanup costs. In addition, parties associated with municipal co-disposal landfills—that is, landfills that have received both municipal solid waste and industrial hazardous substances—can incur high legal costs when disputes over allocating costs arise at these sites. These disputes result from the large numbers of parties and the large volumes of nonhazardous waste mixed with hazardous substances at these sites.

To prevent certain parties from incurring disproportionately high legal costs, the Congress is considering legislative proposals that would provide relief from the liability for site cleanup costs for de minimis parties and potentially responsible parties (PRP) associated with municipal co-disposal landfills. To assist congressional deliberations on these proposals, you asked us to provide information on the number of (1) de minimis parties at nonfederal NPL sites and (2) PRPs at nonfederal municipal co-disposal landfill sites on the NPL.

Results in Brief

Determining with any degree of certainty the number of de minimis parties at nonfederal Superfund sites and potentially responsible parties associated with nonfederal municipal co-disposal landfills is difficult because EPA's data on the number of parties at many sites are incomplete.

[1]As of December 1995, the NPL included 1,238 sites.

On the basis of the limited data available in EPA's database, we estimate that there are, at a minimum, about 8,500 to more than 25,000 de minimis parties at 175 nonfederal Superfund sites and about 15,000 to 40,000 or more potentially responsible parties at 245 nonfederal municipal co-disposal landfill sites.[2] Because EPA's data are incomplete, our estimates are likely to be understated.

Background

Under CERCLA, commonly known as Superfund, EPA has the authority to (1) compel the parties responsible for the pollution at hazardous waste sites to clean them up or (2) seek reimbursement from these parties for the cleanup costs. Responsible parties can, in turn, sue other responsible parties to recoup some of their own expenses. These parties can include generators and transporters of waste and owners and operators of waste sites. According to EPA, de minimis parties generally are generators or transporters of waste whose contribution to the waste at a site is minimal in terms of both volume and toxicity.

To provide relief from the substantial legal costs that de minimis parties can incur in allocating the liability for cleanup costs, EPA is authorized—but not required—to enter into expedited settlements with these parties. These settlements reduce overall legal costs by protecting small parties against claims by other PRPs and reducing the total liability for the remaining PRPs.

Co-disposal landfills are publicly or privately owned waste facilities in which both municipal and industrial waste are mixed. Municipal waste generally includes such nonhazardous household waste as food, yard waste, glass, and aluminum. Industrial waste may include chemicals, solvents, and other hazardous materials. Generally, EPA holds municipalities, industries, and other large contributors of waste primarily responsible for cleaning up sites rather than individual householders or other small contributors.

Two legislative proposals pending in the Congress would affect certain PRPs' liability for cleanup costs. The Accelerated Cleanup and Environmental Restoration Act of 1995 (S. 1285) would require EPA to offer expedited settlements to de minimis parties, who are defined in the bill as responsible parties whose share of the liability for a site's cleanup costs is 1 percent or less. By accepting the settlement offer and paying the

[2]These estimates include PRPs at nonfederal sites that were on the NPL as of 1993; they do not include PRPs at hazardous waste sites that (1) had not been added to the NPL at that time, (2) have been added since 1993, or (3) may be added in the future.

agreed-upon costs, a responsible party would generally be free from further liability at a particular site. The Reform of Superfund Act of 1995 (H.R. 2500) would exempt from liability certain parties at NPL sites who contributed no more than 1 percent of the volume of materials containing hazardous substances at a given site. H.R. 2500 would also eliminate the liability for cleanup costs of all parties at facilities authorized to accept household waste, including municipal co-disposal landfills.

EPA's Remedial Project Managers (RPM) Site Database contains detailed information on the characteristics of NPL sites.[3] The RPM database is based on a 1993 survey of over 450 EPA regional remedial project managers in 10 regions. Project managers provided factual information and, in some cases, relied upon their best professional judgment to characterize specific aspects of each site, including its uses and contamination, the types and numbers of PRPs, waste volumes, cleanup costs, and other topics.

Estimated Number of de Minimis Parties

Determining the number of de minimis parties at nonfederal NPL sites is difficult because EPA's RPM Site Database has several limitations that serve to understate the number of de minimis parties. Although the database is the most current and comprehensive source of site-specific data on NPL sites, it does not contain objectively defined or complete data on the PRPs associated with each site. Specifically, because detailed volumetric data are not available at many sites, it relies on project managers' judgment rather than on volumetric measures to identify de minimis parties. Furthermore, it includes only those PRPs known to EPA, potentially excluding other contributors that have not been identified. For nearly one-third of the nonfederal NPL sites, it does not contain sufficient data to determine the number of de minimis parties.

In view of these limitations, we sought to arrive at the best possible estimate of the number of de minimis parties by analyzing the available data on two different categories of PRPs: (1) those that project managers had identified as "likely to be considered de minimis parties" and (2) those that project managers had categorized as "likely to have contributed less than 1 percent of the waste at a site."

Under EPA's guidance, a de minimis party is one whose waste contribution is "minimal as compared to the total waste volume at the site." This

[3]At the time of our review, 1993 was the most recent year for which EPA had detailed data on PRPs and other characteristics of specific NPL sites. In 1993, 1,056 of the 1,249 sites on the NPL were "final" (i.e., not yet deleted) nonfederal sites. Detailed data are not available on the sites that have been added to the list since 1993.

definition reflects a project manager's general determination that a PRP's contribution is "minimal" rather than a specific comparison based upon measurements of the volume of waste contributed by the parties at the site. Similarly, the categorization of a PRP as one that has contributed less than 1 percent of the waste at a site is based on a project manager's judgment rather than on actual measurements. Hence, under both methods of defining a de minimis party, the volume and even the proportion of waste contributed by such a party can vary from site to site.[4]

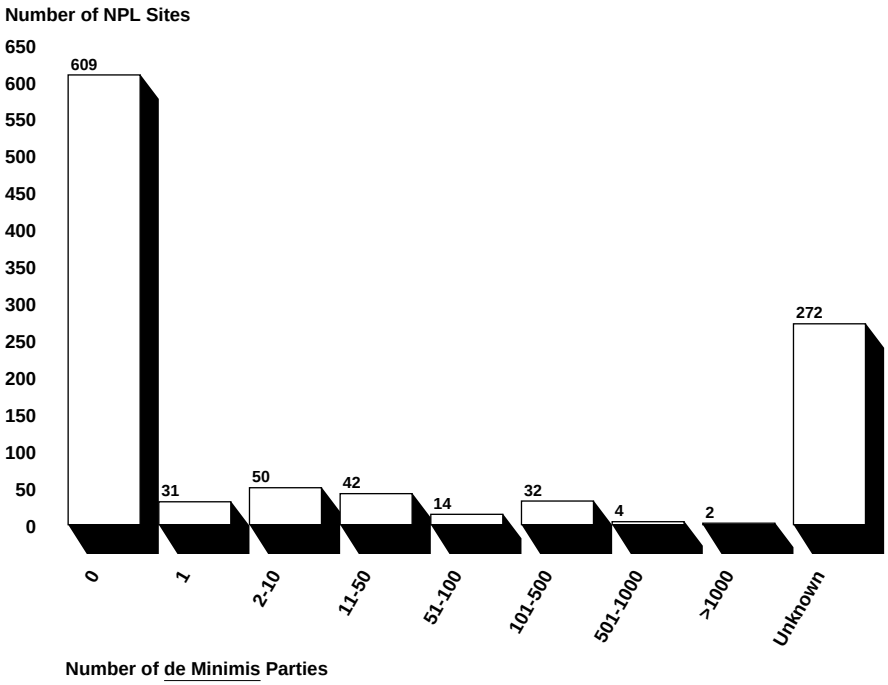
Estimated Number of Parties Considered by Project Managers to Be de Minimis Parties

Figure 1 presents data on the number of nonfederal NPL sites with parties likely to be considered de minimis parties and the number of such parties at these sites. These data reflect EPA remedial project managers' estimates of the number of parties at individual sites that could be considered de minimis parties under EPA's guidance. As this figure indicates, there are no de minimis parties at 609 (about 58 percent) of the 1,056 nonfederal NPL sites. However, at a cumulative total of 175 such sites (about 17 percent), one or more de minimis parties are known to have deposited waste. Furthermore, on the basis of EPA's data, we estimate that from about 8,500 to more than 25,000 de minimis parties—including site owners and operators and waste generators and transporters—may be associated with these 175 sites.[5] However, our estimate may not reflect all of the de minimis parties at nonfederal NPL sites because the information available on the remaining 272 sites (about 26 percent) is not sufficient to determine how many de minimis parties may be associated with those sites. In addition, our estimate does not include PRPs at any sites that may be added to the NPL in the future. EPA believes that as many as 700 additional sites could ultimately be placed on the NPL. According to EPA, approximately 20 percent of these sites could have de minimis parties.

[4]Although de minimis parties and those who have contributed less than 1 percent of the waste at a site are responsible for relatively small portions of the total waste, at some large sites, the volume of waste deposited by these parties may be significant. For example, a PRP who has contributed 1 percent of the 100 million gallons of waste at a site would be responsible for 1 million gallons of this waste. Furthermore, at some sites, all or most PRPs could be de minimis parties, accounting for all or most of the waste there.

[5]EPA's RPM Site Database presents data on responsible parties at each site in ranges, defined as follows: 0, 1, 2-10, 11-50, 51-100, 101-500, 501-1,000, and more than 1,000 parties. We estimated the total range of parties at waste sites by multiplying the number of sites with parties in each range category by the low and high ends of the range and adding the results across all range categories.

Figure 1: Estimated Number of de Minimis Parties at 1,056 Nonfederal NPL Sites

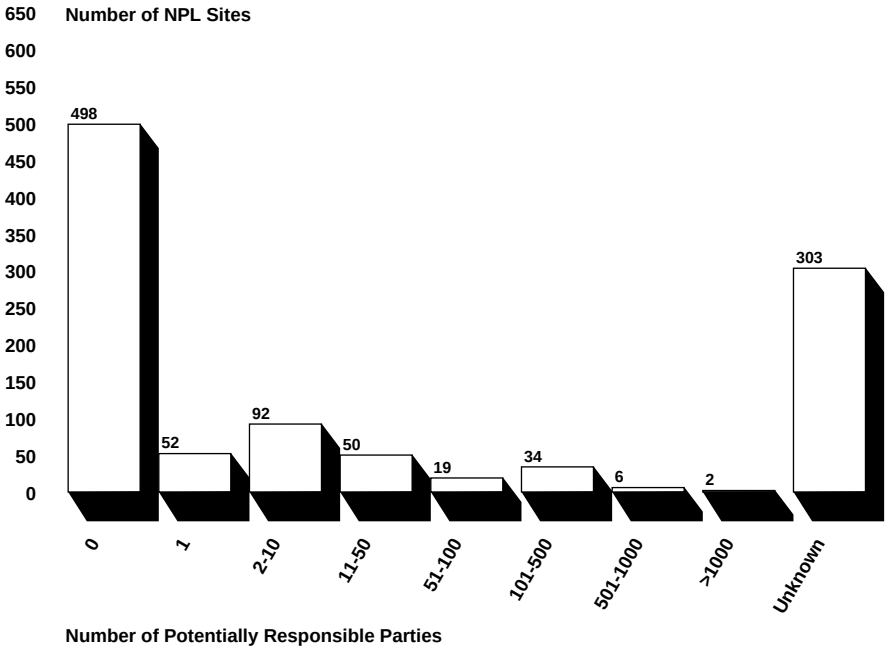


Source: EPA's RPM Site Database.

Estimated Number of Parties Categorized by Project Managers as Likely to Have Contributed Less Than 1 Percent of the Waste at a Site

Figure 2 presents data on the number of nonfederal NPL sites with parties that EPA project managers considered likely to have contributed less than 1 percent of a site's waste and the number of such parties at these sites. According to EPA's data, 498 (about 47 percent) of the nonfederal NPL sites have no PRPs that contributed less than 1 percent of a site's waste; however, a cumulative total of 255 additional sites (about 24 percent) have known PRPs that contributed less than 1 percent of the waste. The data on 303 other sites (about 29 percent) are insufficient to determine how many PRPs may have contributed less than 1 percent of the waste. On the basis of EPA's data, we estimate that the total number of PRPs—including site owners and operators and waste generators and transporters—that have contributed less than 1 percent of the waste at the 255 sites ranges from about 10,000 to over 30,000.

Figure 2: Estimated Number of Parties Contributing Less Than 1 Percent of the Waste at 1,056 Nonfederal NPL Sites



Source: EPA's RPM Site Database.

Estimated Number of Parties at Nonfederal Municipal Co-Disposal Landfills

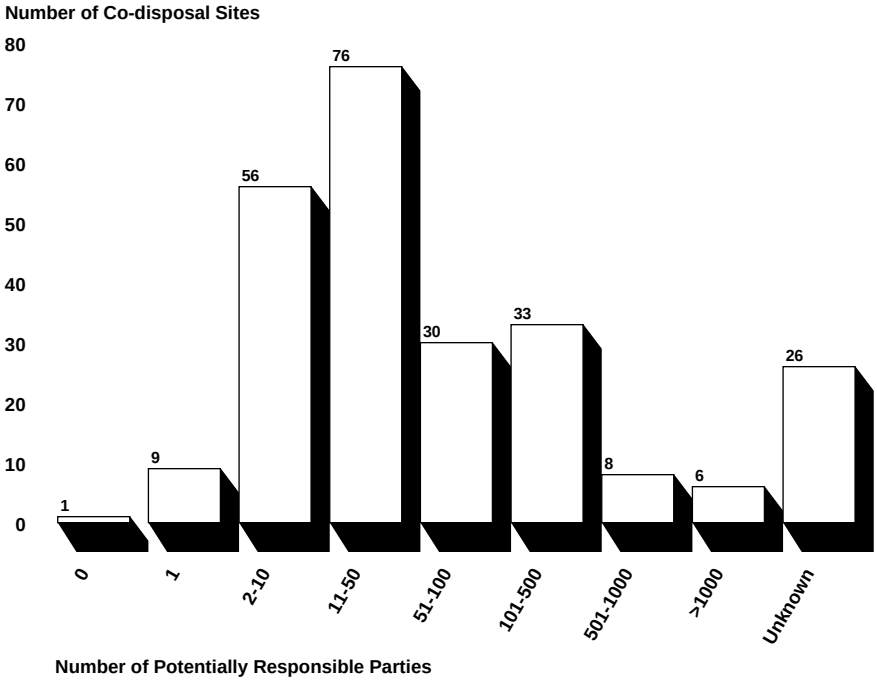
EPA has identified 245 nonfederal municipal co-disposal sites on the NPL. Officials in EPA's Office of Enforcement and Compliance Assurance told us, however, that determining which sites should be characterized primarily as municipal co-disposal sites is difficult because of the large volume and the variety of types of waste deposited at some sites. Consequently, according to these officials, lists of municipal co-disposal sites derived from the same data may differ because this determination often requires subjective judgment. Therefore, although EPA's list of 245 sites appears to be the most recent such assessment and is based on detailed analyses, it may not include all sites that could be considered municipal co-disposal landfills. It may also include sites that other analysts might not have characterized as co-disposal landfills.

According to EPA's data, the 245 nonfederal municipal co-disposal landfills containing both household and industrial waste account for about 23 percent of the total 1,056 nonfederal NPL sites. Figure 3 groups the 245 municipal co-disposal landfill sites by the number of PRPs estimated at the sites.

As this figure indicates, 1 municipal co-disposal landfill is identified as having no PRPs, and a cumulative total of 218 additional sites are identified as having at least one known PRP. On the basis of EPA's data for these 218 sites, we estimate that from about 15,000 to about 40,000 or more PRPs may be associated with these sites. The information on the remaining 26 sites (about 10 percent) is insufficient to determine the number of PRPs associated with those sites. Therefore, our estimate may understate the number of PRPs associated with nonfederal municipal co-disposal sites.

Furthermore, our estimate does not include PRPs at any sites that may be added to the NPL in the future. EPA believes that as many as 700 additional sites could be added to the NPL in the future. According to EPA, approximately 22 percent of these sites could be co-disposal landfill sites.

Figure 3: Estimated Number of Potentially Responsible Parties at 245 Nonfederal NPL Municipal Co-Disposal Landfill Sites



Source: EPA's RPM Site Database.

Agency Comments and Our Evaluation

We provided copies of a draft of this report to EPA for its review and comment. We met with the Deputy Director, Policy and Program

Evaluation Division, Office of Site Remediation Enforcement, in EPA's Office of Enforcement and Compliance Assurance, and with other representatives of that office, to obtain the agency's comments. These officials stated that, overall, the report accurately characterizes EPA's available data on de minimis parties and municipal co-disposal sites. In addition to making a number of suggestions for clarifying our discussion, which we have incorporated into the appropriate sections of the report, these officials provided further comments that they believe should be noted in the report.

EPA believes that the report should acknowledge some of the limitations affecting our estimates of the number of de minimis parties and PRPs at municipal co-disposal sites. Although we stated in the draft report that the estimates represented a minimum range of possible de minimis parties and PRPs at co-disposal sites, we agreed to point out in the final report that these estimates do not include parties associated with hazardous waste sites that had not been added to the NPL in 1993, have been added since 1993, or might be added in the future. We also included in the report EPA's estimates of the number of sites with de minimis parties and the number of co-disposal landfills that may be listed on the NPL in the future.

EPA officials also commented that we did not use alternative methodologies to estimate the number of de minimis parties. We based our estimate on the information in EPA's RPM Site Database because EPA had identified it as the most comprehensive source of recent data on each NPL site. In reviewing our draft report, EPA suggested that we extrapolate an estimate of the number of de minimis parties from information in its Transactional Database on the sites where the waste contributions of individual parties are known. We determined, however, that this approach was unlikely to yield a more certain estimate of the number of de minimis parties. According to EPA officials, the Transactional Database includes data on a relatively small number of NPL sites and these sites are not representative of NPL sites in general.

Scope and Methodology

To identify the number of de minimis parties and of PRPs associated with municipal co-disposal sites, we obtained and analyzed data from EPA's RPM Site Database. Given the database's limitations, we analyzed the available data on two different categories of PRPs to arrive at the best possible estimate of the number of de minimis parties. These categories included parties identified by EPA regional remedial project managers as (1) likely to be considered de minimis parties and (2) likely to have contributed less

than 1 percent of the waste at a site. In identifying municipal co-disposal sites on the NPL, we relied on EPA's listing of 245 nonfederal NPL sites that received both municipal nonhazardous and industrial hazardous wastes. We conducted our work from November 1995 through February 1996 in accordance with generally accepted government auditing standards.

As arranged with your office, unless you announce its contents earlier, we plan no further distribution of this report until 10 days after the date of this letter. At that time, we will send copies to the Administrator, EPA, and the Director, Office of Management and Budget. We will also make copies available to others upon request.

Please contact me at (202) 512-6111 if you or your staff have any questions. Major contributors to this report are listed in appendix I.

Sincerely yours,

Peter F. Guerrero
Director, Environmental
Protection Issues

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