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General Accounting Office
Washington, D.C. 20548

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Resources, Community, and
Economic Development Division

B-278955

January 28, 1998

The Honorable Carol Browner
Administrator
Environmental Protection Agency

Subject: Superfund: Response to EPA's Letter Concerning Recent GAO Reports

Dear Ms. Browner:

This is in response to a December 3, 1997, letter to GAO from the Director of the Environmental Protection Agency's (EPA) Office of Emergency and Remedial Response criticizing two recent GAO reports. The letter questioned the methodology and conclusions of our March 1997 report entitled Superfund: Times to Complete the Assessment and Cleanup of Hazardous Waste Sites (GAO/RCED-97-20) and said that our September 1997 report entitled Superfund: Trends in Spending for Site Cleanup (GAO/RCED-97-211) inaccurately characterized the amount of money going to cleanups. EPA had previously provided us with written comments on drafts of our March and September reports, and we included those comments and our responses to them in the final reports. In those comments, EPA said that the analysis in our September 1997 report was sound. However, EPA disagreed with the methodology used in our March 1997 report. EPA's December letter does not present any information or arguments that we have not already addressed or that would warrant any change in either of our reports. As discussed below, our reports accurately and fairly present information on various trends in the Superfund program, and EPA's critique of these reports is erroneous and misrepresents our work. The enclosure to this letter contains a more detailed, point-by-point response to EPA's letter.

REPORT ON ASSESSMENT AND CLEANUP COMPLETION TIMES

In our March 1997 report on the time it has taken to complete the assessment and cleanup of Superfund sites, which was based on EPA's own

GAO/RCED-98-55R Response to EPA on GAO's Recent Superfund Reports

159 781

data, we measured the time (1) from EPA's discovery of the hazardous waste sites to their listing on Superfund's National Priorities List (site assessment time) and (2) from the sites' listing to the completion of cleanups. The report presents data on sites listed from 1986 through 1996 and sites cleaned up in the same 11 years. It points out that the assessment and cleanup times for completed sites have generally increased over the life of the program. To assess the nonfederal sites it added to the National Priorities List in 1996, EPA took an average of 9.4 years. In contrast, the assessment of nonfederal sites listed in 1986 through 1990 took an average of 5.8 years. Nonfederal cleanup projects completed in 1996 took an average of 10.6 years, while the projects completed from 1986 through 1989 averaged 3.9 years.

EPA's letter challenged the methodology we used and said that our report was inconsistent with earlier GAO reports. EPA contended that cleanup durations have been recently reduced to an average of 8 years. We would like to respond briefly to these comments.

EPA said that our methodology was mathematically programmed to result in increasing cleanup time frames over a period of years, involved only a brief period of observations, and was inconsistent with a methodology we used for measuring the duration of the Food and Drug Administration's (FDA) drug approval processes. On the contrary, our methodology shows increasing cleanup times for sites completing the Superfund process not because it was "programmed" to produce this result but because these times have, in fact, increased. Our report accounts for the most recent 11-year period for which data were available—not for a "brief period." Furthermore, our report on FDA used a different methodology for measuring the duration of an FDA process that was much shorter than the Superfund cleanup process.¹ It would not have been possible to meaningfully measure Superfund activity using the methodology employed in our report on FDA. EPA made changes to its Superfund process designed to speed it up, but these changes occurred too recently to be measured by the methodology used in our report on FDA. The methodology of our March 1997 report presents a historical record of the average time spent in the Superfund process by those sites that were listed or cleaned up in a given year. Our approach is also consistent with a method

¹FDA Drug Approval: Review Time Has Decreased in Recent Years
(GAO/PEMD-96-1, Oct. 20, 1995).

EPA has used in its own management reports to measure the program's accomplishments.

Our reports and testimony over the last several years that have discussed the slow progress of site cleanups in the Superfund program are entirely consistent with our March 1997 report. For example, in 1994 we reported that EPA's data indicated a trend toward longer cleanup times for projects still under way, even though the agency had initiated several major efforts to expedite the process.² In fact, some of the "in process" sites that we described in those earlier reports and testimonies are now reaching the end of cleanup and are reflected in the March 1997 report's data on recent longer cleanup completion times.

EPA did not present data to adequately support its claim that cleanup times have been reduced for sites still in the cleanup process. In this connection, two of our recent reports illustrate the need for better evidence of improved Superfund processing times. First, in September 1997 we reported that the average cleanup time for sites listed on the National Priorities List in fiscal years 1986 through 1994 will exceed 8 years, possibly by a substantial margin.³ In addition, in a May 1997 report discussing EPA's initiatives to speed up the Superfund program and make other improvements, we concluded that EPA has not yet demonstrated whether and to what extent 41 of the 45 reforms we reviewed were accomplishing their objectives.⁴ We have also reported that EPA has made limited use of certain initiatives intended to speed up cleanups.⁵ Moreover, in its response to our September 1997 report, EPA said that

²Superfund: Status, Costs, and Timeliness of Hazardous Waste Site Cleanups (GAO/RCED-94-256, Sept. 21, 1994).

³Superfund: Duration of the Cleanup Process at Hazardous Waste Sites on the National Priorities List (GAO/RCED-97-238R, Sept. 24, 1997).

⁴Superfund: Information on EPA's Administrative Reforms (GAO/RCED-97-174R, May 30, 1997).

⁵Superfund: Integrated Site Assessments May Expedite Cleanups (GAO/RCED-97-181, July 24, 1997) and Superfund: Non-Time-Critical Removals as a Tool for Faster and Less Costly Cleanups (GAO/T-RCED-96-137, Apr. 17, 1996).

". . . insufficient time had passed to see all of the quantifiable and statistically significant changes in durations attributable to the three rounds of administrative reforms . . . [and that] lacking this durations data, it is not possible to adequately validate the impacts of all of the very important improvements in the Superfund cleanup process. Anecdotal information will be the best available data for the next 3 to 5 years."

REPORT ON SUPERFUND SPENDING TRENDS

Our September 1997 report on spending trends for the cleanup of Superfund sites analyzes the program's expenditures in fiscal years 1987 through 1996 to determine, among other things, how much of Superfund's total spending was for cleanup work performed by contractors, in contrast with other activities. The report states that both the amount and share of money spent on contractor cleanup work increased from fiscal year 1987 through fiscal year 1996. In fiscal year 1987, \$261 million (in constant 1996 dollars) was spent on contractor cleanup work, or 37 percent of the \$702 million spent on Superfund. In fiscal year 1996, \$696 million was spent on contractor cleanup work, or 49 percent of the \$1.4 billion spent on Superfund.

EPA's letter asserts that our September 1997 report understated cleanup costs, which it said were over 70 percent of the federal Superfund budget. However, our reporting objective was to provide information on costs going to the cleanup contractors who actually plan and implement Superfund site cleanups. In contrast, EPA includes in its 70-percent figure not only contractor cleanup costs but also activities that support cleanups, such as the salaries of federal employees in field offices.

EPA's letter also asserts that the information in our report, in particular the percentage of Superfund spending going to contractor cleanup work, is inconsistent with a September 1994 GAO report. This assertion is incorrect. Both our September 1997 report and our September 1994 report used the same five categories to provide a breakdown of Superfund costs. Both reports state that the share of total spending going to contractor cleanup costs is less than 50 percent. It is important to note that in commenting on drafts of these reports, EPA stated that our September 1994 report provided a fair and accurate portrayal of the issues and that our analysis in the September 1997 report was sound.

B-278955

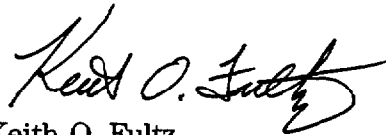
In conclusion, we believe that the two GAO reports discussed in EPA's letter fairly and accurately describe trends in Superfund cleanups and costs. We will be available to meet with you or your staff to discuss these issues further.

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Copies of this report are being sent to the congressional requesters of the March and September 1997 reports and to other appropriate congressional committees. We will also make copies available to others on request.

Please call me at (202) 512-4906 or Peter Guerrero, Director, Environmental Protection Issues, at (202) 512-6111, if you or your staff have any questions about this report.

Sincerely yours,



Keith O. Fultz
Assistant Comptroller General

Enclosure

GAO'S RESPONSES TO EPA'S LETTERGAO'S RESPONSES TO THE SPECIFIC POINTS EPA RAISED ABOUT
OUR MARCH 1997 REPORT ON ASSESSMENT AND CLEANUP
COMPLETION DURATIONS

EPA's comment: GAO's methodology has been compared to timing the first few finishers in a marathon race and "declaring their average time to be descriptive of all runners. By standing briefly at the 'finish line,' as GAO did, one can rely on a method that is inherently biased, always showing increasing time frames."

GAO's response: We do not measure the success of the program by the early completion times. In fact, the conclusions section of our report states that ". . . given the increased complexity of cleanups and the volume of activity that the program now handles, cleanups may not be completed as quickly as in the early days of the program." Our primary benchmarks are the goals for listing sites set forth in the 1986 Superfund Amendments and Reauthorization Act and EPA's own standard for completing cleanups.⁶ As our report discusses, recent listing and cleanup completion times have substantially exceeded these standards.

We observed 11 years of completion times. This is not a brief period of the program's history, as implied by EPA's comment. The Superfund program was authorized in 1980 and began to list substantial numbers of sites in fiscal year 1983. Our report begins the measurement of listing times and cleanup completion times in fiscal year 1986 and concludes in fiscal year 1996 (the latest fiscal year for which data were available at the time of our review).

EPA's comment: An earlier GAO report on the Food and Drug Administration's (FDA) drug approval process indicated that the methodology GAO used to describe the progress of the Superfund program was inappropriate.

GAO's response: Two of our prior reports discuss FDA's processing times: Medical Devices: FDA Review Time (GAO/PEMD-96-2, Oct. 30, 1995) and FDA Drug Approval: Review Time Has Decreased in Recent Years (GAO/PEMD-96-1, Oct. 20, 1995). The report on medical devices measured trends in the time it took FDA to review

⁶The goal of the Superfund Amendments and Reauthorization Act of 1986 was for EPA to evaluate nonfederal sites for listing, when warranted, within 4 years of their discovery. This act did not set deadlines for completing cleanups within a certain number of years, but EPA set an expectation for 1993 for its regions to complete a cleanup within 5 years of a site's listing.

applications for the approval of these devices. This report grouped its duration data by the year in which applications were received, that is, the year they entered the process. Our March 1997 report groups data on assessment and cleanup completions by the year that sites completed these processes, not the year they began the process. The report on medical devices says on page 14:

"The two methods provide different information and are useful for different purposes. Using the date-of-decision cohort [the method used in our March 1997 report] is useful when examining productivity and management of resources. . . . Alternatively, using the date-of-submission cohort [the method used in the report on FDA] is useful when examining the impact of a change in . . . policy."

For our review of FDA, it was possible to use the date-of-submission cohort to measure trends because FDA's process for reviewing medical devices was so short (a median time of 152 days in 1994) in contrast to the often decade-long Superfund cleanup process. Grouping Superfund cleanup time frames by year of listing (the equivalent of the date of submission in the FDA process) would not allow an assessment of the ultimate cleanup pace of sites listed in recent years because so few sites listed in those years had been cleaned up at the time of our review. Similarly, neither the date-of-submission nor the date-of-decision method would be able to measure the effects, if any, of EPA's attempts to speed up cleanups because these efforts are so recent.

The methodology used in our March 1997 report is also not inconsistent with our other report on FDA's processing time—the report on drug approval. A principal purpose of that report was to describe the timeliness of the review and approval process for new drugs. The report used the date-of-submission method to measure changes in a much shorter process (an average of 19.2 months for drug applications submitted in 1992) and did not analyze durations for the 2 years before our review because so many applications submitted in those years were still pending.

EPA's comment: The Congressional Budget Office (CBO) has used a different methodology than GAO in its study of Superfund cleanup times.

GAO's response: CBO used a different methodology for a different purpose. A principal purpose of the CBO memorandum entitled "Analyzing the Duration of Cleanup at Sites on Superfund's National Priorities List," March 1994, was to forecast how long it would take to complete the cleanup of Superfund sites. Our March 1997 report does not forecast future cleanup completion times. CBO based its estimates on interviews with Superfund project managers. CBO concluded that

". . . the average time between proposed listing on the NPL [National Priorities List] and . . . completion of principal cleanup work . . . will be at least 12 years for the first 1,249 sites. Given the limitations of the data, the true average is more likely to lie between 13 and 15 years."

CBO's projections are actually longer than the recent cleanup completion times we measured in our March 1997 report.

EPA's comment: EPA has used a method, by implication superior to GAO's, to gauge progress in cleaning up Superfund sites by measuring the time to complete each phase of the Superfund cleanup process.

GAO's response: Our report contains many of the measurements of Superfund phases that EPA says it makes for management purposes. For example, we indicate that the completion times for some phases of the Superfund process are stable or have been reduced over the years. However, we also found that the duration of other Superfund phases, such as the time between the completion of preliminary site assessments and the listing of sites and between listing and the selection of cleanup remedies, has increased over the life of the program, as measured by sites completing these processes. These increases have contributed to the overall stretching out of listing and cleanup completion times that we discussed in our report.

EPA's comment: GAO's March 1997 report is inconsistent with earlier GAO reports. In the past, GAO has reported that the pace of Superfund cleanups was slow. In its March 1997 report, GAO said cleanups were done more quickly early in the program.

GAO's response: Our March 1997 report indicated that the sites that were cleaned up earlier in the program's history were done in less time than more recent completions, while our previous reports and testimonies reported that cleanups had been completed at relatively few Superfund sites and that most sites would take a long time to clean up. Our earlier reports and testimonies, in effect, forecast the long recent completion times our March 1997 report disclosed. There is no conflict between these earlier reports and testimonies and the March 1997 report.

EPA's comment: Superfund cleanup times are decreasing, not increasing. The construction of cleanup remedies has been completed at more than twice as many Superfund sites in the past 5 years than in the first 12 years of the program combined.

GAO's response: As we pointed out several years ago in our report entitled Superfund: Status, Cost, and Timeliness of Hazardous Waste Site Cleanups (GAO/RCED-94-256, Sept. 21, 1994), EPA has made considerable progress moving sites through the Superfund process. However, this is not evidence of decreasing processing times; rather,

it is an indication that the program, now more than 15 years old, has been around long enough for a substantial number of sites to have had remedies constructed. Given the long cleanup times for many sites, it is not surprising that more sites, most listed years ago, are now reaching the end of cleanup.

GAO'S RESPONSES TO THE SPECIFIC POINTS EPA RAISED ABOUT
OUR SEPTEMBER 1997 REPORT ON SUPERFUND SPENDING TRENDS

EPA's comment: There is a discrepancy between the EPA Superfund budget and GAO's report in connection with the percentage of Superfund costs spent on cleanup. Specifically, GAO's report states that only 49 percent of Superfund costs go for cleanup, while in fact over 70 percent of the federal Superfund budget is spent on direct site cleanup.

GAO's response: In September 1997, we reported on the amount of money that the Superfund program had spent for "contractor cleanup costs," i.e., the costs going to the contractors that actually perform studies, designs, removal actions, and remedial actions at Superfund sites. EPA's budget category "cleanup costs" includes not only the costs of the contractors who perform the actual cleanup work but also activities that support cleanups such as the salaries of federal employees in field offices.

EPA's comment: GAO's extremely narrow definition of cleanup costs has led to confusion and perpetuated inaccuracies about the amount of money going toward cleanups.

GAO's response: We disagree. Over the years, we have consistently reported on the amount of money that the Superfund program spends on the contractors who actually perform the studies, designs, and removal and remedial actions at Superfund sites.

EPA's comment: GAO's "cleanup costs" have not been consistently defined for a valid trend analysis.

GAO's response: In our September 1997 report, we provided 10 years of Superfund spending data using consistent cost categories. To ensure that this information could be used for a valid trend analysis, we reported the data in both then-current and constant 1996 dollars. (See tables I.1 and I.2 in our September 1997 report.) In addition, during our review, we worked with the Chief of the Superfund Accounting Branch, Office of the Comptroller, to establish the cost categories for our analysis.

EPA's comment: GAO has modified its findings on the percentage of the Superfund budget going to cleanup. In 1994, GAO reported that the percentage of the Superfund budget going for remedial construction increased to 78 percent for fiscal year 1993.

GAO's response: Our five issued products (reports and testimonies) on Superfund costs since 1991 have all reported that less than 50 percent of the total Superfund budget goes to contractor cleanup costs. EPA drew excerpts from these reports and testimonies to make invalid comparisons that imply that we have been inconsistent in reporting on Superfund spending. For example, EPA's letter compares the total contractor cleanup spending in one year to a subcategory of contractor cleanup spending in another year. This comparison makes it appear that we reported that cleanup spending increased from 45 percent in fiscal year 1992 to 78 percent in fiscal year 1993.

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