

GAO

Testimony

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Superfund Work Force Issues

Statement of
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Before the
Subcommittee on Superfund and Environmental
Oversight
Committee on Environment and Public Works
United States Senate



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Mr. Chairman and Members of the Subcommittee:

The Environmental Protection Agency's (EPA) Superfund program faces the task of cleaning up perhaps thousands of sites contaminated by hazardous wastes. To do so, EPA will need the services of various skilled personnel in scientific and technical fields. Concerned that EPA may face a shortage of skilled staff, the Congress, when it reauthorized and amended Superfund in October 1986, directed that GAO study the types and extent of skilled personnel shortages in the Superfund program, employee turnover, pay differentials with the private sector, and employee training needs.

We have completed our study and have sent EPA a draft of our report so that we can obtain and consider the Administrator's comments before we issue our final report to the Congress. Mr. Chairman, we are pleased to be here today to discuss our tentative findings.

RESULTS IN BRIEF

Briefly, we found that Superfund employees believed there were staffing and skill shortages in the program in early 1987. Staff increases for fiscal year 1987, if fully used, should have been sufficient to alleviate these shortages. However, EPA needs to use more objective techniques and productivity measures to better support and analyze Superfund's future staffing and skill requirements.

Superfund employee turnover, which had been below the turnover rate for all federal employees, more than doubled to surpass federal rates in fiscal year 1986. Advancement opportunity was the most frequently cited reason employees left Superfund but EPA has taken action to enhance promotion opportunities.

Superfund employees, like federal employees in general, receive less pay than do their private-sector counterparts, according to the government's pay survey. Although EPA is considering ways to increase Superfund employee compensation, we do not as a rule favor separate pay systems because of the pay inequities they would create within the government. Additionally, while Superfund employees told us that they need more training, EPA has developed plans to address training needs.

BACKGROUND

The Superfund program, enacted in 1980, provided EPA with \$1.6 billion to (1) remove hazardous substances, (2) initiate long-term remedies to clean up contaminated land and groundwater, and (3) initiate legal action to secure clean-up or cost recovery from responsible parties. The 1986 amendments provided an additional \$8.5 billion and set ambitious schedules for assessing sites and initiating clean-up actions.

As shown in attachment I, EPA used over 3,800 people working the full-time equivalent of 1,643 employees in fiscal year 1986. These employees came from over 120 occupations, of which more than half were engineers, scientists, lawyers, and other technical specialists. To obtain information on the many issues we studied, we relied heavily on questionnaires and interviews with these employees. In all, we received questionnaire responses from about 700 current and former Superfund employees in the technical and scientific occupations listed in attachment I, and interviewed 55 program managers at EPA headquarters and at 6 EPA regions.

STAFFING AND SKILL NEEDS

Our survey of Superfund employees showed that about 80 percent worked in units that they believed were understaffed in early 1987. Employees perceived that the program was understaffed by about 36

percent, or from 375 to 600 positions,¹ at that time. Also, as shown in attachment II, most employees reported they needed the services of hydrologists, toxicologists, chemists, and soil engineers. Many, however, reported problems obtaining these services, which delayed or affected the quality of Superfund activities. For example, because needed specialists were not available, our survey showed that about half of the current employees had to delay their work for at least a week or more.

At the regional offices, program managers generally told us that they were short of staff, including such disciplines as project managers, on-scene coordinators, hydrologists, and toxicologists. Program managers also said that such staffing and skill shortages delayed and impaired the quality of Superfund activities. For example, in EPA's San Francisco region, one official told us that shortages in their region resulted in slippage in site activities and less time for reviewing project proposals.

EPA management in Washington concurred that shortages no doubt existed in early 1987, but they noted that staffing has since been increased considerably. Congress authorized EPA to use an additional 773 Superfund positions for fiscal year 1987, over and above the 1,643 that EPA used in fiscal year 1986. If they had been fully used, these positions should have been sufficient to alleviate perceived shortages. However, EPA expects that a considerable number of these positions will go unused during fiscal year 1987 because of the short time EPA had available to fill them.

While a shortfall is expected, EPA has requested 2,716 Superfund positions in its fiscal year 1988 budget, or 300 more than the Congress authorized for fiscal year 1987.

¹Positions are expressed as full-time equivalents (FTEs).

Our review of EPA's work force planning system raises questions, however, about the reliability of EPA's estimated staffing requirements to carry out planned Superfund activities. EPA relies largely on managers' judgments of the time required to carry out various Superfund activities in establishing the program's staffing requirements. This is an acceptable technique if more objective techniques are impractical. However, its primary disadvantage is that the time required to do a job is an estimate only and may vary widely from the actual time workers need, thereby resulting in over- or underestimating staffing needs.

EPA now has enough experience in operating the program to compare estimated requirements to the actual time spent by employees in performing various Superfund activities. However, EPA does not routinely collect historical data--such as employee time records--in enough detail to help validate the reasonableness of its staffing estimates.

Similarly, EPA does not use productivity measures to help gauge how effectively and efficiently it is using its Superfund staff. EPA has the data to evaluate Superfund's productivity and the use of productivity measures would help EPA to evaluate differences between its regional offices in the type and size of the work force and methods of operation used to carry out Superfund activities. For example, EPA's Boston region uses a single project manager to handle both remedial and enforcement activities, whereas Chicago has separate project managers for each of these activities.

EMPLOYEE TURNOVER

As shown in attachment III, the rate at which EPA Superfund employees left the program was below the rate for all federal employees in fiscal years 1984 and 1985. The Superfund rate more

than doubled between fiscal years 1985 and 1986, from 2.9 percent to 7.2 percent--surpassing the overall federal rate of 5.2 percent.

As attachment IV shows, several critical Superfund occupations had quit rates that were two to six times higher than the average for federal employees in these occupations. For example, the Superfund hydrologist quit rate of 14 percent was over 6 times higher than the rate for all federal hydrologists.

While Superfund employee turnover has been above federal rates, 34 of the 55 Superfund managers we interviewed did not consider employee turnover a problem. Of the 21 managers who did, some reported that turnover delayed or impaired the quality of Superfund activities.

Most of the Superfund managers we interviewed expected turnover to increase as the private sector lures even more employees away from the program. Our review confirmed this point, showing that over one-third of Superfund employees planned to look for other jobs during 1987. The Superfund work force is relatively young--over 60 percent is under the age of 36--and these younger employees historically change jobs more frequently than older ones. As the size of the Superfund staff expands, the work force is likely to remain young. These factors all suggest that Superfund employee turnover could remain relatively high.

One reason for the higher Superfund rate for fiscal year 1986 was its abundance of younger employees. But we also asked former Superfund employees to rate 17 reasons for leaving the Superfund program. Attachment V shows the results. It shows the percentage of former employee respondents who both rated each reason as major and indicated that they definitely would have stayed had conditions relative to this reason changed to their satisfaction. The data shows that more advancement opportunity was the most often cited reason. Also frequently cited were dissatisfaction with regional

management, salaries, and use of employees' technical skills and disillusionment with clean-up progress.

Concerned with limited advancement opportunities, EPA revised its policies in October 1986 to make project managers and on-scene coordinators eligible for higher salary grades when warranted by the size and complexity of the sites managed. EPA also has designed separate career paths to enable chemists and general physical scientists to obtain higher grades without having to move into management positions. In addition, EPA is considering the results of an internal Superfund study, which recommended improving compensation for Superfund employees through bonuses and added fringe benefits.

PAY DIFFERENTIALS AND SUCCESS OF EMPLOYEE RETENTION PROGRAMS

According to the Annual Report of the President's Pay Agent,² federal civilian pay in general needed to be increased by about 24 percent as of March 1986 to achieve pay comparability with the private sector. However, federal pay increases in January 1987 were limited to 3 percent. On the basis of the private-sector pay data used by the pay agent, attachment VI shows that the pay for federal attorneys, chemists, and engineers--three key Superfund occupations--trailed those in the private sector by \$7,800 to \$41,300, or 25 to 68 percent, as of March 1986. In addition, our survey showed that former Superfund employees who took private-sector jobs received pay increases averaging \$7,200.

The Office of Personnel Management can approve agency requests for special pay rates when it finds that private-sector pay substantially exceeds federal pay and significantly handicaps the

²A group composed of the Directors of the Office of Management and Budget and the Office of Personnel Management and the Secretary of Labor.

recruitment or retention of well-qualified individuals. By narrowing the pay gap, these special rates have helped agencies to be more competitive and encouraged employees to stay longer. But among the Superfund technical and scientific occupations we studied, only Superfund engineers, like all federal engineers, received special pay rates.

As previously mentioned, EPA is now considering ways to improve Superfund compensation through bonuses and added fringe benefits. As a general rule, we have opposed separate pay systems for specific employee groups, suggesting instead that any changes focus on resolving perceived inequities in the pay system that exist for all federal employees. This approach minimizes pay inequities within the government and precludes providing one agency with a competitive advantage over others in recruiting the same employees.

EMPLOYEE TRAINING NEEDS

Our survey also showed that about 60 percent of current employees believed that they needed more training to carry out their Superfund responsibilities. As shown in attachment VII, nearly a quarter of them believed they needed more training in each of the following areas: clean-up design and action, cost recovery, and legal case development. An EPA survey of Superfund training needs confirmed our findings.

Aside from needing more training, only about half of the current Superfund employees were satisfied with the training they had already received. Many identified problems with course content and delivery, management commitment to training, and the time employees have available to attend training.

EPA has developed a 2-year plan and drafted policies to improve its Superfund training program. When fully implemented,

these plans and policies should help to resolve the course content and delivery and organizational problems employees identified. Concerning the remaining problems employees identified, Superfund staffing and training funds were recently increased significantly. These staffing increases may make it easier for employees to find the time to take needed training courses. However, as we previously mentioned, EPA did not expect that it would be able to fill many of the 773 additional positions authorized for fiscal year 1987.

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In summary, Mr. Chairman, we found that the Superfund program was likely understaffed in early 1987 and that staffing increases for fiscal year 1987 should have been sufficient, if fully used, to alleviate these shortages. We also found that EPA can improve Superfund work force planning by better estimating staffing requirements and analyzing productivity. Our draft report includes proposals for the Administrator to deal with these issues. While Superfund employee turnover has been increasing, EPA has taken some actions that may help to reduce the trend. The pay comparability gap obviously affects turnover, but we do not favor special pay systems for individual programs or agencies because of the equity problems this could cause within the government. Lastly, EPA needs to upgrade its Superfund training program to better meet employee training needs, and it plans to do this over the next 2 years.

Mr. Chairman, this concludes my prepared statement. I would be pleased to respond to any questions you might have at this time.

Occupational Distribution of Superfund
Employees and FTEs^a for Fiscal Year 1986

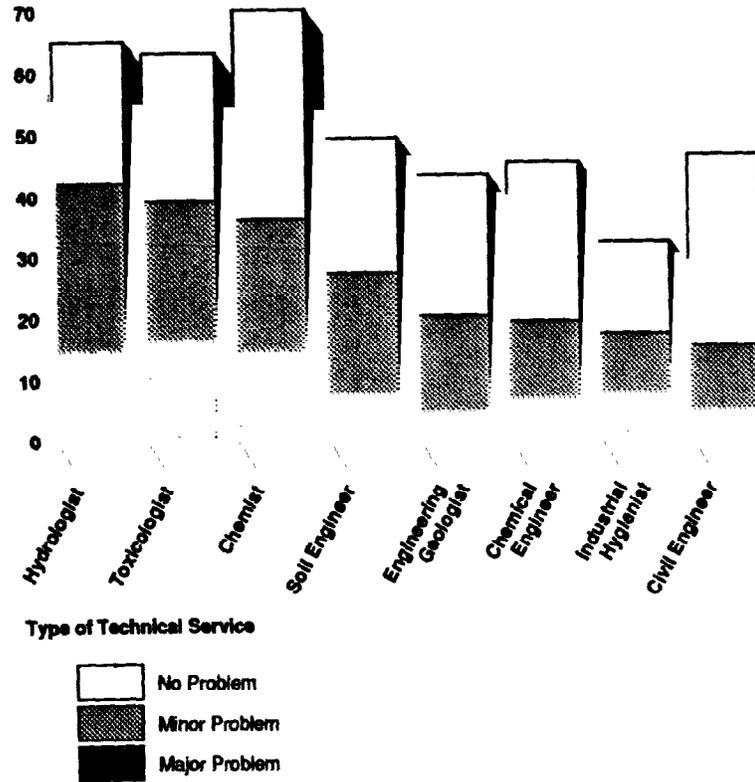
<u>Occupational area</u>	<u>Number of</u>		<u>Percentage of total FTEs</u>
	<u>Employees</u>	<u>FTEs</u>	
Technical:			
Physical sciences	740	384	23
Engineering and architecture	574	335	21
Environmental protection	318	187	11
General attorney and paralegal	310	128	8
Contract and procurement	84	36	2
Biological sciences	80	25	2
Public affairs	50	21	1
Subtotal	<u>2,156</u>	<u>1,116</u>	<u>68</u>
Other:			
Secretary and clerk typists	492	193	12
Accounting and budgeting	357	87	5
Miscellaneous	830	247	15
Total	<u>3,835</u>	<u>1,643</u>	<u>100</u>

^aFull-time equivalents.

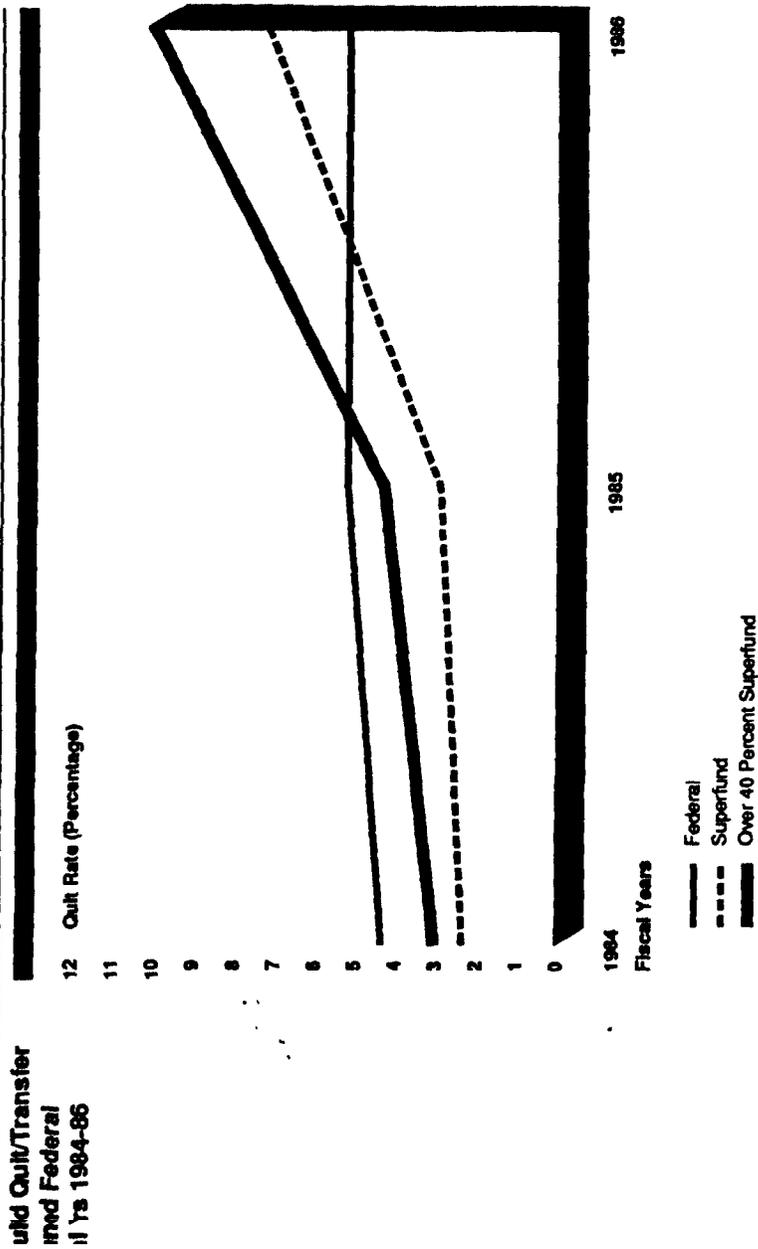
Source: EPA.

Employee Experience in Obtaining Technical Services

80 Percentage Needing Technical Service and Extent of Problem



Note: Responses do not total 100 percent because some employees indicated that they did not require that type of skilled service.



Quit Rate Comparisons for Critical Superfund Occupations

<u>Critical occupation^a</u>	<u>Quit rates</u>			
	<u>Fiscal year 1985</u>		<u>Fiscal year 1986</u>	
	<u>Superfund^b</u>	<u>Federal</u>	<u>Superfund^b</u>	<u>Federal</u>
Environmental engineer	3.1	4.7	7.6	5.8
Hydrologist	4.7	1.6	14.0	2.1
Attorney	4.1	7.3	6.2	7.1
General physical science	2.9	2.7	5.2	2.5
Contract & procurement	0.0	2.8	0.0	2.7
Environmental protection specialist	2.8	3.1	5.2	3.1
Environmental protection assistant	0.0	7.1	5.7	2.7
Geologist	4.5	1.2	4.7	1.7
General biological ^c	1.9	1.9	0.0	1.7
Chemical engineer	0.0	4.0	4.3	4.0

^aIncludes those critical occupations identified in EPA's Superfund work force planning project, except for administrative and clerical, which were not defined well enough to facilitate rate comparisons. Occupations are listed in the order of criticality.

^bRates were generally higher for those employees in these occupations who spent over 40 percent of their time on Superfund.

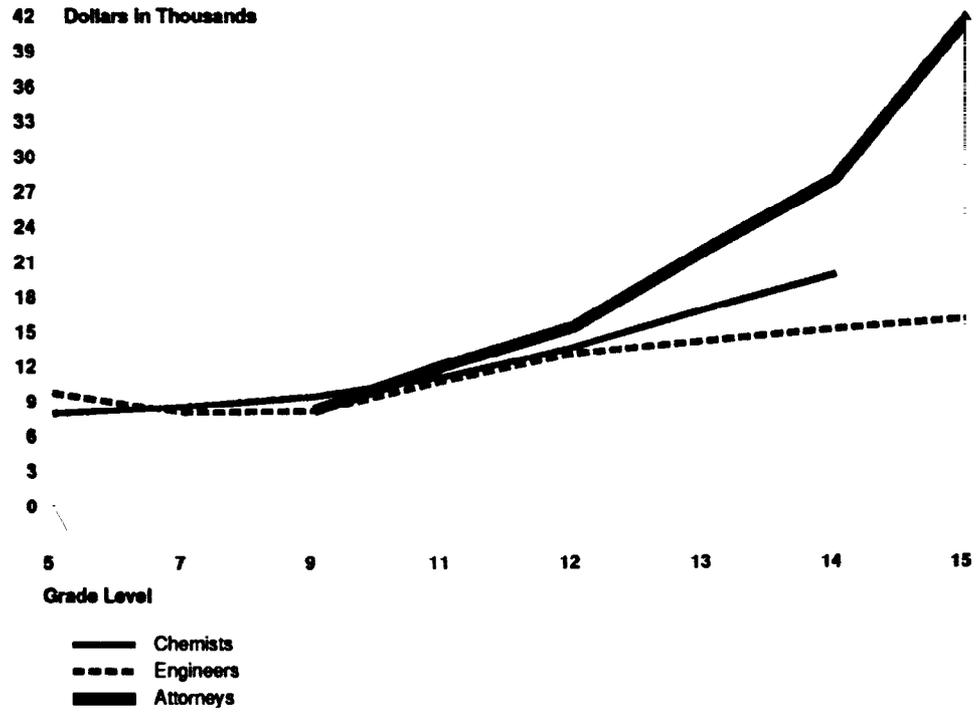
^cIncludes Toxicologist.

Source: GAO from EPA computer data and the Office of Personnel Management.

Reasons 117 Former Superfund Employees Rated
for Leaving Superfund to Take Other Jobs

<u>Reasons</u>	<u>Percentage of former employee respondents</u>		<u>Both rating reason as major and definitely stayed had conditions changed to satisfaction</u>
	<u>Major</u>	<u>Minor</u>	
More advancement opportunities	67	16	28
Regional management	28	19	14
Increase in salary	40	23	13
Poor use of their technical skills	23	26	13
Disillusioned with clean-up progress	23	24	11
Problems with immediate supervisor	17	16	9
Change in work location	21	13	6
Improved physical work environment	17	20	6
Poor administrative or clerical support	19	22	5
Excessive work load	19	12	4
Program guidance from headquarters	19	19	4
Too much paperwork	16	22	4
Too many reviews	24	18	3
Better fringe benefits	7	19	3
Less out-of-town travel	4	6	3
Career change	11	9	2
Avoid exposure to hazardous substances	0	3	0

**Annual Pay Comparability Gap for
Selected Federal Employees,
March 1986**



Note: Grade 9 is the entry level for attorneys. Private-sector pay data was not available for chemists to make comparisons beyond grade 14.

Current Employees' Training Needs by Superfund Tasks

<u>Tasks</u>	<u>Percentage of technical employees</u>	
	<u>Working on task</u>	<u>Requiring training</u>
Remedial design	41	29
Remedial action	45	27
Contracts management	66	25
Negotiations and settlements	54	22
Legal case development	45	21
Cost recovery	41	20
Remedial investigations and feasibility studies	50	18
State programs and liaison	49	18
Oversight of responsible parties	45	17
Administrative orders	48	16
Identification of responsible parties	44	16
On-scene monitoring and oversight	33	15
Removal actions	30	13
Removal investigations	28	11
Site inspection	30	9
Federal facilities oversight	20	9
Legal consultation	30	8
Preliminary assessment	29	8