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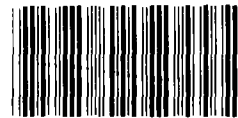
GAO

Report to the Congress

October 1987

SUPERFUND

Improvements Needed in Work Force Management



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United States
General Accounting Office
Washington, D.C. 20548

Comptroller General
of the United States

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To the President of the Senate and the
Speaker of the House of Representatives

The Superfund Amendments and Reauthorization Act of 1986 requires us to perform six reviews of various aspects of the Superfund program and related issues. This report was mandated by section 118(d) of the act. As required by that section, this report discusses

- the type and extent of skilled shortages in the Superfund program,
- the extent to which skilled personnel of federal and state governments are leaving for positions in the private sector,
- pay differentials between the public and private sectors for skilled positions in the Superfund program,
- the success of Department of Defense and Office of Personnel Management programs in retaining skilled personnel, and
- the types of training required to improve employee skills in carrying out the Superfund program.

Copies of this report are being sent to appropriate House and Senate committees; the Administrator, Environmental Protection Agency; the Director, Office of Management and Budget; and other interested parties. We will also make copies available to others on request.

This report was prepared under the direction of Hugh J. Wessinger, Senior Associate Director, Resources, Community, and Economic Development Division. Other major contributors are listed in appendix V.

Charles A. Bowsher
Comptroller General
of the United States

Executive Summary

Purpose

The Environmental Protection Agency's (EPA) Superfund program faces the task of cleaning up perhaps thousands of hazardous waste sites. To do so, EPA will need the services of various skilled personnel. Concerned that EPA faces a shortage of skilled staff, the Congress directed GAO to study the types and extent of skilled personnel shortages in EPA's Superfund program, employee turnover, pay differentials with the private sector, and training.

Background

The Superfund program enacted in 1980 provided EPA with \$1.6 billion to remove hazardous substances, clean up contaminated land or groundwater, or initiate legal action to secure cleanup or cost recovery from responsible parties. The 1986 amendments provided an additional \$8.5 billion.

In fiscal year 1986, EPA used over 3,800 people, working the full-time equivalent of 1,640 employees, on Superfund. Over one-half of them were engineers, scientists, lawyers, and other technical specialists. In conducting its study, GAO surveyed about 700 current and former employees in these occupations and interviewed Superfund managers. (See ch. 1.)

Results in Brief

According to GAO's survey, Superfund employees believed that the program was understaffed by as much as 600 full-time employees in early 1987. These employees and the program managers GAO interviewed cited chemists, hydrologists, attorneys, and toxicologists as the skills most in demand. Staffing increases for fiscal year 1987, if fully used, should be sufficient to alleviate these perceived shortages. Nevertheless, EPA will need 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 in fiscal years 1984 and 1985, more than doubled to surpass federal rates in fiscal year 1986. While advancement opportunity was the most significant reason employees left, EPA is taking 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. While EPA is considering various ways to improve

Superfund employee compensation, GAO has consistently opposed separate pay systems for special groups of federal employees because they create pay inequities within the government.

GAO and EPA surveys both showed that Superfund employees believed that they need more training. EPA has developed plans and drafted policies that should, if fully implemented, provide employees with the needed training.

Principal Findings

Staffing and Skill Shortages

GAO's survey showed that about 80 percent of Superfund employees worked in units they believed were understaffed in early 1987. Employees perceived that the program was understaffed by 36 percent, or from 375 to 600 positions. Many employees also reported that they had problems obtaining the services of chemists, hydrologists, and toxicologists, which delayed or hindered the quality of Superfund activities. For example, at EPA's San Francisco region, one official stated that shortages resulted in slippage in site activities and less time for reviewing project proposals.

While concurring that shortages no doubt existed in early 1987, EPA program officials noted that staffing has since been increased considerably. Compared with fiscal year 1986, the Congress authorized EPA to use an additional 773 full-time positions in Superfund for fiscal year 1987. If fully used, these positions should have been sufficient to alleviate perceived shortages. However, because of the short time EPA had available to fill these additional positions, EPA expects that about 240 of them will go unused during fiscal year 1987.

EPA's Superfund work force planning should use the most objective means practical to determine staffing needs. EPA, however, relies on managers' judgments of the time required to carry out various activities to estimate Superfund's staffing needs. Also, historical data on the time employees spent on various Superfund activities are not routinely collected to help support these estimates.

While EPA has the data to evaluate productivity, it lacks productivity measures to gauge how efficiently it is using its Superfund staff. The regional differences that GAO observed in the work force size and skill

mixes, and method of operation used to carry out Superfund activities, make it important that EPA have a means of comparing performance. (See ch. 2.)

Employee Turnover

The rate at which EPA employees left Superfund was below the rate for all federal employees in fiscal years 1984 and 1985. However, the Superfund rate more than doubled between fiscal years 1985 and 1986, from 2.9 percent to 7.2 percent, to surpass the federal rate.

Several critical Superfund occupations had quit rates two to six times higher than the average for similar federal jobs. For example, the Superfund hydrologist quit rate of 14 percent was over six times higher than that for all federal hydrologists. Most EPA managers GAO interviewed expected the private sector to lure even more employees away from Superfund. GAO's survey showed that over one-third of Superfund employees planned to look for other jobs in 1987.

Sixty-seven percent of the former employees GAO surveyed rated more advancement opportunities as a major reason they left Superfund for other jobs. Dissatisfaction with regional management, salaries, and use of employees' technical skills and disillusionment with clean-up progress were other reasons employees left.

In October 1986 EPA revised its policy to make some Superfund employees, such as project managers, eligible for higher salary grades. EPA has also designed separate career paths to enable chemists and general physical scientists to obtain higher grades without having to move into management positions. (See ch. 3.)

Pay Differentials and Employee Retention

According to the government's pay survey, 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. Federal pay was increased 3 percent in January 1987. Using private-sector pay data from this survey, GAO found that the pay for federal attorneys, chemists, and engineers—three key Superfund occupations—trailed private-sector pay by \$7,800 to \$41,300, or 25 to 68 percent. The former Superfund employees GAO surveyed who took private-sector jobs reported receiving pay increases that averaged \$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 employee recruitment or retention. All federal engineers, including those in Superfund, receive special rates.

EPA is now considering recommendations from an internal study to improve Superfund compensation through bonuses and added fringe benefits. As a general rule, GAO has opposed separate pay systems for specific employee groups, suggesting instead that changes be directed at resolving perceived inequities in the federal pay system. GAO's approach minimizes pay inequities within the government and precludes providing one agency with a competitive advantage over others in recruiting the same employees. (See ch. 4.)

Superfund Training

According to GAO's survey, about 60 percent of current Superfund employees believe that they need more training to carry out Superfund activities. Nearly a quarter believed that they needed more training in each of the following areas: clean-up design and action, cost recovery, and legal case development. An EPA survey completed in January 1987 found a similar need for training. EPA has developed a 2-year plan and drafted policies that should, if fully implemented, provide employees with needed training. (See ch. 5.)

Recommendations

GAO recommends that EPA (1) examine the costs and benefits of using more objective techniques to determine Superfund staffing requirements, (2) use productivity measures to gauge the appropriateness of Superfund's work force size and skill mix, and (3) implement its plans and proposed policies for improving Superfund training. (See chs. 2 and 5.)

Agency Comments

Regarding planned improvements in Superfund training, EPA stated that they were scheduled for full implementation in fiscal year 1988. EPA, however, disagreed with GAO's other two recommendations on the grounds that forecasting techniques must be project-specific and that productivity measures were impractical, considering the uniqueness of each Superfund clean-up site. (See app. IV.) GAO continues to believe that EPA can improve its techniques for determining staffing levels and that the uniqueness of clean-up sites presents a challenge but not a barrier to using productivity measures. (See chs. 2 and 5.)

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Abbreviations

| | |
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| CBO | Congressional Budget Office |
| DOD | Department of Defense |
| EPA | Environmental Protection Agency |
| FTEs | full-time equivalents |
| GAO | General Accounting Office |
| KSAs | knowledge, skills, and abilities |
| OECM | Office of Enforcement and Compliance Monitoring |
| OJT | on-the-job training |
| OMB | Office of Management and Budget |
| OPM | Office of Personnel Management |
| OPPE | Office of Policy, Planning and Evaluation |
| OSWER | Office of Solid Waste and Emergency Response |
| RCED | Resources, Community, and Economic Development Division |
| SARA | Superfund Amendments and Reauthorization Act of 1986 |

The Superfund Program

Thousands of waste disposal sites have been contaminated with hazardous substances that threaten the health and welfare of the nation and its environment. In enacting the Superfund program in 1980, the Congress gave the Environmental Protection Agency (EPA) a broad mandate to clean up hazardous sites and to respond to emergency releases of hazardous substances. But in recent years, the public, the Congress, we, and others have expressed concern over EPA's progress in cleaning up sites. While the Congress has taken actions to expand EPA's clean-up authority and its resources, this has raised new concerns over whether EPA has enough staff with the skills needed to carry out an expanded program. This report discusses EPA's staffing and skill needs for the Superfund program, including employee turnover and training needs.

EPA's Superfund program was authorized by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980. This act provided EPA with a \$1.6 billion fund, which was to be accumulated from taxes on petroleum and certain chemicals and from federal appropriations, to carry out clean-up activities. While the program's initial funding authority expired at the end of fiscal year 1985, the Superfund Amendments and Reauthorization Act of 1986 (SARA), which became effective October 17, 1986, extended the program another 5 years, through October 1991, and provided EPA with an additional \$8.5 billion in funds to carry out the Superfund program.

SARA charges EPA with sweeping new responsibilities, some of which are identified below. It requires EPA to move toward alternative technologies and permanent solutions to site contamination and sets mandatory schedules. The involvement of state and local governments in site cleanup is increased, as well as public participation in the remedial process. It broadens EPA's authority for cleaning up hazardous substances, establishes enforcement procedures for negotiating settlements with responsible parties, and provides for a larger EPA role in clean-up actions at federal facilities. In addition, EPA must provide additional resources to support contracting, information, and personnel needs.

With the monies made available by the Superfund program, EPA can act to remove hazardous substances. These removal actions are generally short-term, immediate responses taken to address the uncontrolled release of hazardous substances into the air, land, or water. Beyond the immediate removal of hazardous substances, EPA also can initiate long-term and more permanent remedies (remedial actions) to clean up any contaminated land or groundwater.

Instead of using Superfund monies to clean up sites, EPA can also use its enforcement authorities to (1) issue an administrative order or pursue judicial action to require responsible parties to clean up priority sites or (2) negotiate a settlement under which responsible parties agree, possibly with court approval, to undertake all or part of the site clean-up activities, with Superfund monies covering the remaining clean-up costs. Where EPA deems it appropriate to use Superfund monies to clean up sites, EPA can also use its enforcement authority to seek judicial relief to recover from responsible parties any Superfund monies used to clean up sites.

EPA's implementing policies and procedures are contained in the National Contingency Plan. The plan, which is subject to revision on the basis of SARA, delineates (1) federal and state response authority for abandoned or uncontrolled hazardous waste sites and (2) methods and criteria for when, and to what extent, a removal or remedial response should be undertaken. In addition, the plan limits long-term, permanent clean-up actions to sites included on the National Priorities List. This list designates the nation's worst known sites contaminated with hazardous substances. The list has grown from 115 sites in 1981 to 951 sites¹ as of January 1987.

Program Administration and Staffing

The Superfund program is primarily administered by EPA's Office of Solid Waste and Emergency Response (OSWER), Office of Enforcement and Compliance Monitoring (OECM), and EPA's 10 regional offices. OSWER is responsible for providing agencywide policy, guidance, and direction for EPA's solid waste and emergency response programs. Within OSWER the Office of Emergency and Remedial Response is responsible for managing Superfund's removal and remedial activities; the Office of Waste Programs Enforcement is responsible for compliance and enforcement under Superfund, which is carried out in conjunction with OECM's legal enforcement activities.

OSWER's specific responsibilities include developing program policies and guidance for emergency responses and for removal, remedial, and enforcement actions; developing hazardous waste standards and regulations; managing removal and remedial contracts;² managing and maintaining the National Priorities List; ensuring compliance with applicable

¹Includes 248 sites proposed for inclusion on the list

²Much of EPA's Superfund work is carried out by private contractors.

laws and regulations; developing budget submissions, annual work plans, and work load models; and developing and providing training in support of removal, remedial, and enforcement activities.

OECM provides direction and review of civil and criminal enforcement activities under Superfund and refers cases to the Department of Justice. It provides direction and guidance to OSWER and the regions on case development, administrative actions, and compliance. To support its activities, the office develops budget submissions, conducts management and work load analyses, and develops and implements training programs for regional attorneys and support personnel.

Besides OSWER and OECM, the Office of Administration and Resources Management is responsible for providing administrative and financial management support and the Office of Research and Development conducts and applies research to the cleanup of Superfund sites.

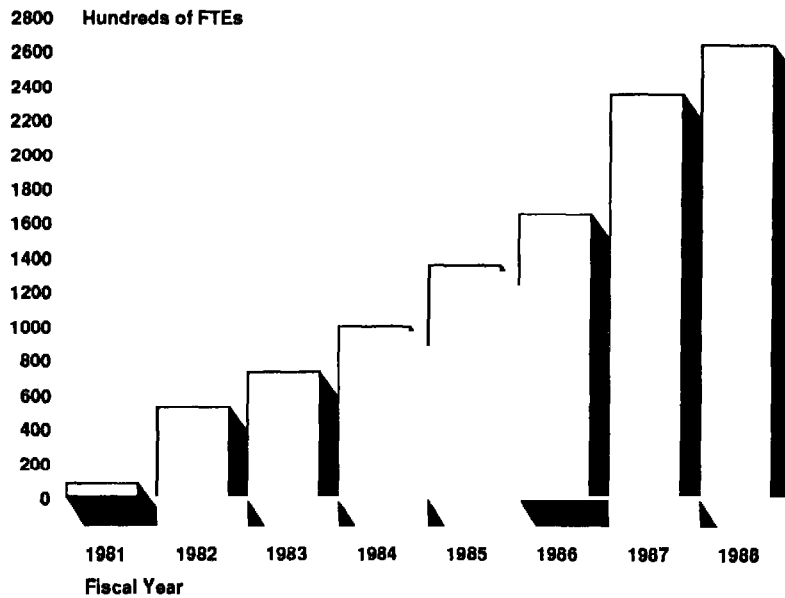
At the local level, primary responsibility for carrying out Superfund's removal, remedial, and enforcement actions rests with EPA's 10 regional offices. In carrying out these actions, the regional offices

- review and investigate reports of hazardous substance releases, provide on-scene monitoring of the cleanup of major releases, and—when necessary—arrange for and supervise the removal of such substances;
- arrange for preliminary assessments and site inspection of hazardous waste sites and propose new sites for the National Priorities List;
- initiate and oversee remedial investigations/feasibility studies, remedial designs, and remedial actions;
- identify responsible parties and secure their action in site cleanups through negotiation, administrative orders, and consent decrees obtained from the courts;
- oversee responsible party actions to ensure compliance with administrative and judicial orders;
- provide technical documentation and support for cost recovery and, for smaller cases, secure cost recovery through administrative procedures; and
- provide community assistance grants to community organizations for reviewing potential site remedies.

Staffing levels for the Superfund program, generally referred to in terms of full-time equivalents (FTEs), have grown considerably since program inception. (An FTE is a personnel position representing the equivalent of

one full-time person for 1 year.) Figure 1.1 shows the growth in FTEs from 1981 through 1988.

Figure 1.1: Growth in FTEs in the Superfund Program



Note 1: For fiscal year 1986, the Congress authorized 1,816 FTEs but EPA used only 1,643.

Note 2: For fiscal year 1987, EPA set aside 68 of the 2,416 FTEs authorized for Superfund to implement Title III of SARA, which is a free-standing title (not a part of Superfund) known as the Emergency Planning and Community Right to Know Act of 1986.

Note 3: Fiscal year 1988 data reflect the Superfund FTEs requested in EPA's budget.

About 63 percent (1,483) of the 2,348 planned Superfund FTEs for fiscal year 1987 were programmed for OSWER, which distributes its FTEs between headquarters and regional offices, as do the other programming units. EPA's regional offices will use about 1,550 (66 percent) of the 2,348 FTEs on the basis of the FTEs allocated to them by OSWER and other Superfund program units.

In fiscal year 1986, more than 3,800 EPA employees from over 120 occupations worked on the Superfund program. Time charged by employees to the program equaled about 1,640 FTEs. Table 1.1 shows the number of

EPA employees and FTEs who were employed by the Superfund program for fiscal year 1986 for various occupational areas.

Table 1.1: Occupational Distribution of Superfund Employees and FTEs, Fiscal Year 1986

| Occupational area | Number of | | Percentage of total FTEs |
|--------------------------------|--------------|--------------|--------------------------|
| | Employees | FTEs | |
| 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 |
| Total | 2,156 | 1,116 | 68 |
| Other | | | |
| Secretary and clerk typist | 492 | 193 | 12 |
| Accounting and budgeting | 357 | 87 | 5 |
| Miscellaneous | 830 | 247 | 15 |
| Total | 3,835 | 1,643 | 100 |

Besides its own staff, EPA works with states and other federal agencies to clean up hazardous waste sites. The 1980 act requires that states participate in any remedial clean-up actions within their boundaries, either cooperating with EPA on federal-led projects or taking the lead on the projects themselves, and sharing in the clean-up costs. EPA also works with other federal agencies to clean up contaminated sites at government-owned facilities. However, EPA may not use Superfund monies for long-term or permanent corrective actions at federal facilities, which must instead be funded by agency appropriations.

For the most part, however, EPA uses private contractors to carry out site clean-up activities, perform site assessments and inspections, and provide technical and enforcement support, investigation work, and on-scene monitoring of response activities.

Objectives, Scope, and Methodology

SARA requires us to perform six reviews of various aspects of the Superfund program and related issues. This report was mandated by section 118(d) of the act. This section requires us to study the problem of shortages of skilled personnel in EPA to carry out response actions under Superfund. Specifically, we were required to study

- the types of skilled personnel needed for response actions for which there are shortages in EPA, and the extent of such shortages;
- the pay differential between the public and private sectors for the skilled positions involved in response actions;
- the extent to which skilled personnel of federal and state governments involved in response actions are leaving their positions for employment in the private sector;
- the success of Department of Defense (DOD) and Office of Personnel Management (OPM) programs in retaining skilled personnel; and
- the types of training required to improve skills of employees carrying out response actions.

Staffing and Skill Shortages

We conducted a mail survey to obtain the perceptions of current Superfund employees on staffing, skill needs, and work load. We used computer data we requested from EPA's Superfund financial management system and its personnel data system to identify current employees in the technical occupations shown in table 1.1 who worked regularly (an average of 20 percent of their time or more) in the Superfund program as of September 30, 1986. Of the 1,374 current technical employees identified in this way, we took a 50-percent statistical sample and sent questionnaires to 687 employees at all levels—management and staff.

Of the 687 employees sent a questionnaire, we received replies from 577, but only considered 526 of these responses (a 77-percent response rate) valid, for a variety of reasons. For example, some respondents had since left the Superfund program. The questionnaire we used and a summary of employee responses are contained in appendix I.

Sampling errors for our current employee questionnaire were computed at the 95-percent confidence level. For categorical-level questions asked of the entire sample,¹ sampling errors are no more than 3 percent. For categorical questions answered by at least 175 respondents, sampling errors are no more than 5 percent. Where fewer than 175 respondents answered a question, such as the questions we included on employee training needs, sampling errors ranged between 5 percent and 7.5 percent.

¹Categorical-level questions are those for which the respondent selects a category from a list offered and checks the box for that response.

In addition to sending the questionnaires, we interviewed 55 program managers at EPA headquarters and at 6 of EPA's 10 regional offices to obtain their views on staffing and skill shortages. We also reviewed EPA's budget and work force planning and management systems and interviewed EPA program and budget officials concerning the operation of these systems in determining staffing and skill needs for Superfund. Our work in this area was generally limited to OSWER because that office has primary responsibility for the technical implementation of the Superfund program and accounts for about 60 percent of the staff resources programmed for Superfund. We also monitored and reviewed the results of EPA's Superfund work force planning project, which was completed in January 1987.

Pay Differential Between Public and Private Sector

We reviewed and analyzed the 1986 Annual Report of the President's Pay Agent on "Comparability of the Federal Statutory Pay Systems With Private Enterprise Pay Rates" and the Department of Labor, Bureau of Labor Statistics' March 1986 "National Survey of Professional, Administrative, Technical, and Clerical Pay," on which the pay agent's study is based. In addition, we reviewed prior reports and testimony, including our own, on federal pay issues.

We also surveyed, by mail questionnaire, former Superfund employees to determine the increases in pay, if any, they received upon leaving the Superfund program. Using the computer data we requested from EPA, we identified 375 former employees who had resigned or transferred to another government agency from the Superfund program during fiscal years 1985 and 1986. From this group, we identified 156 former employees who were in the same technical occupations as the current employees we surveyed (see table 1.1) and who had worked 20 percent or more of their time on Superfund. In addition, we sent questionnaires to 63 current EPA employees who had worked on Superfund during fiscal year 1985 but not during fiscal year 1986. We also sent our former-employee questionnaire to 30 people from our list of current employees who indicated that they no longer worked in the Superfund program.⁴

In all, we sent questionnaires to 249 former employees and received valid responses from 164 of them—about a 66-percent response rate. Of

⁴There may be close to 30 other employees on our current-employee list who were not selected in our 50-percent sample, who are also former Superfund employees but who were not included in this study.

the 164 responses, however, only 117 indicated that they left specifically to take another job, the remainder having left for other reasons, such as to return to school; the data presented in this report is therefore generally limited to these 117 respondents. The questionnaire we used and a summary of responses for these 117 former Superfund employees are contained in appendix II.

Employee Turnover

We used the computer data we obtained from EPA to compute turnover rates for Superfund employees who quit or transferred to other government agencies. For comparative purposes, we also obtained turnover data on federal employees from OPM. We used our former-employee questionnaire to ascertain employee reasons for leaving the Superfund program and to determine the extent to which these former employees would have stayed in the program if these factors had changed to their satisfaction.

We interviewed 55 program managers at EPA headquarters and the 6 regions to determine the extent that they perceived employee turnover to be a problem, the effects of this turnover on the program, and the likelihood of future employee turnover. To obtain additional data on the likelihood of future employee turnover, we used our current-employee questionnaire to ascertain the extent to which current employees were satisfied with various job-related factors, whether they had looked for or planned to look for jobs outside the Superfund program, and their reasons for looking elsewhere.

In addition, we obtained data from 12 states on employee turnover in state Superfund programs. We also interviewed officials from these states to determine the extent to which employee turnover had been a problem in the administration of state Superfund programs. The results of this are included in appendix III.

DOD and OPM Employee Retention Programs

To obtain data on the success of these programs, we reviewed our prior reports on OPM's special pay rates and DOD's reenlistment bonuses. In addition, we reviewed OPM reports on a Department of the Navy personnel management demonstration project at research laboratories in China Lake and San Diego, California.

Training Needs

We used our questionnaire to current Superfund employees to identify their self-assessed training needs for carrying out response actions and

to assess their satisfaction with the training received. In addition, we reviewed EPA records and documents and interviewed program and training officials at headquarters and in selected regions regarding Superfund training needs and activities and ongoing and proposed changes to OSWER's training program.

Scope and Standards of Our Review

We limited our study to employees in the technical occupations identified in table 1.1 because they would be most directly involved in carrying out response actions under Superfund. Moreover, we relied to a large extent on employee perceptions of staffing, skill, and training needs because of the limited time in which we had to perform our study. Our test of the accuracy of the computer data provided by EPA was limited to eliminating duplicative records and correcting the data for obvious inconsistencies.

Our review was conducted at EPA headquarters in Washington, D.C., and EPA regional offices in Atlanta, Boston, Chicago, New York, Philadelphia, and San Francisco. We also reviewed the experiences of the states of California, Florida, Illinois, Indiana, Massachusetts, Michigan, Minnesota, New Jersey, New York, Ohio, Pennsylvania, and Wisconsin. These EPA regions and states account for over 60 percent of the hazardous waste sites on the National Priorities List, and were selected on this basis.

Our review was conducted from September 1986 to March 1987. Our questionnaires were mailed in January 1987; only responses received by March 17, 1987, were considered in preparing this report. Our review included a limited check of EPA's internal controls as they relate to staffing requirements and employee training. Our review was performed in accordance with generally accepted government auditing standards.

Better Work Force Planning Is Needed to Support Superfund's Staffing and Skill Needs

The Superfund program was understaffed by 36 percent in early 1987, according to our survey of Superfund's technical employees. This equates to a need for 375 to 600 additional employees (FTEs). Employees had the most need for the services of hydrologists, toxicologists, and chemists, and most employees had problems obtaining these services. Also at the six EPA regional offices in our review, program managers generally reported staffing shortages and a need for more project managers, on-scene coordinators, hydrologists, hydrogeologists, and toxicologists. Employees and program managers reported that these staffing and skill shortages delayed and impaired the quality of Superfund activities.

Compared with fiscal year 1986, EPA has an additional 773 FTEs to use in the program for fiscal year 1987. If fully used, these additional FTEs should be sufficient to alleviate the shortages reported by employees and program managers. However, EPA expects that it will not be able to use about 240 of the 773 additional FTEs during fiscal year 1987 because of the short time it had available to fill all these positions. Notwithstanding this, EPA needs to improve work force planning to better support that Superfund's staffing requirements and work force skill mix are appropriate to carry out planned activities.

Effective work force planning should provide for using the most objective means practical for determining staffing and skill needs and for ensuring the efficient use of those resources. However, EPA currently relies on technical (judgmental) estimates of the staff time required to carry out various activities (tasks) in establishing its Superfund staffing requirements.

While the use of technical (judgmental) estimates is an acceptable practice when more objective techniques are not practical, the staff time employees actually require to perform a specific activity could vary from these estimates, thereby resulting in over- or underestimates in staffing needs. EPA would be in a better position to estimate its staffing requirements if it used historical data, such as employee time records, to help validate the reasonableness of its staffing estimates. Similarly, incorporating another unused technique—productivity measures—would help EPA gauge the appropriateness of Superfund's work force size and skill mix.

EPA also does not have specific criteria to translate Superfund's staffing allocations into skill needs. These decisions are left up to the program divisions and EPA's regional offices and, not surprisingly, differences

exist among EPA's regions in the skill mixes used to carry out Superfund. EPA has recently completed a Superfund work force planning project that identifies current and future critical occupations and the knowledge, skills, and abilities needed to administer the program. This project also identified the skill occupations that need to be recruited for by each EPA regional office. The project's results should help EPA staff Superfund with appropriately skilled people.

Perceptions of Staffing and Skill Shortages in the Superfund Program

According to our questionnaire survey of current technical employees who spent at least 20 percent of their time on the Superfund program and our interviews of program managers, shortages exist in the numbers of staff and the staff skills EPA needs to implement the Superfund program. These shortages reportedly increase the work load of the existing staff and impair the timeliness and quality of Superfund activities.

Employee Perceptions of Shortages

According to our survey, 82 percent of Superfund's current technical employees believe that they work in units that "probably" or "definitely" needed additional employees. In contrast, only 7 percent of Superfund's current employees believe they work in units that probably or definitely do not need additional staff. The remaining 11 percent were uncertain or had no basis to judge their unit's need for additional staff.

Our survey also showed that Superfund's current technical employees worked in units that had an average of 13.4 employees (FTEs) but reportedly needed an average of 4.9 additional employees, or an increase of about 36 percent,¹ during the January-March 1987 time period in which survey responses were obtained. Using these data, we projected that 375 to 600 additional employees (FTEs) were needed in the Superfund program in early 1987 to meet the additional staffing needs identified by Superfund's current technical employees.² The basis for our projection follows.

¹This 36-percent average increase has a sampling error at the 95-percent confidence level of less than 3 percent, which means that needed staffing increases could be as little as 33 percent or as much as 39 percent. In computing the average, we assigned a value of zero to those respondents who reported "uncertain, probably no, or definitely no" to the question on whether additional employees are needed.

²At the 95-percent confidence level used for our projection, the lower projection of 375 could range between 348 and 402 and the upper projection of 600 could range between 558 and 642.

The projection of 375 reflects the fact that the technical/scientific employees from which we drew our sample represent a 1,374-employee universe that accounts for about 63 percent of the 1,643 FTEs used in the Superfund program in fiscal year 1986 (1,643 x .63 x .36). However, respondents were not asked to limit the additional staffing needs of their units to just the technical/scientific staff. Therefore, the 36-percent increase could represent the unit's need for all types of staff, which means that, overall, as many as 600 additional employees could have been needed (1,643 x .36) in the Superfund program.

In addition to staffing shortages, our survey results showed that 60 percent of current employees judge their work load to be too heavy or somewhat heavy, in contrast to 8 percent who consider their work load somewhat or much too light. About 44 percent of current employees also believed that they did not have sufficient time to complete their work. However, a similar percentage believed that sufficient time was available.

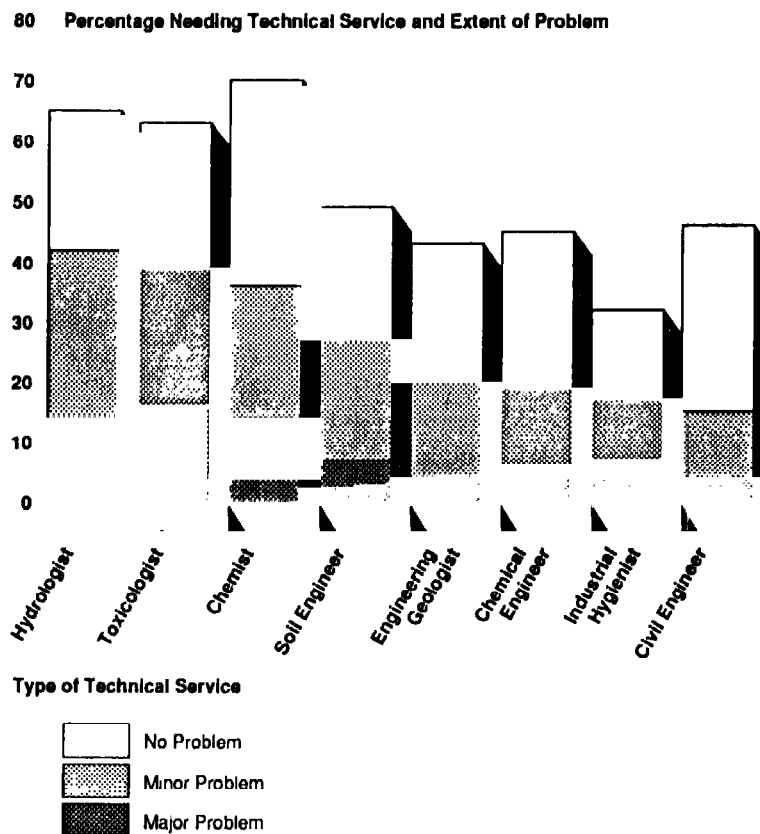
Our survey also showed that 64 percent of current employees had major or minor problems (36 percent reported major problems) obtaining the services of one or more technical experts. Figure 2.1 shows current employee needs for various technical experts, and the extent to which employees had a problem obtaining the services of such experts within Superfund, from other EPA programs, or from outside sources such as contractors.

According to our survey results, about half of the current employees had to delay their work at least once for a week or more since January 1, 1986, because needed specialists were not available. About one-quarter had delayed their work at least five times for a week or more. In addition, 39 percent of current employees had a problem since January 1986 in assuring the quality of the Superfund tasks on which they worked because of the lack of skilled personnel.

Views of Superfund Program Managers

Staffing shortages existed to some degree at each of the six regions in our review, according to program managers. Managers in Boston, Philadelphia, New York, and San Francisco expressed the greatest need for more staff. Shortages in Philadelphia and New York were attributable, in part, to vacancies in authorized positions. At the Chicago Regional Office, program managers were split on whether more staff was needed; in Atlanta, only two of the six program managers interviewed indicated a need for more staff.

Figure 2.1: Employee Experience in Obtaining Technical Services



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

The program managers we interviewed at EPA headquarters generally believed staffing would be sufficient provided staffing increases they were promised by management for fiscal year 1987 materialized.

Skill Needs

Program managers having a need for more staff indicated that they needed more project managers to handle clean-up and enforcement activities at hazardous waste sites and more on-scene coordinators to handle emergency spills and to remove wastes from hazardous waste sites. In terms of the skills needed to either fill or support the activities

of these positions, program managers reported a need for more attorneys, chemists, hydrologists, hydrogeologists, toxicologists, and administrative/clerical support. To a lesser extent, program managers indicated they also needed environmental scientists and engineers, civil and chemical engineers, geologists, contract administrators, and civil investigators.

In addition to these needs, program managers also reported they needed more supervisors. At the Chicago and San Francisco Regional Offices, 9 of the 19 program managers felt that there were not enough supervisors to direct and oversee EPA staff. In each of these regions, supervisors were responsible for 8-10 staff. While there is no specific criterion for the optimal number of staff for which supervisors should be responsible, supervisors at the Atlanta office were responsible for 7-8 staff; officials there considered this number appropriate.

Of the remaining three regions, only Philadelphia indicated a need for more supervisors. Program officials there saw the span of control in the removal and remedial areas as currently too broad for effective management. As an example, they cited the emergency response section chief, who has 21 people under his direct supervision.

Effects of Perceived Shortages

According to program managers, staffing and skill shortages result in delays in carrying out response actions, limited oversight of contractors and state activities, and dependence on contractors for assistance. Some examples follow:

- In San Francisco, project manager shortages caused site activity schedules to slip. These shortages forced existing staff to work overtime and provided less time to review project proposals. As a result, some reviews are not extensive, while others are completed late.
- In Chicago, attorney shortages created delays in completing legal work and resulted in less than the desired amount of time spent on enforcement case development.
- In New York, project managers lacked an understanding of contractor work and site conditions because of a shortage of hydrogeologists and toxicologists.
- In Philadelphia, record-keeping is poor and there is no assurance that contract terms are being met because of inadequate staff support in contract administration.

Recent Increases in Superfund Staffing Should Help Relieve Perceived Shortages

EPA concurs that staffing shortages, such as those perceived by current employees and program managers, existed in early 1987. However, EPA believes that the additional 773 FTEs it has available for fiscal year 1987 will be sufficient to alleviate any shortages.

On paper it would appear that this increase would be more than sufficient to alleviate the 375 to 600 additional employees that were needed on the basis of current employee perceptions of shortages. However, EPA was planning to use some of these additional FTEs to increase its volume of work products or to handle additional work requirements imposed by SARA. In addition, EPA expects that about 240 of these additional FTEs will go unused during fiscal year 1987.

OSWER officials, including the Deputy Assistant Administrator, were not surprised that employees and program managers perceived a Superfund staffing shortage in early 1987. During the period the program was awaiting reauthorization,³ they explained that the volume of work continued to grow without any commensurate increase in staffing. Under these circumstances, OSWER officials concurred that a staffing shortage no doubt existed in early 1987.

In commenting on a draft of this report, the Acting Assistant Administrator, Office of Policy, Planning and Evaluation (OPPE), stated that the Administrator, while awaiting reauthorization, had implemented a contingency plan on August 14, 1985, to conserve dwindling Superfund resources and retain and protect the program's staff. (See app. IV.) As a part of this plan, a hiring freeze was put into effect for 8 months from August 1985 through April 1986. According to the Acting Assistant Administrator, EPA was moving away from the constraints of this plan at the time of our employee survey in early 1987 in order to regain program momentum. He stated that at that time, the regions were indeed understaffed, having lapsed 173 FTEs in fiscal year 1986, because of the overall uncertainty concerning reauthorization.

While EPA recognizes that a staffing shortage no doubt existed in early 1987, OSWER officials pointed out that Superfund staffing levels have since been increased considerably. EPA's appropriation for fiscal year 1987—which was enacted on October 30, 1986, subsequent to SARA—provided 2,416 FTEs for the Superfund program, 773 more than the 1,643 FTEs that were used in the Superfund program in fiscal year 1986.

³Superfund's taxing authority lapsed on September 30, 1985, and it was not reauthorized until October 17, 1986.

This included an additional authorization of 600 FTEs, compared with the 1,816 FTEs that had been authorized for the program for fiscal year 1986.⁴ However, due to the normal budgeting and position allocation processes, these new resources were unavailable to EPA and its regional offices until February 1987, which was subsequent to the results of most of our surveys and interviews on staffing shortages.

Concerning the intended use of the additional 773 FTEs provided for fiscal year 1987 (see table 2.1), we found that EPA was planning to use some of them to increase its work products or to meet the additional work requirements imposed by SARA. For example, of the 119 additional FTEs OSWER was planning to use in hazardous spills and response, 76 FTEs were to be used by EPA's regional offices. With these additional FTEs, the regions were expected to use

- 37 FTEs to increase remedial activities, including the volume of site inspections, remedial investigations and feasibility studies, remedial designs, and remedial actions;
- 15 FTEs to increase removal activities, especially the number of removal actions;
- 14 FTEs to increase staffing for response support; and
- 5 FTEs to implement the new assistance grants SARA authorized.

Concerning its ability to use the additional FTEs authorized for fiscal year 1987, EPA was projecting as of March 31, 1987, that it might not be able to use possibly as many as 473 of these additional 773 during the fiscal year. According to OPPE's Acting Assistant Administrator, these new resources were unavailable to EPA or its regions until February 1987, or almost halfway through the fiscal year. In anticipation of the large work load and hiring increase facing EPA, he stated, EPA established a Superfund recruitment task force to develop a strategy for hiring personnel to use these additional FTEs as well as those requested in its fiscal year 1988 budget. While this effort resulted in many new employees being hired, the full impact was not recognized in EPA's March 31, 1987, projection.

As of July 31, 1987, EPA was projecting that it would use 535 of the additional 773 FTEs during fiscal year 1987, lapsing possibly as many as 238 FTEs. However, according to OPPE's Acting Assistant Administrator,

⁴EPA had not requested an increase in FTEs when it submitted its fiscal year 1987 budget to the Congress in early 1986 since funding authority for the program had already lapsed and the program had not yet been reauthorized.

EPA now expects to have 2,500 Superfund employees on board by the end of fiscal year 1987 as a result of EPA's recruitment efforts. Moreover, he stated that if the current pace of hiring continues, EPA will be very close to full utilization of its fiscal year 1988 request for FTEs.

EPA's fiscal year 1988 Superfund budget request is for 2,716 FTEs, or 300 more than what the Congress authorized for the program for fiscal year 1987. While EPA is optimistic it will be able to fully utilize these FTEs, we believe EPA is in a somewhat tenuous position with its present Superfund work force planning process to support that staffing and skill needs for the program are appropriate to carry out planned activities.

Adequacy of EPA's Superfund Work Force Planning Process

Work force planning provides a disciplined approach for determining the quantity and type of skills needed to accomplish an organization's mission and for identifying the volume and type of personnel management actions needed to obtain, develop, and maintain a quality work force. Among other things, it consists of identifying and clarifying

- tasks to be performed and work units to be produced,
- projections of organizational work load for the program or budget period,
- work and staffing standards to project aggregate work force requirements, and
- work and productivity measures to gauge the appropriateness of work force size and mix.

In the Superfund program, EPA relies largely on judgmental estimates obtained from its program managers to determine staffing requirements. Historical data—employee time records—are not collected in sufficient detail to help validate these estimates nor were productivity measures being used to help ensure the efficient use of Superfund staff resources, including regional differences we observed in skill mixes and methods of operation. Furthermore, EPA has not provided its program offices and regions with specific criteria to translate Superfund's staffing allocations into staffing positions, such as the number of project managers or types of skills that are needed.

Use of Estimates to Determine Staffing Needs

Superfund staffing requirements (FTEs) are determined annually by each participating programming organization as part of the annual budget process. Table 2.1 shows program organization staffing requirements with respect to authorized and budgeted staff resources for fiscal years

Chapter 2
Better Work Force Planning Is Needed to
Support Superfund's Staffing and Skill Needs

1986 through 1988, together with the program area in which staffing increases are to be used.

Table 2.1: Superfund Staffing Requirements, Fiscal Years 1986-88

| Program area | Fiscal year staffing requirements (FTEs) | | | | |
|---|--|-----------------|-------------------|-------------------|-------------------|
| | Actual 1986 | Authorized 1987 | Increase for 1987 | Budgeted for 1988 | Increase for 1988 |
| OSWER | | | | | |
| Spill and Response | 780 | 899 | 119 | 1,042 | 143 |
| Technical Enforcement | 404 | 583 | 179 | 653 | 70 |
| OECM | | | | | |
| Legal Enforcement | 160 | 234 | 74 | 280 | 46 |
| Technical Support | 33 | 39 | 6 | 45 | 6 |
| Office of Administration and Resources Management | 150 | 364 | 214 | 384 | 20 |
| Office of Research and Development | 58 | 86 | 28 | 86 | 0 |
| Other ^a | 58 | 143 | 85 | 143 | 0 |
| Superfund Total | 1,643 | 2,348 | 705 | 2,633 | 285 |
| Title III ^b | 0 | 68 | 68 | 83 | 15 |
| Total | 1,643 | 2,416 | 773 | 2,716 | 300 |

^aIncludes the Offices of the Inspector General; General Counsel; Water; Air and Radiation, and Policy, Planning, and Evaluation.

^bAlthough authorized by SARA, the emergency planning and community right-to-know provisions contained in title III are not a part of the Superfund program. However, until separate resources can be appropriated, EPA plans to use some of its Superfund FTEs for title III.

Within OSWER, which accounts for about 60 percent of the staff resources programmed for Superfund, projections are first made of the various work outputs to be produced—such as the number of removals—on the basis of data contained in EPA information and tracking systems. These work outputs are then multiplied by a staffing standard,⁵ which reflects the amount of staff time needed to do a specific unit of work, to determine the total FTE requirements for that work.

Although OSWER has staffing standards for major Superfund response activities, it uses technical (judgmental) estimates—essentially the opinions of its program managers—to establish and revise these standards. Judgmental estimates are also used to determine staffing needs with respect to Superfund work not currently covered by staffing standards. The use of technical estimates is an acceptable technique for determining staffing standards if more objective techniques are impractical to

⁵EPA refers to its staffing standards as pricing factors.

use.⁶ The advantages of this technique are that it is relatively inexpensive in relationship to the time it takes and may be the only technique available for certain types of jobs, such as technical projects. However, the primary disadvantage of this technique is that the time required to do a job is a judgmental estimate only, and may vary widely from the actual time that workers require.

EPA has now had several years' experience in running Superfund, and it has historical data on the time employees spend in the program as a whole and in broad program areas such as hazardous spills and response activities. However, EPA does not collect data on the time employees spend on individual work activities for which staffing standards have been developed. For example, historical data are not available on the time employees actually spent on preliminary assessments, site inspections, remedial investigation and feasibility studies, remedial designs, or remedial actions. However, if such data were available, EPA would be in a better position to use these data to help validate the reasonableness of the staffing standards it uses to determine staffing requirements for these and other activities.

OSWER recognizes the importance of having historical data available for use in validating its staffing standards. For example, OSWER contracted with Booz, Allen and Hamilton, Inc., Washington, D.C., for a study, which was completed in April 1986, to reconstruct the staff time spent on selected enforcement activities, including Superfund. However, this study was able to provide estimates only of the staff time employees spent on these activities because (1) individuals knowledgeable about many of the cases studied had left the agency and (2) only a limited number of cases were available for study in the four regions selected. Nevertheless, OSWER used the results of this study to revise staffing standards for Superfund enforcement activities.

OSWER officials told us that EPA was developing a new integrated financial management system and that program offices would be given an opportunity to comment on this system over the next 2 years. As a part of this, these officials indicated that it would be appropriate to consider improving EPA's tracking of staff time to provide historical data for use in validating Superfund staffing standards.

In addition, according to the chief of the Superfund budget branch, the program's current resources are sufficiently large so that now would be

⁶Handbook for Government Work Force Requirements (GAO/FPCD-80-36, Jan. 28, 1980).

an appropriate time to consider the cost and benefits of collecting more specific data on the actual use of employee time for use in estimating Superfund staffing requirements.

Productivity Measures Not Used

Productivity is the measure of the efficiency with which resources are used to produce government services or products at specific levels of quality and timeliness. As such, productivity measures provide management with a useful tool to evaluate program operations. In the area of work force planning, they provide a useful gauge to evaluate the appropriateness of the work force size and skill mix in relationship to work load.

EPA, however, does not use productivity measures to help ensure that its Superfund staff resources are used efficiently. Such measures would be useful considering that regional offices differ in their work force size, skill mix, and methods of operation in carrying out the program. Additionally, EPA has the data necessary to measure and evaluate productivity.

Reasons for Not Using Productivity Measures

According to OSWER's Director of Resource Management, productivity measures were not being used because OSWER's attention has been devoted primarily to getting the work done with costs being somewhat incidental. However, recent emphasis by the administration on productivity improvements may spur EPA to make increasing use of productivity measures in the Superfund program.

In February 1986 the President, through Executive Order 12552, established a comprehensive program for improving productivity in executive departments and agencies and set a goal of 20 percent productivity improvement in selected government functions by 1992. The Office of Management and Budget (OMB) issued implementing instructions (Bulletin 86-8).

As a part of this effort, EPA has a number of initiatives underway to improve productivity, but none involving the Superfund program. According to an EPA budget official, OMB expects agencies to have productivity initiatives underway by 1992 that cover 50 percent of an agency's FTEs. Because Superfund is a major EPA program, this official expected that it would have at least one productivity initiative underway during fiscal year 1988. He further stated his view that the use of

productivity measures is an essential part of the administration's productivity program.

Data Exist With Which to
 Measure Productivity

To measure productivity, both program accomplishments and the resources consumed must be identifiable. EPA has data on the various Superfund products (work outputs) it produces—such as the number of preliminary assessments made or remedial designs completed—and the total staff resources that were consumed in producing various products in broad program areas, such as hazardous spills and response activities. Furthermore, it has this information for each of its regions. With this information EPA could weigh its various work products, on the basis of such things as the degree of difficulty (labor intensity) or importance of the work. The weighted outputs from this could then be compared with the total staff resources used to derive a productivity measure for the program area or for each region.

Table 2.2 shows a hypothetical example of a productivity measure for regional hazardous spills and response activities in the Superfund program. In this example, planned and actual work products were weighted on the basis of the labor intensity required to produce each product using EPA's staffing standards. While this example reflects the totals for all regions, individual data are available with which to develop separate measures for each region.

Table 2.2: Hypothetical Productivity Measure for Regional Hazardous Spills and Response Activities

| Activity | Weighted outputs for fiscal year 1986 | |
|---|---------------------------------------|-------------------|
| | Planned | Actual |
| Preliminary assessments | 16.0 | 17.0 |
| Site investigations | 17.4 | 19.0 |
| Site listings | 14.8 | 17.2 |
| Remedial investigations and feasibility studies | 108.6 | 146.7 |
| Remedial designs | 58.7 | 24.1 |
| Remedial actions | 54.9 | 27.1 |
| Removal activities | 107.4 | 122.6 |
| Total weighted outputs | 377.8 | 373.7 |
| Divided by total staff resources | 601.3 | 602.9 |
| Productivity Measures | 62.8 ^a | 62.0 ^a |

^aThe productivity measure was multiplied by 100 to provide a whole number.

Source: EPA budget data.

The use of productivity data would allow EPA to determine the extent to which actual productivity met or exceeded planned productivity for the fiscal year. In our example, the regions' actual productivity was almost 99 percent (62/62.8) of what was planned. In addition, indexes such as this could be used as a benchmark to provide EPA with some measure of its progress in improving productivity over time. Furthermore, if EPA were to collect more specific data on the time employees spend on various activities, the productivity of each activity could then be assessed. But more importantly, if productivity measures were developed for each regional office, EPA would be able to better evaluate the various work force size and skill mixes and methods of operation that were used by its regions to carry out Superfund.

Regional Differences

As shown in table 2.3, the Superfund work force size and occupational skill mix differs from region to region. Differences in skill mixes also exist among regions of comparable size. For example, EPA's San Francisco region relies equally on environmental protection specialists, environmental engineers, and general physical scientists to administer the Superfund program. In contrast, the Kansas City region, which is comparable in size to San Francisco, uses a greater proportion of environmental engineers. Differences such as these could, in our opinion, affect the effectiveness and efficiency of EPA's regions in carrying out Superfund activities.

Table 2.3: Distribution of Skill Mixes in Selected Regions

| Occupational skill | Percentage distribution of FTEs ^a for selected regions | | | | | |
|--------------------------------------|---|---------------|----------------------|--------------|----------------------|--------------|
| | Group A ^b | | Group B ^b | | Group C ^b | |
| | Kansas City | San Francisco | Boston | Dallas | Philadelphia | Atlanta |
| Environmental Protection Specialists | 6.3 | 27.6 | 8.1 | 17.3 | 9.0 | 2.7 |
| Environmental Engineers | 35.2 | 24.6 | 30.3 | 25.5 | 15.8 | 32.0 |
| Attorneys | 6.6 | 6.5 | 12.3 | 6.5 | 8.6 | 6.5 |
| General Physical Sciences | 10.5 | 22.6 | 16.1 | 12.5 | 26.2 | 17.9 |
| Hydrologists | .0 | .0 | .5 | .0 | 2.3 | .0 |
| Chemists | 10.8 | 2.2 | 4.5 | 4.9 | 2.7 | 6.7 |
| All Others | 30.6 | 16.5 | 28.2 | 33.3 | 35.4 | 34.2 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

^aBased on employees who spent more than 40 percent of their time on Superfund

^bRegions were grouped according to size. Group A regions had 66-68 FTEs, B regions had 82-87 FTEs, and C regions had 112-117 FTEs

Source: EPA computer data

Besides differences in work force size and skill mix, other regional differences exist that could affect productivity in the Superfund program. For example, at EPA's Boston Regional Office, the removal of hazardous waste from sites is handled by the Environmental Services Division, whereas this function is carried out by the Waste Management Division at most of the other regions we visited. The Boston region uses a single-project manager to handle both remedial and enforcement actions. In contrast, the Chicago region had dual project managers: one for remedial activities and one for enforcement.

Differences such as these have been identified by EPA in its annual reviews of regional office activities. For example, OSWER's August 1986 report on the Boston region disclosed that the region had recently implemented a unique organizational structure for its Superfund, Resource Conservation and Recovery Act, and enforcement programs. According to OSWER's report, a future evaluation will be required to assess this new organization's effectiveness in implementing these programs. Having productivity measures could help EPA to perform such evaluations.

Skill Criteria and EPA's Superfund Work Force Planning Project

While differences exist among EPA's regions in the skill mixes they use to carry out the Superfund program, EPA has not provided its regions with specific criteria to translate their FTE allocations into skill needs, either in terms of the number of positions, such as project managers, or occupational specialties that should be employed to carry out the program. EPA has recently completed a Superfund work force planning project that identifies current and future critical occupations and the knowledge, skills, and abilities that are or will be needed to administer the program, including those needed by each of its regional offices. The results of this project should prove useful to EPA in ensuring that Superfund is staffed with the appropriate skills.

Once program staffing requirements are determined and EPA's budget request is approved by OMB, EPA allocates its staff resources to the regions using various work load models. These models allocate budgeted FTEs on the basis of the projected work load for each region and the staffing standards used during budget formulation. Generally the models are used to allocate 90 percent of the FTEs programmed for the regions. After this preliminary allocation, negotiations are then held between headquarters and the regions to finalize work load (program outputs) and to distribute the remaining FTEs on the basis of agreed-upon outputs and any special regional needs.

According to OSWER officials, specific guidance has not been provided to the regions for translating their FTE allocations into staffing positions or occupational skills. These officials explained that the regional administrators are in a better position than headquarters to decide what positions and skills are needed relative to the conditions that exist in their regions. Moreover, these officials did not see headquarters' role as one of over-managing its regions.

While criteria are lacking, EPA contracted with McManis Associates, Inc., Bethesda, Md., in 1986 to develop a work force planning methodology in anticipation of SARA to identify the types of occupations and requisite skills needed to perform Superfund tasks. Specifically, the project was to help Superfund managers

- estimate the type (but not number) of staff and the knowledge, skills, and abilities (KSAs) needed to accomplish required Superfund work over the next 3-5 years;
- assess current work force characteristics related to work and staffing requirements; and
- identify recruitment, "reskilling," and career-enhancement options to ensure a skilled work force capable of doing the work.

Table 2.4 shows these critical occupations, as identified in the January 1987 final report on the work force planning project, in rank order. The top 8 occupations are expected to remain the same over the next 3-5 years, with two exceptions. The roles of toxicologists and administrative and clerical personnel will become more critical, whereas the role of chemical engineers and geologists are expected to become less critical.

Table 2.4: Critical Occupations for the Superfund Program

| Current | Next 3-5 years |
|--|--|
| 1. Environmental engineer | 1. Environmental engineer |
| 2. Hydrologist | 2. Hydrologist |
| 3. Attorney | 3. Attorney |
| 4. Physical/environmental scientist | 4. Contract & procurement specialist |
| 5. Environmental protection specialist | 5. Physical/environmental scientist |
| 6. Geologist | 6. Environmental protection specialist |
| 7. Contract & procurement specialist | 7. Toxicologist |
| 8. Chemical engineer | 8. Administrative/clerical |

Source: EPA's January 1987 report on the Superfund work force planning project

The study concluded that the program's current and strong orientation toward engineering and physical/environmental sciences was appropriate for the program's future field operations. However, on the basis of anticipated trends and changes in the program, the following occupational areas appear to be underrepresented among Superfund staff: hydrology, geology, and procurement and contracts.

In addition to critical occupations, the study identified nine critical tasks and the KSAs that were required to carry out these tasks. These critical tasks included cost recovery, remedial action, state program development, remedial design, procurement/contracts, responsible-party oversight, training and technical support, cost control, and negotiations and settlements.⁷

The study recommended that future recruitment be focused on key positions and on candidates from specific occupational fields. Recommendations were also made as to the specific occupations that should be recruited for in each region and at headquarters. Besides these recommendations, the report contained numerous other recommendations on recruitment and selection, training and development, and career enhancement.

In response to the project report, OSWER has established an implementation work group that will advise the Assistant Administrator for Solid Waste and Emergency Response on the best methods to incorporate project recommendations into existing management systems, including the identification of skill requirements in determining staffing requirements. According to EPA, the project's recommendations are scheduled for full implementation in fiscal year 1989. Officials in EPA's Office of Human Resources Management, which cosponsored the project, also told us that they have been asked by OSWER to work with them to train managers on how to use the information in the project report. Copies of the report have also been distributed to regional officials.

Conclusions

Current employees and program managers perceived that staffing and skill shortages existed in EPA's Superfund program in early 1987. However, EPA officials contended that the additional FTEs provided late for fiscal year 1987 would be sufficient to alleviate these perceived

⁷There are numerous KSAs that are required to complete these tasks; those KSAs in which improvements were needed are discussed in chapter 5.

shortages. While this should have been the case, EPA expects that a considerable portion of them will go unused during fiscal year 1987.

Although EPA has requested additional staffing increases for Superfund for fiscal year 1988, it will need to improve its present work force planning process if it is to better support that its Superfund staffing requirements and skill mixes are appropriate to carry out planned activities. One area needing improvement involves using historical data, such as employee time records, to help validate its staffing standards. A second area involves using productivity measures to (1) help ensure that Superfund staff resources are used efficiently and (2) evaluate the appropriateness of differences among EPA's regional offices in the work force skill mixes and methods of operations being used to carry out the Superfund program.

Recommendations

In order to develop a more informed basis for determining Superfund's staffing requirements and work force skill mix, we recommend that the Administrator, EPA:

- Examine the costs and benefits of using more objective techniques to determine staffing requirements (levels), including the collection of more specific historical time data from employees to help validate the reasonableness of its staffing estimates.
- Use productivity measures to gauge the appropriateness of the work force size and skill mix, including regional variations.

Agency Comments and Our Evaluation

In commenting on our recommendation that EPA examine the costs and benefits of using more objective techniques to determine staffing requirements (see app. IV), EPA's Acting Assistant Administrator, OPPE, stated that EPA has already conducted a work force planning study by procuring the services of a highly reputable contractor. He stated that the contractor, in fulfilling the stated obligations, conducted the work using accepted techniques and processes to accomplish the study. He also stated that OSWER did not request that the contractor use additional forecasting techniques when conducting the study because such techniques must be project-specific and are difficult to develop when applied to a newly reauthorized program that has yet to be implemented.

Our recommendation is not intended to be a criticism of the Superfund work force planning study or of the techniques used to conduct that study. In fact, we stated that the study should be useful in helping EPA

staff the program with needed skilled personnel. However, we also stated that the study was not intended to identify the number of skilled personnel needed, only the types. In this respect, the study "strongly recommended" that the process established by this study become integrated with budget and program planning. It is in this area of budgeting that we believe EPA needs to use more objective techniques, other than the judgmental estimates of its managers, to quantify program staffing requirements.

One approach to accomplish this, which we believe EPA should consider, would be to routinely collect historical data from employees on the actual time they require to perform various tasks. Some tasks now performed in the Superfund program will be relatively unaffected by SARA and the data collected on the time employees spend on these tasks should be useful in verifying the judgmental estimates of EPA's managers. Other tasks will be affected, to varying degrees, by SARA. The time employees now spend to perform these tasks would provide a base, which could be increased or decreased to reflect management's judgments of SARA's effects on the labor intensity of these tasks. However, as experience is gained in carrying out these tasks and any new ones created by SARA, EPA would increasingly be in a better position in ensuing years to budget staffing needs for the Superfund program.

In commenting on our recommendation to use productivity measures to gauge the appropriateness of Superfund's work force size and skill mix, OPPE's Acting Assistant Administrator stated that EPA believes that fulfillment of this recommendation would be impractical to carry out because each hazardous waste site is unique. In elaborating on this, he stated that each Superfund clean-up site has its individual characteristics that are not comparable to another site, including such factors as geology, hydrology, contaminants, volume, and public involvement.

Differences in the characteristics of sites may present a challenge, but should not be viewed as a barrier to using productivity measures. It takes years to clean up sites and, considering this, a region's mix of projects is not likely to change drastically from year to year. Even if this mix varied from year to year, Superfund activities could be weighted to account for any significant differences within and between regions. Alternatively, management could measure the rate of change in productivity from year to year to eliminate any distortions resulting from site differences. In addition, the usefulness of productivity measures could be enhanced by involving managers and employees in identifying and weighing the items to be measured.

Superfund Employee Turnover Is Increasing

Although Superfund employee turnover was lower than federal employee turnover in fiscal years 1984 and 1985, it more than doubled in fiscal year 1986, to surpass the federal average. Age disparities between the Superfund and federal work force account somewhat for the higher rates in the Superfund program. Nevertheless, several critical Superfund occupations, such as geologist and hydrologist, had turnover rates that were significantly higher than the rates for other federal employees in these occupations. In addition, regional Superfund employees had higher turnover rates than did corresponding headquarters staff.

Most program managers we interviewed (34 of 55) did not consider turnover a problem. Of the 21 who did, some described instances where turnover delayed or impaired the quality of Superfund activities. Turnover also adds to the direct and indirect costs of doing business.

Concerning the future outlook of Superfund employee turnover, most program managers we interviewed expected it to increase under the expanded program authorized by SARA. Our survey also showed that over one-third of current Superfund employees planned to look for other jobs in the next year. In addition, the Superfund work force is relatively young—about 60 percent of the work force is under the age of 36—and younger workers historically have higher turnover rates than older workers. Moreover, as the size of the staff expands, the work force is likely to remain young. These factors all suggest that turnover could continue at present levels.

There are many reasons why Superfund employees left or were planning to leave the program for other jobs. The most significant were: advancement opportunities, regional management, salaries, Superfund's use of the employee's technical skills, and disillusionment with clean-up progress. Furthermore, many of the employees who left for these reasons would have stayed had conditions changed to their satisfaction.

EPA has already taken some actions and is contemplating others that will affect some of the factors employees rated as reasons for leaving the Superfund program.

Employee Turnover: What Is It and How Is It Measured?

Job separations in the federal government are categorized as quits,¹ transfers between federal agencies, retirements, and other separations (such as layoffs, deaths, furloughs, and extended leave without pay). These separation categories do not include employees who are re-assigned or promoted to other jobs within the same agency but in different program areas.

Although EPA did not have readily available data on employee separations in the Superfund program at the time we started our review, we were able to identify EPA employees who separated from Superfund—and the type of separation—from the computer data provided by EPA. The results of our analysis for fiscal years 1985 and 1986 are shown in table 3.1. In all, about 480 Superfund employees separated from EPA during these 2 years, and most either quit or transferred to other federal agencies.

Table 3.1: Superfund Employee Separations

| | FY 1985 | | FY 1986 | |
|--------------|------------|-------------------------|------------|-------------------------|
| | Number | Percentage ^a | Number | Percentage ^a |
| Quits | 79 | 61 | 232 | 67 |
| Transfers | 24 | 18 | 40 | 11 |
| Total | 103 | 79 | 272 | 78 |
| All Others | 27 | 21 | 77 | 22 |
| Total | 130 | 100 | 349 | 100 |

^aOf total separations for that period.

Source: EPA computer data

While a variety of ways exist to measure employee turnover, the most widely used measure, and the one we used, expresses employee separations over a specified period as a percentage of the average employment for that period. In addition, turnover rates may be developed for different types of separations, with the quit rate being the one most often cited.

We concentrated our analyses primarily on quits because these employees were the ones most likely to have left to take jobs in the private sector. In some of our analyses, however, we also included transfers, since these employees also left Superfund to take jobs in other federal agencies. As shown in table 3.1, quits and transfers account for most

¹This category includes all employees who resigned from government service, including those who resigned to take a job in the private sector or for such purposes as returning to school.

employee separations in the Superfund program. We also computed distinct separation rates for Superfund employees who spent a significant portion of their time—over 40 percent—on the Superfund program.

Superfund Employee Turnover Rate Comparisons With Total Federal Work Force

Figure 3.1 compares quit rates for all Superfund employees to the rates OPM maintains on all federal employees for fiscal years 1984-86. These comparisons show that except for fiscal year 1986, Superfund rates were lower than the rates for all federal employees. However, Superfund rates have been increasing since fiscal year 1984, and between fiscal years 1985 and 1986, they more than doubled from 2.9 percent to 7.2 percent to surpass the overall federal rate of 5.2 percent. According to OPPE's Acting Assistant Administrator, delays in program reauthorization and the uncertainty regarding the future of Superfund affected the program's ability to retain key staff in fiscal year 1986 (see app. IV). In contrast, rates for federal employees remained relatively stable between fiscal years 1984 and 1986.

Quit/transfer rate comparisons for Superfund and federal employees are shown in figure 3.2. Figures 3.1 and 3.2 also show that employees who worked over 40 percent of their time on the Superfund program had higher quit rates than did Superfund employees as a whole.

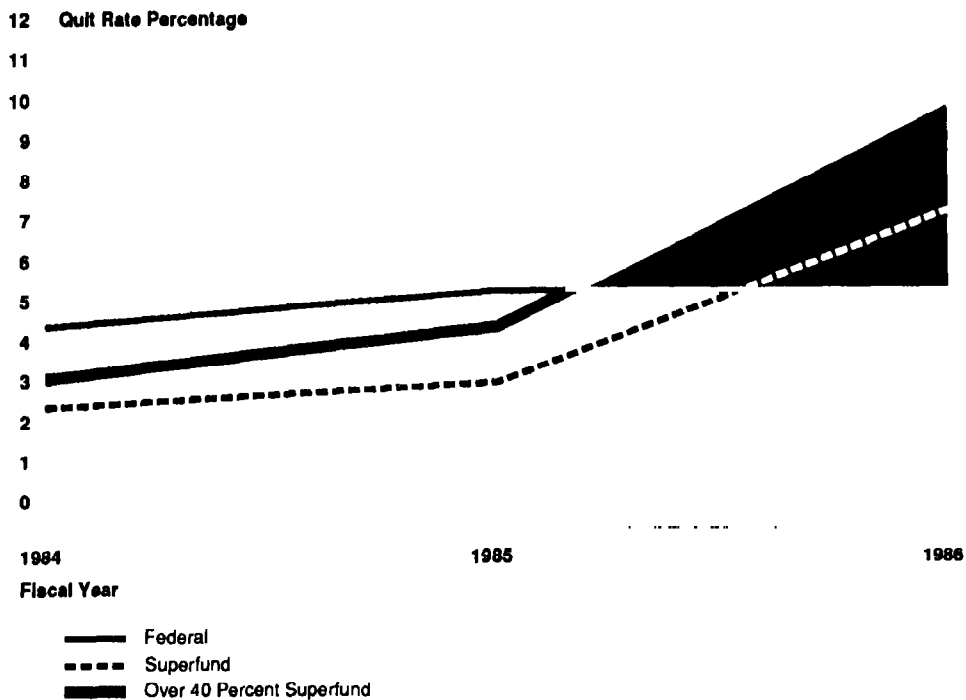
Effect of Age and Length of Service on Superfund Turnover Rates

Superfund employees are younger and have a shorter length of service than the federal work force as a whole; this difference accounts in part for the higher turnover rates in the Superfund program for fiscal year 1986.

According to a Congressional Budget Office (CBO) report, which analyzed separations of federal workers in fiscal year 1984, quits and transfers are more common among younger workers and those with fewer years of service.² In 1984, for example, federal workers with 5 or fewer years of service had quit/transfer rates that were more than twice the average for all workers and more than 20 times the rate of workers with more than 25 years of service. The study also showed that younger workers—age 21 to 35—had a rate two times greater than the rate for all employees and that the quit/transfer rate declined as the age of workers increased. Among Superfund employees who quit in fiscal year 1986, 96 percent were age 35 or younger, and 72 percent had 5 or fewer years of service.

²Congressional Budget Office. Employee Turnover in the Federal Government, February 1986.

Figure 3.1: Quit Rate Comparison for Superfund and Federal Employees, Fiscal Years 1984-86



According to the CBO report and the literature on which it was based, the relationship between length of service and quits/transfers reflects in part the search for fulfilling work that occurs early in many careers and the fact that skills may not yet have become so specialized as to limit other opportunities. Workers with less seniority are also generally younger and thus may enjoy greater job mobility, given the absence of family, home ownership, and other responsibilities. With advancing years, however, such responsibilities increase, as does the value placed on a compensation package—such as that of the federal government—that rewards service and age. Moreover, this relationship holds regardless of the occupation considered.

As shown in table 3.2, the Superfund program has a disproportionately younger work force than the federal government as a whole. The data for Superfund employees are for fiscal year 1986, but the only recently available data for federal employees was for fiscal year 1984. According to an OPM official, however, the age distribution of the federal work force does not change much from year to year.

Figure 3.2: Quit/Transfer Rate Comparison for Superfund and Federal Employees, Fiscal Years 1984-86

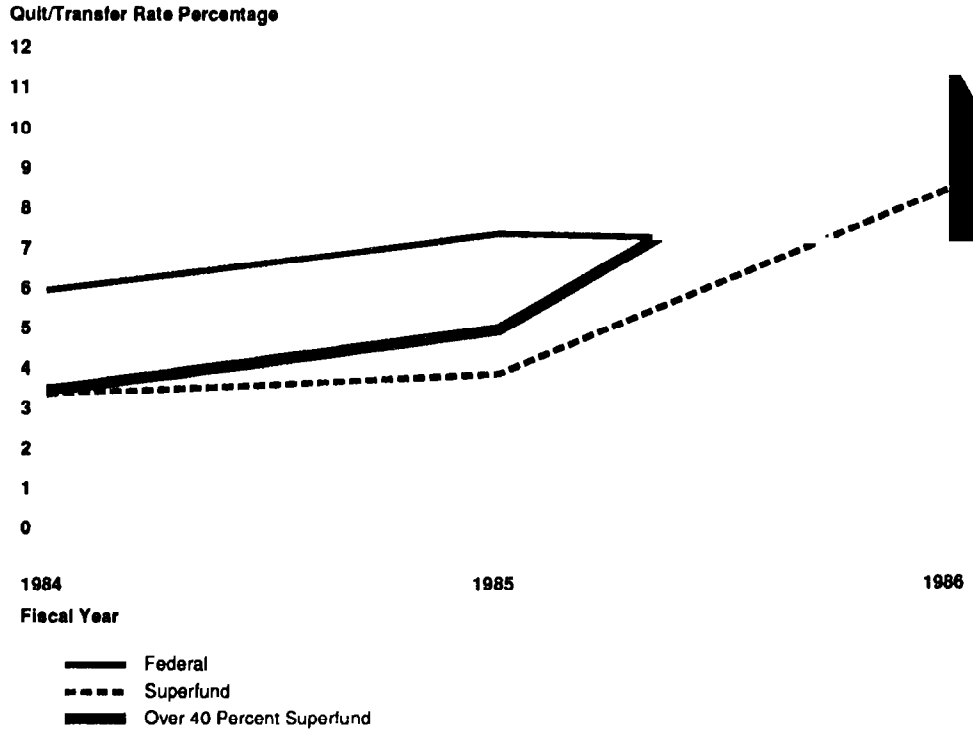


Table 3.2: Age Distribution of Superfund and Federal Employees

| | Percentage of employees age | |
|--------------------------------------|-----------------------------|-------------|
| | 35 and under | 36 and over |
| Federal | 35 | 65 |
| All Superfund | 58 | 42 |
| Employees working over 40% Superfund | 68 | 32 |

Source: EPA computer data and CBO's February 1986 report

When Superfund quit and quit/transfer rates for fiscal year 1986 are adjusted to reflect the age distribution of federal workers,³ table 3.3 shows the rates for Superfund employees are closer to, but still above, the rates for federal employees.

³Adjusted rates were computed as follows: Superfund quit and quit/transfer rates were computed for the two age groups shown in table 3.2 and then weighted by multiplying each rate by the percentage of federal workers in that age group. These two weighted rates were then combined to yield an adjusted rate for Superfund that reflects the same age distribution found in the federal work force.

Table 3.3: Comparison of Fiscal Year 1986 Turnover Rate Percentages After Adjusting Superfund Rates for Differences in Age Distribution

| Employee group | Quit rate | | Quit/transfer rate | |
|--------------------|---------------------|-----------------------|---------------------|-----------------------|
| | Actual ^a | Adjusted ^b | Actual ^a | Adjusted ^b |
| All Superfund | 7.2 | 6.2 | 8.4 | 7.4 |
| Federal | 5.2 | 5.2 | 7.0 | 7.0 |
| Difference | 2.0 | 1.0 | 1.4 | .4 |
| Over 40% Superfund | 10.0 | 7.7 | 11.4 | 9.0 |
| Federal | 5.2 | 5.2 | 7.0 | 7.0 |
| Difference | 4.8 | 2.5 | 4.4 | 2.0 |

^aSuperfund rates unadjusted for age disparity

^bSuperfund rates after adjustment for age disparity

Source: EPA computer data and OPM

Similar to age disparity, a larger percentage of Superfund employees had 5 or fewer years of federal service than did federal employees as a whole. For example, 35 percent of all fiscal year 1986 Superfund employees (45 percent for those working over 40 percent on Superfund) had 5 or fewer years of federal service. In contrast, as of March 1985, 25 percent of federal workers had 5 or fewer years of federal service.

Besides differences in age and length of service, other differences could also exist between the Superfund and federal work force that account for the variations in the turnover rates between these two groups.

Some Critical Superfund Occupations and EPA Regions Had High Turnover Rates

As shown in table 3.4, quit rates in several occupations critical to the Superfund program were significantly higher than the rates for all federal employees in these occupations for fiscal year 1986.⁴ Most notably, quit rates for Superfund geologists and hydrologists were two to six times higher, respectively, than rates for all federal employees in these same occupations. Superfund quit rates in these two occupations were also considerably higher than rates for federal employees for fiscal year 1985.

⁴Quit/transfer rate comparisons produced similar results.

Table 3.4: Quit Rate Comparisons for Critical Superfund Occupations

| Critical occupation ^a | Quit rates | | | |
|-------------------------------------|------------------------|---------|------------------------|---------|
| | FY 1985 | | FY 1986 | |
| | Superfund ^b | Federal | Superfund ^b | Federal |
| 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 scientist | 2.9 | 2.7 | 5.2 | 2.5 |
| Contract and procurement specialist | 0 | 2.8 | 0 | 2.7 |
| Environmental protection specialist | 2.8 | 3.1 | 5.2 | 3.1 |
| Environmental protection assistant | 0 | 7.1 | 5.7 | 2.7 |
| Geologist | 4.5 | 1.2 | 4.7 | 1.7 |
| General biologist ^c | 1.9 | 1.9 | 0 | 1.7 |
| Chemical engineer | 0 | 4.0 | 4.3 | 4.0 |

^aIncludes those critical occupations identified in EPA's Superfund work force planning project (see ch 2), except for administrative and clerical, which was not well enough defined 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.

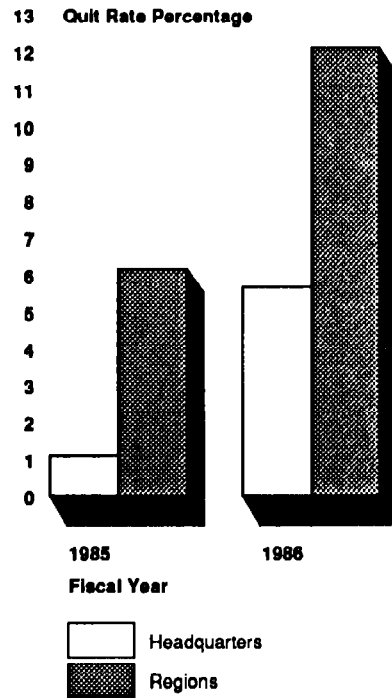
^cIncludes toxicologists

Source: EPA computer data and OPM

As shown in table 3.4, seven critical Superfund occupations had quit rates in fiscal year 1986 that were higher than rates for federal employees in the same occupations. Age disparities between Superfund and federal employees, again, could account for some of this difference, especially in the case of environmental engineers, general physical scientists, environmental protection specialists, geologists, and chemical engineers. As expected, quit rates for Superfund employees in these occupations were higher for younger workers (age 35 or younger) than for older workers. In the case of Superfund hydrologists and environmental protection assistants, however, older workers had a higher quit rate than did younger ones.

In addition, as shown in figure 3.3, regional Superfund employees had a quit rate that was considerably higher than the rate for headquarters Superfund employees.

Figure 3.3: Quit Rate Comparisons for Headquarters and Regional Employees Working Over 40 Percent of Their Time on Superfund



Among all employees who worked over 40 percent on the Superfund program, table 3.5 shows, some EPA regional offices had quit rates that were considerably higher than the average for all regions for fiscal years 1985 or 1986. Quit and transfer rates for these regions were also considerably higher than the average for all regions.

Table 3.5: EPA Regions With Highest Quit Rates

| Region | Quit rates for fiscal year | |
|----------------------|----------------------------|------|
| | 1985 | 1986 |
| Chicago | 8.1 | 20.3 |
| Dallas | 16.8 | 15.0 |
| San Francisco | 10.0 | 30.9 |
| Seattle | 11.1 | 4.0 |
| Average, all regions | 6.2 | 12.1 |

Source: EPA computer data.

Quality and Experience of Superfund Employees Leaving the Program

The quality and experience of the employees who leave an agency can be just as important as the numbers of employees who leave. Because some turnover is unavoidable, an agency would be better off to lose its poor performers or less experienced employees than its superior or more experienced employees. Although the Superfund program has lost highly rated and experienced employees, the ratio of loss in these categories was not disproportionately higher relative to the employees who were in these categories.

Among Superfund employees who worked on the program in fiscal year 1986, about 48 percent were highly rated. In contrast, about 23 percent of the Superfund employees who quit in fiscal year 1986 were highly rated. Among EPA employees who worked over 40 percent on Superfund, about 45 percent were highly rated, whereas about 22 percent of those who quit were highly rated. We considered employees rated either outstanding or exceeding expectations as highly rated employees. We excluded employees rated fully successful, minimally satisfactory, unsatisfactory, or not rated.

Concerning length of work experience in the Superfund program, our survey indicated that there was little difference between current and former employees. At the time former employees left Superfund, they had an average of about 3 years' experience, which was comparable to the average level of experience of current employees.

Program Managers' Views on Turnover and Its Effect on the Superfund Program

The program managers we interviewed had mixed opinions on whether turnover was a problem. Thirty-four of the 55 headquarters and regional program managers we interviewed did not believe turnover was a problem. However, of the 21 managers who did, some said that turnover caused delays or impaired the quality of Superfund activities. But some managers attributed these delays and quality impairment to hiring freezes or regional policies that provided for periodically reassigning staff between program areas. Employee turnover also increases the costs for such things as recruitment and training, although measuring these costs can be difficult.

Turnover was considered a problem by 15 of the 40 program managers interviewed at the 6 regions in our review. Following are some examples of comments we received from program managers on turnover and its impact on the Superfund program.

At EPA's Boston Regional Office, the Superfund remedial and enforcement unit had a 26-percent attrition rate, which represents the loss of all employees from separations and the reassignment or promotion of employees to other EPA programs. According to the Superfund unit chief, most employees leave the program because they get burned out from the heavy work load.⁵ Moreover, when experienced employees leave, this loss of time and experience causes delays and interrupts project continuity while new project managers become familiar with their projects. For example, one Boston regional Superfund site has had six different project managers since the inception of work at that site.

At the Philadelphia region, although turnover has historically been low, it ballooned in the removal and remedial areas in fiscal year 1986, according to the Superfund branch chief. He attributed this to employee burnout and to the number of employees who had attained a level of experience that made them attractive to private-sector employers. Because of this turnover, less experienced project managers had to be assigned more sites, which delayed project activities. In addition, these project managers had to spend a larger amount of their time instructing new employees hired to fill vacancies created by turnover.

The Philadelphia region's enforcement branch chief also stated that attrition had become a recent problem. He estimated the turnover rate to be 10-20 percent for fiscal year 1986. But the problem was attributed not to employee quits but to employee reassignments to and from other EPA units. According to this branch chief, the regional administrator supports the concept of cross-training staff in a variety of environmental programs. As a result, frequent transfers occur between Superfund and other EPA programs. This turnover delays site actions because of the time lost in training replacements. Turnover also places a greater work load on the remaining staff, which causes more slowdowns and at times complete cessation of site work.

In the Philadelphia region's Environmental Services Division, attrition among chemists was considered a problem. According to the division director, two of the five chemists left within the past year for positions with a contractor and obtained pay increases of \$10,000 to \$20,000, and the remaining staff had to work overtime to compensate for this loss.

⁵Thirty-two percent of former employees rated heavy work load as a major or minor reason for leaving.

The Chicago region's Office of Regional Counsel lost five attorneys in its emergency response branch during the first 6 months of fiscal year 1986. According to the branch chief, their legal work takes longer and the depth of work on individual cases is less than it could be because of this turnover.

One of Chicago's remedial units lost three senior staff between June 1985 and July 1986, according to its chief: one went to private industry and two went elsewhere within EPA. This loss, accompanied by a hiring freeze, resulted in morale problems because active projects with important decisions pending had to be assigned to other staff, whose work load was already heavy.

At EPA headquarters, 6 of the 15 Superfund program managers interviewed stated that turnover had been a problem. These managers cited career enhancement and increased salary as reasons staff left. Four stated that the loss of senior staff placed a burden on the branch chiefs, who must pick up the slack. One stated that experienced staff are not available to train new employees and, as a result, things are not always done quickly or correctly. Another stated that he was not able to provide day-to-day reporting, guidance, or direction to the regions, nor did he have any detailed knowledge of regional issues.

Employee Turnover Involves Other Costs That Can Be Difficult to Measure

Besides delays and quality impairment, various other direct and indirect costs are also incurred as a result of employee turnover. Some of these costs, which can be inferred from the comments we received from program managers, include lower productivity, recruitment and training costs for replacements, and increased payroll costs for overtime.

According to CBO's report on federal employee turnover, federal managers wishing to consider all the costs of turnover in decision making would face a formidable task because of the number and variety of costs involved.⁶ Data for even the most obvious costs are generally difficult to obtain. Further, techniques for valuing less obvious indirect costs in the government are nonexistent or poorly developed. Despite the problems that can be encountered in estimating such costs, CBO stated that turnover can be expensive and that managers should not ignore these costs.

On the basis of data CBO obtained for its study on recruitment and placement costs for selected federal jobs, it found these costs to be higher for

⁶Congressional Budget Office, February 1986.

professional and administrative jobs with high skill levels, and lower for less technical, clerical positions. For example, CBO estimated the recruitment and placement costs in 1985 were \$22,200 for medical officers and \$300 for secretaries. CBO found several factors that help explain the generally higher recruiting costs for professional, administrative, and similarly ranked jobs. For example, review panels may be called together to screen applications for some jobs. Such positions also commonly involve payments for relocation, security clearances, and other expenses.

Considering the high recruitment and placement costs for some occupations, CBO stated, managers would not want to incur such large costs too often. On the other hand, if an organization could plan on having the services of such personnel over many years, these costs would be less burdensome. If the employees stayed in their positions the 9 years that the average federal professional is estimated to stay on the job, for example, then replacement costs might represent only a small fraction of their payroll cost for the period.

In contrast, CBO stated that the increased costs and inconvenience of higher turnover might be acceptable if the personnel actions that cause people to leave also produce even larger savings—for example, savings in pay reductions. Nevertheless, CBO stated, the costs of turnover—both direct and indirect—should be a part of management decision making.

Superfund Employee Turnover Is Expected to Increase

Most program managers we interviewed expected turnover to increase in the future. The reasons cited for this increase included the additional nonfederal employment opportunities associated with SARA and the poor pay and promotion opportunities within EPA.

In the 6 regions visited, 32 of the 40 program managers interviewed expected employee turnover to increase in the next 5 years. Some expected that the additional funding provided by SARA, \$8.5 billion, would increase the demand for qualified and experienced personnel among private-sector participants involved in the clean-up process, such as contractors and consultants. Moreover, they believed these contractors and consultants would aggressively recruit from EPA to fill this demand. Other managers attributed future increases in turnover just to the low pay and limited promotion opportunities, or to the fact that employees tend to leave after they gain sufficient experience.

At EPA headquarters, 6 of the 15 program managers interviewed also expected turnover to increase during the next 5 years. They likewise

attributed this to the job opportunities SARA will create in the private sector. They see Superfund as containing many experienced staff who know the laws, EPA, and the contractors involved in the program; these contractors pay up to \$30,000 more in salary than can EPA. (As shown in ch. 4, the salary increases of former employees we surveyed ranged up to \$22,000.) Furthermore, as more Superfund employees become experienced, more will be lost because they cannot be promoted, due to a limited number of senior positions.

In addition our survey showed that over 40 percent of Superfund's current technical employees had sought a job outside the program—mostly within the past year—and over one-third probably or definitely plan to look for another job in the next year. However, this is not surprising considering that most of the Superfund work force is relatively young—68 percent are age 35 or younger, and younger workers traditionally have higher turnover rates than older workers.

Moreover, the Superfund work force is likely to stay young for some time. EPA is currently in the process of expanding its Superfund work force—600 additional positions were authorized for fiscal year 1987 and EPA has requested an additional 300 in its fiscal year 1988 budget—and many of these new positions are likely to be filled by younger workers, as has been true in the past.

Most current employees had sought, or were planning to look for, other jobs for many of the same reasons former Superfund employees left.

Reasons Employees Leave Superfund

More advancement opportunity was the top reason employees left Superfund for other jobs, but other factors also contributed to an employee's decision. Employees who left Superfund for other jobs largely left for jobs in private industry, and most took jobs involving hazardous waste.

While most of Superfund's current technical employees were satisfied with the work they were doing, this is not indicative of an employee's intention to remain. Most former employees were also satisfied with their work when they left Superfund. Moreover, many current employees expressed dissatisfaction with some of the same job-related factors cited by former employees as reasons for leaving. In fact, over one-third of current employees either had looked for other jobs in the past or planned to look in the next year—and for the same reasons former employees left.

**Why Did Former
Employees Leave and
Where Did They Go?**

Our survey of former Superfund employees showed that 117 of them left Superfund to take other jobs. The 117 former employee respondents were asked to rate 17 reasons as either a major, minor, or no reason for leaving the Superfund program. For each reason rated as either major or minor, former employees were also to indicate the extent to which they would have stayed had conditions relevant to that reason changed to their satisfaction. We analyzed these responses to determine the extent that respondents rated a reason both as one that was major and one that, had conditions changed to their satisfaction, they definitely would have stayed. By correlating these responses, we were able to obtain a better picture of the significance of the various reasons former employees rated for leaving Superfund.

As indicated in table 3.6, our analysis showed that more advancement opportunity was the most significant reason, among those rated, why former employees left Superfund. In fact, advancement opportunities were twice as important as any of the other reasons rated. Secondary reasons that appeared to be somewhat significant included regional management, higher salaries, dissatisfaction with Superfund's use of the employee's technical skills, and disillusionment with the progress made in cleaning up hazardous waste sites.

Table 3.6: Reasons 117 Former Superfund Employees Left to Take Other Jobs

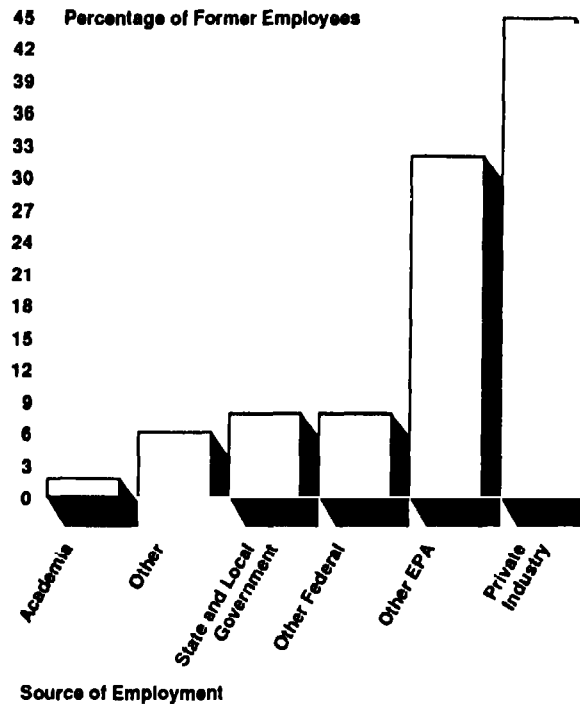
| Reasons rated | Percentage of former employee respondents who | | |
|---|---|-------|---|
| | Cited reason as | | Both cited reason as major and who would have definitely stayed if conditions changed to their satisfaction |
| | Major | Minor | |
| More advancement opportunities | 67 | 16 | 28 |
| Regional management | 28 | 19 | 14 |
| Increase in salary | 40 | 23 | 13 |
| Poor use of their technical skills | 23 | 26 | 13 |
| Disillusionment 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 |

We also analyzed former employee responses by sex and work location. This analysis showed that men were more inclined than women to rate salary increases (68 percent of the men vs. 48 percent of the women), poor use of their technical skills (52 vs. 40), and too much paperwork (42 vs. 26) as major or minor reasons for leaving Superfund. (Men account for 67 percent of Superfund's current technical employees.) In addition, former headquarters employees were about twice as likely as former regional employees to rate physical work environment (70 percent of former headquarters employees vs. 29 percent of former regional employees), inadequate clerical and administrative support (67 vs. 35), and excessive work load (50 vs. 26) as major or minor reasons for leaving. (Sixteen percent of Superfund's current technical employees are at EPA headquarters.)

Figure 3.4 shows that 45 percent of those employees who left for other jobs took jobs in private industry. While the employees who left were lost to the Superfund program, about 72 percent of them took jobs in the

hazardous waste area; about 91 percent of them were at those jobs when they completed our questionnaire.

Figure 3.4: Source of Employment for 117 Former Superfund Employees Who Left for Other Jobs



Besides the 117 former employee respondents who left Superfund for other jobs, 47 former employees who had quit or transferred for other purposes responded to our questionnaire. Of these, 30 left to return to school, while the remainder left for other reasons—for example, to relocate with their spouse or to have a baby.

How Satisfied Are Superfund Employees?

Current employees were basically satisfied with the work they were doing, liked working in the Superfund program because of its objectives, and expressed average to above average levels of morale. For example, according to our survey, 75 percent of current technical employees were at least generally satisfied with the work they were doing in the

Superfund program; only 11 percent were dissatisfied. Ninety-four percent of current employees liked working in Superfund because of its mission. Morale was average, high, or very high among 81 percent of current employees.

This high level of job satisfaction with Superfund work, however, is not necessarily indicative of an employee's intention to remain, as 62 percent of former employees who left also reported general satisfaction with their Superfund work.

As shown in figure 3.5, many current employees were dissatisfied with many of the same factors that former Superfund employees rated as reasons for leaving the program. More than half of the current employees were dissatisfied with their physical work environment, promotion opportunities, and salary.

Furthermore, our analyses of the survey data showed that employee dissatisfaction with the following job factors was significantly related to an employee's plans to seek another job: (1) promotion opportunities, (2) Superfund's use of the employee's technical skills, (3) the amount of recognition received for good work performance, (4) regional management, and (5) salary. As previously mentioned, over one-third of current employees probably or definitely plan to seek other jobs in the next year.

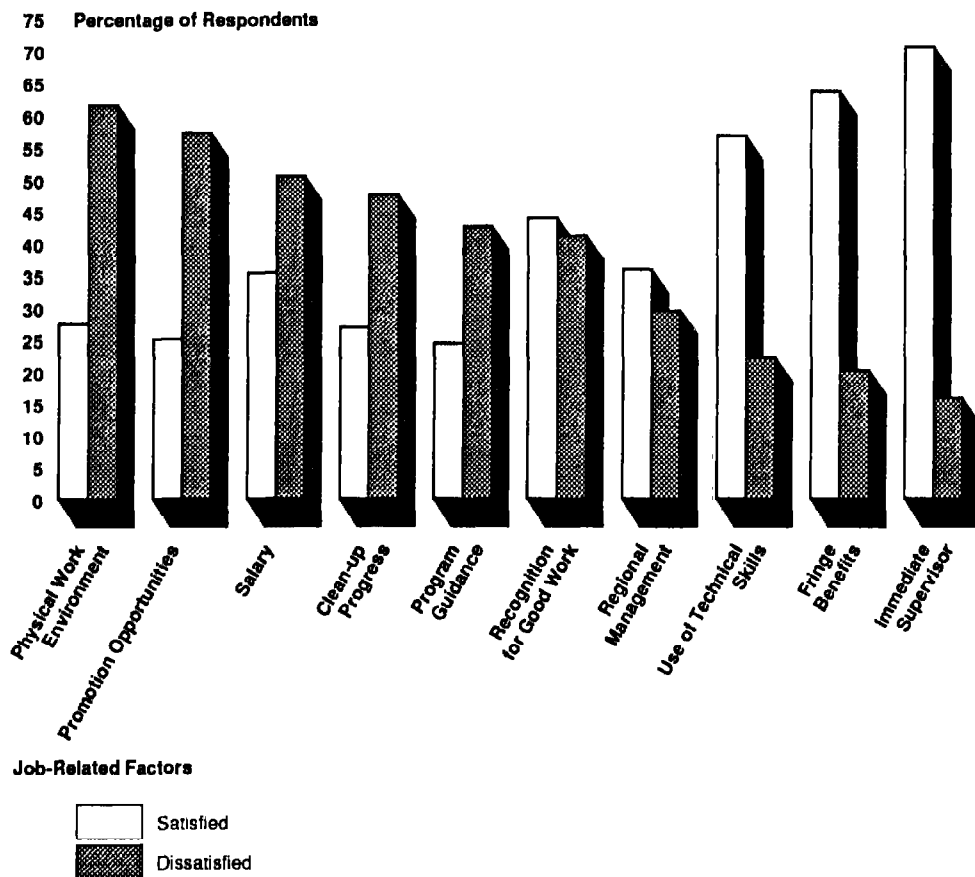
EPA's Actions for Dealing With Superfund Employee Turnover

EPA has several actions underway and is contemplating others that will likely affect two major reasons employees leave the Superfund program: advancement opportunities and salaries.

Concerning advancement opportunities, EPA revised its policy for salary grade levels in October 1986 to make Superfund's nonsupervisory project managers and on-scene coordinators eligible for grade 13, 14, and 15 positions. In the past, these higher salary grades were generally reserved for supervisory personnel. However, under the new policy, higher grades can be provided if warranted by the type/complexity of the hazardous waste site managed, for example.

Although this policy was relatively new when we made our visits to six of EPA's regional offices, some program managers had already increased or were authorized to increase grade levels for some of their project managers or on-scene coordinators. In addition, other program managers

Figure 3.5: Current Employee Satisfaction With Various Job Factors



Note: Responses do not total 100 percent because of those employees who were neither satisfied nor dissatisfied.

were in the process of assessing the extent to which higher graded positions were warranted under the revised policy. According to OPPE's Acting Assistant Administrator, 25 higher graded positions were in place and more were being considered as of September 1987 (see app. IV).

EPA has also been reviewing the use of dual career paths—one for management and one for nonmanagement—by other agencies and organizations to assist in the design of a nonmanagerial career path for its technical and scientific staff. With a separate nonmanagerial career path, EPA technical and scientific staff would no longer be forced into management to gain promotion.

According to an EPA official, dual career paths have already been designed for chemists and general physical scientists, and EPA is now in the process of issuing implementing guidelines. Furthermore, EPA's Superfund work force planning project recommended that this experience should be reviewed with an eye toward expanding dual career paths to other occupations to address important career concerns expressed by Superfund scientists, engineers, and technicians. However, the project's report cautioned that dual career paths should be developed and implemented with care so as not to raise false expectations among affected staff who may view these career paths as opportunities for automatic promotion.

Concerning salaries, EPA's Superfund work force planning project recommended that the use of incentive pay for new entrants should be one of five options to be reviewed and assessed for incorporation into a general recruitment and selection strategy. The report stated that high-tech firms in the private sector have been using incentive pay programs to attract scarce electrical engineers and computer scientists to join their organizations.

The report also stated that the all-volunteer Army has offered new enlistees financial incentives (lump sum cash bonus or funds for college education) to ensure a pool of recruits of sufficient quantity and quality. The report stated that if a high selection ratio (ratio of applicants to those selected) is desirable, especially for Superfund's key positions (e.g., remedial and enforcement project managers), pay incentives may be a useful tool in generating a pool large enough to ensure selection of top quality people. It stated that incentive pay may also be offered to highly qualified specialists on short-term (temporary) appointments to get them to extend their appointments, especially in hard-to-retain jobs such as hydrologists and geologists.

In addition, the report stated that compensation was the most frequent reason employees leave Superfund. In this respect, the report recommended that a career enhancement program for the Superfund program should include, among other things, an "improved compensation program (bonuses, added fringe benefits, job-related perks, etc.)."⁷ The report's recommendations are under review by EPA.

⁷EPA stated that the reference to (1) bonuses pertained to internal award mechanisms that would not require OPM and OMB involvement and (2) fringe benefits included nonmonetary compensation. (See app. IV.)

Conclusions

The rate at which EPA employees left Superfund was below the rate for all federal employees in fiscal years 1984 and 1985. However, the rate more than doubled between fiscal years 1985 and 1986, to surpass the federal rate. The higher Superfund rate was partly caused by Superfund's higher ratio of younger employees, who historically change jobs more often. In addition, some critical Superfund occupations, most notably hydrologists, had quit rates that were considerably higher than the average rate for all federal employees in these occupations.

Although program managers generally had not perceived turnover to be a problem, most managers expect turnover to increase under the expanded program authorized by SARA. This, together with our survey results (which showed that over one-third of current employees planned to look for other jobs in the next year) and the young age of the present and future work force (which historically has high turnover rates), suggests that turnover could remain high.

Turnover delays and impairs Superfund activities. It also affects the direct and indirect costs of doing business, for example, by increasing recruitment and training costs. Some turnover is unavoidable, as in the case of employee deaths or retirements, and the costs attributable to this turnover can be considered a normal cost of doing business. However, turnover should be considered excessive when its impact on program activities and costs exceeds the cost of taking appropriate corrective action. While measuring turnover's impact on program costs can be difficult, these costs should be considered when making management decisions that are likely to affect turnover.

The employees who quit Superfund to take other jobs left largely because of advancement opportunities. Other significant reasons included regional management, salaries, poor use of employee's technical skills, and disillusionment with clean-up progress. Moreover, many of the employees who quit for these reasons would have stayed had conditions improved.

EPA has taken some actions and is contemplating others—such as dual career paths—that would provide selected Superfund employees with additional promotion opportunities. Besides this, EPA is also considering the recommendations of its Superfund work force planning project, which, among other things, recommended improving the compensation of Superfund employees.

Federal and Private Pay Comparisons and Success of DOD/OPM Pay and Retention Programs

Federal employees in general receive less in pay than do their private-sector counterparts, according to the government's pay survey. This includes federal attorneys, chemists, and engineers, who are used extensively in the Superfund program. The former Superfund employees included in our survey received annual pay increases that averaged about \$7,000 upon leaving Superfund for private-sector jobs.

While this pay gap can affect the government's efforts to recruit and retain employees, DOD and OPM have a number of special programs that have helped address employee recruitment and retention problems. OPM has special pay rates for selected occupations and geographical areas; some of these rates have benefited Superfund employees, most notably those in the engineering occupations.

In addition, OPM—in conjunction with the Department of the Navy—is involved in a merit-oriented, pay-for-performance project at two research laboratories in California. While we are currently in the process of evaluating this experimental demonstration project, the project reportedly has helped to increase salaries and to reduce employee turnover. Also, the Department of the Navy is successfully using DOD's reenlistment bonus program to encourage military personnel to reenlist in occupational specialties that are experiencing chronic shortages or are hard to fill.

In chapter 3, we stated that EPA's Superfund work force planning project recommended an improved compensation program, consisting of incentive pay (bonuses) and added fringe benefits. We do not favor a separate pay program for Superfund employees because the pay situation for these employees is not any more critical than for other federal employees.

Federal Pay, Including That of Superfund Employees, Lags Behind Private-Sector Pay

The Federal Salary Reform Act of 1962 called for federal General Schedule pay rates to be comparable to average private-sector pay rates for the same levels of work. The Federal Pay Comparability Act of 1970 established the President's Pay Agent,¹ authorized the President to adjust salaries on the basis of an annual survey of private-sector salaries, and provided the President with authority to propose an alternative pay plan in the event of national emergency or economic conditions affecting the general welfare. The alternative pay plan becomes effective unless it is disapproved by the Congress.

The President's Pay Agent computes the pay comparability gap on the basis of the Bureau of Labor Statistics' annual national private-sector survey of professional, administrative, technical, and clerical pay. The Bureau's survey contains salary data on various occupations from a sample of private-sector establishments throughout the country. The pay agent uses these data to identify differences between federal and private-sector salaries and determines the adjustments needed to achieve full pay comparability.

In August 1986 the pay agent reported that federal employees' pay on average lagged behind the private sector by 23.8 percent as of March 1986, up from 19.2 percent a year earlier. The President proposed an alternative plan for a 2-percent increase, but the Congress enacted a 3-percent increase, effective January 1987. This marked the ninth straight year that federal pay rates were not increased by the comparability adjustments indicated by the pay agent's analysis.

We used the Bureau's March 1986 survey to compare salaries for attorneys, engineers, and chemists. These are three of the top five highly skilled technical/scientific occupations in the Superfund program,² accounting for about 28 percent of the employees who worked on (and about 35 percent of the FTEs expended in) this program during fiscal year 1986. Our comparisons were limited to these three occupations because the Bureau's survey did not include data on other Superfund technical/scientific occupations (see ch. 1).

In making our occupational comparisons, we used the median private-sector salaries from the Bureau's survey and average federal salaries

¹A group composed of the Directors of the Office of Management and Budget, OPM, and the Secretary of Labor.

²General physical scientist and environmental protection specialist were the other two top occupations.

for General Schedule federal employees obtained from OPM's March 31, 1986, Central Personnel Data File Report. Within each occupation, separate comparisons were made for each work level in the Bureau's survey and the corresponding grade level in the General Schedule to differentiate between the duties and responsibilities of individuals in these occupations. For example, the median private-sector salary for a level I attorney was compared to the average salary of federal attorneys in grade 9, which has comparable duties and responsibilities.

Our comparisons showed that the federal attorneys, chemists, and engineers, including those in Superfund, received from \$7,800 to \$41,300 less in annual pay than did private-sector attorneys, chemists, and engineers for comparable work. To achieve comparability, federal pay would have to be increased 25-68 percent for the various grades within these occupations. Figures 4.1 and 4.2 show the results of our comparisons. Federal engineers, which had the smallest comparability gap of the three occupations, receive special pay rates approved by OPM. These special rates are discussed later in this chapter.

Testifying before a congressional subcommittee in March 1986, we stated that comparability with the private sector is a logical and factual standard to follow in establishing federal pay rates.³ We stated that paying federal employees amounts comparable to what their counterparts are receiving throughout the national economy will help assure employees and the taxpayers that compensation levels are fair. However, we suggested—on the basis of our September 1985 report—that the comparability principle be expanded to include fringe benefits as well as salary.⁴

In that report, we provided comparative information on pay, retirement benefits, health and life insurance, annual and sick leave, and holidays in the federal and private sectors. In addition, we stated that the Hay/Huggins Company, a management consulting firm specializing in private-sector pay and benefits, in a 1984 study for the House Committee on Post Office and Civil Service, had found that federal pay and benefits lagged behind private-sector benefits by 7.2 percent as of March 1984.⁵

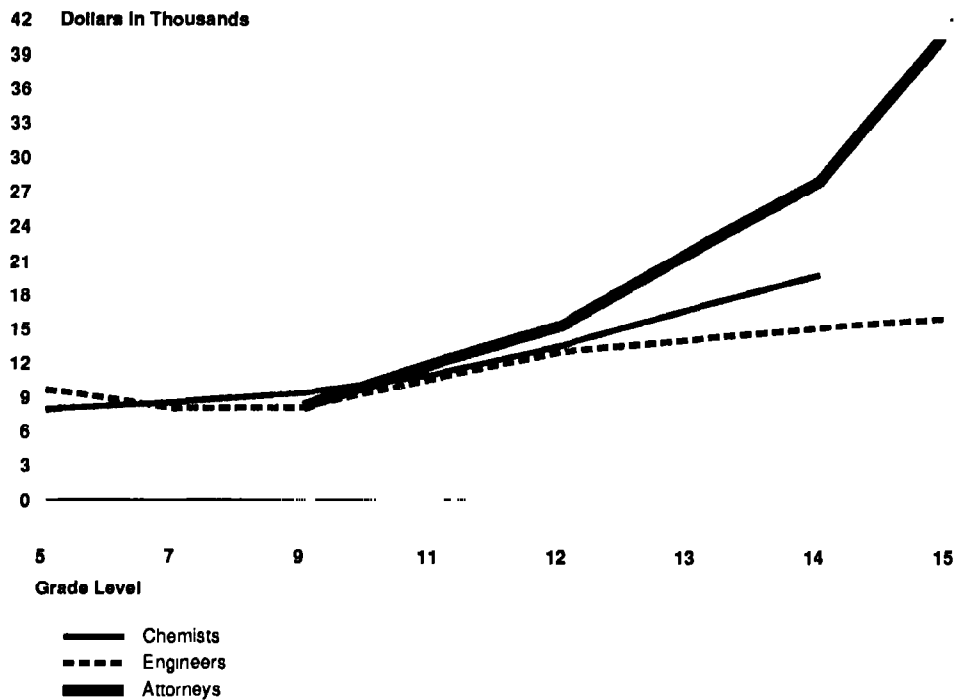
³General Accounting Office, Federal Pay. Statement of Rosslyn S. Kleeman before the Subcommittee on Compensation and Employee Benefits, House Committee on Post Office and Civil Service, Washington, D.C., March 19, 1986.

⁴Comparison of Federal and Private Sector Pay and Benefits (GAO/GGD-85-72, Sept. 4, 1985).

⁵Hay/Huggins Company, Study of Total Compensation in the Federal, State, and Private Sectors, December 4, 1984.

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Figure 4.1: Dollar Comparability Gap in Annual Pay for Selected Federal Employees, March 1986



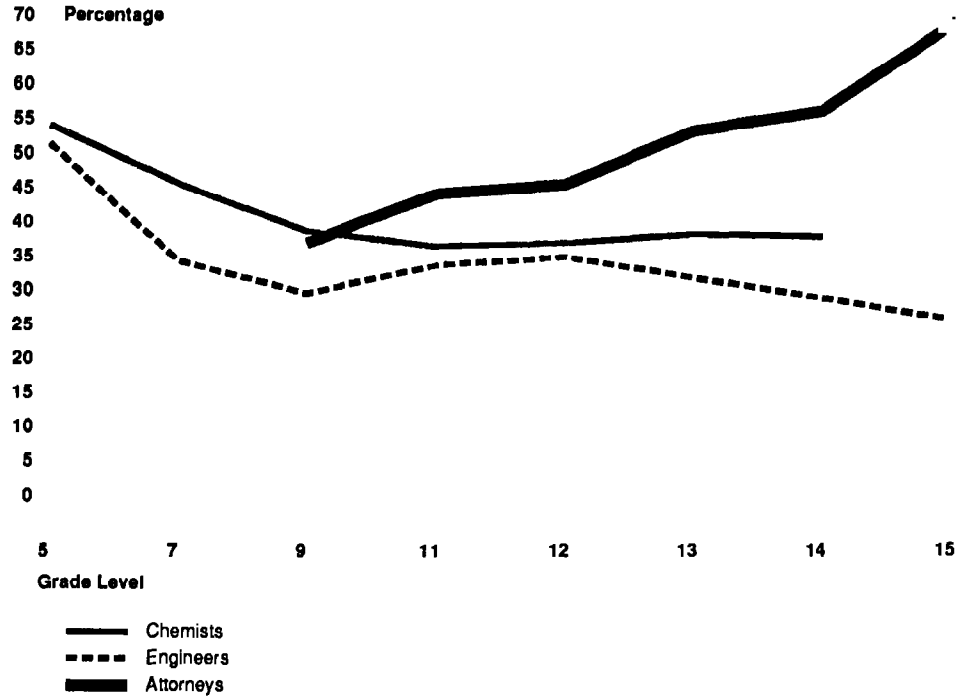
Note: Grade 9 is the entry level for attorneys. Private-sector data were not available for chemists beyond grade 14.

Table 4.1 shows the results of the Hay/Huggins study for various elements of compensation.⁶

⁶The Hay/Huggins data are based on a comparison of federal pay and benefits with those paid by the companies in Hay's private-sector data base, which includes information on pay rates in 1,249 medium (100 to 1,000 employees) and large (over 1,000 employees) companies and benefits data on 854 companies (size not specified).

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**Figure 4.2: Percentage Comparability
Gap for Selected Federal Employees,
March 1986**



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

**Table 4.1: Federal Compensation
Relative to the Private Sector, March
1984**

| Element of compensation | Extent federal compensation is ahead of (behind) private sector as a percentage of payroll |
|----------------------------------|--|
| Pay | (10.3) |
| Retirement | 6.4 |
| Death benefits (life insurance) | (.3) |
| Disability (sick leave included) | (.7) |
| Health benefits | (2.2) |
| Executive perquisites | (1.2) |
| Annual leave | 8 |
| Overall ^a | (7.2) |

^aHay stated that because some benefits vary by salary, this (overall) percentage is not simply the sum of salary and benefits.

Source: Hay/Huggins Company.

We also reported that this study and the others we reviewed suggested that federal employees' overall compensation lags behind the private sector. Furthermore, we stated:

"Our work indicates that consideration of any individual compensation element in isolation can be meaningless insofar as judgments on overall compensation levels are concerned. For example, the evidence presented in this report suggests that . . . if a pay raise were granted in the full amount determined by the Pay Agent . . . to achieve pay comparability, the overall federal compensation program would be superior to the typical private-sector program. Reduction in retirement benefits, the one element of compensation in which the federal government is clearly ahead of the private sector, would drop the overall federal compensation level further behind the private sector, unless there were offsetting improvements in other elements."⁷

Both the House and Senate Appropriations Committees want to replace the Bureau's existing survey with a national white-collar survey of fringe benefits as well as salaries and include state and local governments and small businesses. In approving the Department of Labor's fiscal year 1987 budget request, the Committees approved \$2.1 million for the Bureau of Labor Statistics to begin planning, testing, and implementing a new survey. In addition, the House Committee report requested that the Bureau provide the Congress with a plan for implementing the new survey by August 1987.

Pay Increases Received by Former Superfund Employees

Former Superfund employees in our survey reported that they received annual pay increases ranging from \$1,000 to \$22,000 upon leaving the Superfund program, with the average increase being \$4,800. Among former employees who specifically took jobs in private industry,⁸ the average annual increase in pay was \$7,200.

We did not attempt to determine whether the new jobs taken by former Superfund employees were comparable to their Superfund jobs or whether their new jobs entailed more responsibility. But to the extent that employees took comparable jobs, the increases would reflect the value the private sector placed on their skills and experience. To the extent that employees left to assume additional duties and responsibilities, these salary increases would suggest that these employees may

⁷Our report and the Hay/Huggins study did not consider the new Federal Employees Retirement System that took effect January 1, 1987.

⁸As shown in figure 3.3 (see ch. 3), former employees also left to take jobs in other than private industry.

have been promotable. As shown in chapter 3, advancement opportunity was the top reason employees rated for leaving the Superfund program.

Special DOD/OPM Programs Have Helped to Address Pay and Retention Problems

While federal pay, including the pay of Superfund employees, lags behind private-sector pay, we stated in chapter 3 that EPA's Superfund work force planning project recommended (1) the use of incentive pay, such as bonuses, for new entrants as one option for incorporation into a general recruitment and selection strategy and (2) an improved compensation program (bonuses, added fringe benefits, job-related perks, etc.) for inclusion into a career enhancement program. According to EPA, the project's reference to (1) bonuses pertains to internal award mechanisms that would not require OPM and OMB involvement and (2) fringe benefits included nonmonetary compensation.

DOD and OPM have special pay programs that have helped to address employee recruitment and retention problems. Under its special rate program, OPM can increase the special pay rates applicable to specific civilian occupations and geographical areas when private-sector pay substantially exceeds federal pay and a recruiting and retention problem can be shown. Although federal agencies are responsible for requesting special rates from OPM, EPA activity in this area appears to have been limited. These special pay rates have helped agencies be more competitive even though our prior reviews showed that OPM was slow to approve or increase special pay rates.

In addition, OPM and the Department of the Navy have an experimental demonstration pay-for-performance project underway at two research laboratories in California. Although we are currently in the process of evaluating this project, it reportedly has increased pay for federal civilian employees, reduced turnover, and increased employee satisfaction. Furthermore, DOD has a selective reenlistment bonus program for military personnel that has proved to be an effective retention incentive that can be targeted to specific areas experiencing shortages.

OPM Special Pay Rates

Under the Federal Salary and Reform Act of 1962, OPM can increase basic pay rates for civilian personnel if it finds that private-sector pay rates substantially exceed federal pay rates and significantly handicap the government's ability to recruit or retain well-qualified individuals. By law, OPM can increase the minimum entry-level pay rate for an applicable grade (step 1) up to the maximum pay rate for that grade (step

10). In addition, OPM can extend this new entry rate to provide a 10-step pay range to cover longevity pay increases. Special pay rates can be authorized on a locality basis or on a national or worldwide basis to meet staffing needs. OPM reviews these special pay rates at least annually, at which time it can continue, abolish, or revise them as necessary.

Before a special rate can be established, OPM requires departments and agencies to provide evidence that a significant recruitment or retention problem is caused by substantially higher private-enterprise rates. Departments or agencies initiate requests for new special rate authorizations, while OPM initiates the annual review of special pay rates. In both cases, OPM requires departments and agencies to submit specific data that show the extent to which (1) recruitment and retention problems affect staffing levels and (2) federal salaries lag behind private-sector salaries. Departments and agencies are also required to show that alternative means, such as improved working conditions, job redesign, and training, will not resolve the problem.

The use of special pay rates has been increasing over the years. In March 1984 we reported that the number of employees covered by special rates rose from 8,000 in fiscal year 1977 to almost 34,000 by fiscal year 1984.⁹ We reported that the primary reasons for this increase are (1) General Schedule pay adjustments at less than the amount needed to achieve comparability with private-sector salaries, (2) across-the-board instead of grade-by-grade pay adjustments, and (3) geographic and occupational variations in private-sector pay that are not recognized in the nationwide pay rates provided by the General Schedule.

EPA's Use of Special Pay Rates

EPA employees in a number of occupational series, such as medical officers, printers, and engineers, including Superfund engineers, benefit from the special pay rates OPM has approved for these occupations. However, according to an official in EPA's Office of Administration and Resources Management, EPA has requested special pay rates only once, for the clerk-typist series.¹⁰ EPA has not proposed the establishment of special pay rates for other occupational series, such as attorneys or chemists, because it could not furnish statistical evidence to show that it was experiencing recruitment and retention problems in these series, according to this official.

⁹Federal White-Collar Special Rate Program (GAO/GGD-84-54, March 30, 1984).

¹⁰Special pay rates for clerk-typists were recently approved on a regional basis for the cities of Boston, New York, San Francisco, and Washington, D.C.

Success of Special Pay Rates

In April 1986 we testified that the special rate program has helped agencies to be more competitive in certain occupations and labor markets.¹¹ An example of this would be the special pay rates that are in effect for engineers. As shown in figure 4.1, the pay comparability gap for federal engineers is smaller than the gaps that exist for federal attorneys and chemists, who are not currently covered by special pay rates.

Nevertheless, in our March 1984 report, we stated that OPM had been slow to increase special pay rates, despite agency beliefs that OPM's decisions then to limit or deny special rate adjustments were having an adverse effect on their operations.¹² In contrast, we reported that OPM believed its decisions had not harmed the government's ability to attract and retain employees because the slowdown in the economy had minimized recruitment and retention problems, despite pay disparities. Also in 1985, we reported on how the special rates OPM granted over the years were too small to overcome the Federal Aviation Administration's police staffing problems at National and Dulles airports.¹³

In our April 1986 testimony, we stated that other problems were inherent in the special rate program. First, the current law authorizing special rates does not allow the government to pay starting salaries above the tenth step of each grade of the General Schedule. As a result, agencies are at a recruiting disadvantage when entry-level salaries are at the maximum rate but are still substantially below starting salaries in the private sector. For example, special pay rates for engineers, including environmental engineers used in the Superfund program, are currently at the maximum levels for grades 5, 7, and 9.

Second, the current law does not allow OPM and agencies to use special rates to deal with factors other than pay disparities. For example, special rates cannot be authorized to correct staffing problems caused by undesirable working conditions and locations, or by differences in federal and private-sector premium pay and benefits.

¹¹General Accounting Office, Federal Pay and Personnel Systems. Statement of Rosslyn S. Kleeman before the Subcommittee on Civil Service, Post Office and General Services, Senate Committee on Governmental Affairs, Washington, D.C., April 30, 1986.

¹²GAO/GGD-84-54.

¹³Compensation and Staffing Levels of the FAA Police Force at Washington National and Washington Dulles International Airports (GAO/GGD-85-24, May 17, 1985)

OPM/Navy Demonstration Project

Besides special pay rates, OPM is involved with the Department of the Navy in an experimental demonstration project at two research laboratories in California, that involves a pay-for-performance compensation program.

The Civil Service Reform Act of 1978 authorized OPM to conduct experimental demonstration projects to explore new concepts and approaches in personnel management that could enhance the effectiveness and efficiency of the federal work force. The first experimental project approved by OPM was the Department of the Navy's demonstration project at the Naval Weapons Center in China Lake, California, and at the Naval Ocean Systems Center in San Diego, California.

The China Lake project was initiated in July 1980 to demonstrate that the effectiveness of federal laboratories can be enhanced by allowing greater managerial control over the personnel function. Specifically, the project provides for implementing (1) a simplified and more flexible position classification system, (2) an objectives-oriented performance appraisal system that is both streamlined and closely integrated with organizational objectives, and (3) a pay-for-performance compensation program.

Under the project, the 18 General Schedule grades were combined to form 6 pay bands, with each band incorporating at least 2 General Schedule grades (e.g., GS-11 and GS-12) directly related to "levels of difficulty." The six broad pay bands were designed to enhance competitive recruitment of quality candidates, as well as to allow tangible performance-linked pay distinctions between employees. Progression within each pay band was to be accomplished through performance appraisal, while promotion between pay bands was to follow usual merit promotion practices.

According to a March 1984 report prepared by OPM, the number of employees intent on quitting decreased slightly at the demonstration laboratories but increased at two control laboratories. Intent to quit decreased the most among scientists and engineers at the demonstration laboratories, and was significantly lower among high performers than among low performers. Turnover at the two demonstration laboratories ranged from 5.2 to 6.5 percent, compared with 8.5 to 9.3 percent at the two control laboratories. Among scientists and engineers rated outstanding, turnover was 6.0 to 7.1 percent at the demonstration laboratories, compared with 8.7 to 16.8 percent at the control laboratories.

In addition, pay satisfaction—which was low at all four laboratories prior to 1980—decreased significantly at the control laboratories, while increasing slightly at the demonstration laboratories. Employee satisfaction with extrinsic factors such as supervision, performance appraisal, promotion opportunities, and organization climate increased significantly at the demonstration laboratories but only slightly at the control laboratories.

In our March 1986 testimony, we stated that alternative pay systems like the China Lake project could be more expensive than the present federal pay system.¹⁴ Personnel costs at the demonstration laboratories reportedly are almost 6 percent higher than at the control laboratories. This is due in part to the higher pay rates offered to new employees to compete with private industry. For example, at one of the demonstration laboratories, entry-level salaries increased by over 45 percent the first year. These higher salaries may be the main reason for the project's popularity. In contrast, DOD and OPM officials assert that the increased personnel costs are offset by reduced efforts in administration, classification, and recruiting, plus intrinsic improvements such as higher quality work and productivity and better job satisfaction.¹⁵

Furthermore, we stated that if agencies individually develop alternative pay programs, sufficient central control will be needed to ensure that they do not use pay differences to compete with each other for the same employees. If alternative pay systems were established for certain occupations, agencies would be required to operate dual personnel systems: a new system for these occupations and the existing system for other white-collar employees. This could create enormous administrative problems as varying standards and processes are applied for hiring, paying, training, and retaining these personnel.

Should a need exist for alternative pay systems, it would be preferable to establish them not on a skills (occupation) basis, but on an agency-by-agency basis, to eventually include all agencies, with central control exercised by OPM.¹⁶ Without central control, we foresee a potential for inequitable pay and personnel practices.

¹⁴Kleeman, March 19, 1986.

¹⁵As part of our ongoing review of the China Lake project, we are, among other things, examining the extent to which any improvements can be attributed to the project.

¹⁶Kleeman, April 30, 1986.

DOD's Selective Reenlistment Bonus Program

DOD also has a number of special pay programs to attract and retain military personnel for hard-to-fill occupations. The selective reenlistment bonus program, authorized in 1974, is the primary monetary incentive military personnel managers have for inducing people to reenlist in occupational specialties that are experiencing chronic shortages or are hard to fill.

In testimony before the Subcommittee on Manpower and Personnel, Senate Committee on Armed Services, we endorsed the selective reenlistment bonus program for military personnel because of its management flexibility.¹⁷ Specifically, we stated that the program provides an effective retention incentive that can be targeted to specific personnel shortfall problems and is therefore a more cost-efficient alternative than many others, such as across-the-board pay raises.

More recently, we reported on the Navy's use of this program for retaining personnel.¹⁸ Overall, we found that the Navy's program was well managed. We reported that in fiscal year 1984 the Navy, which was the largest user of the program, had awarded bonuses to over half (20,525) of all personnel with at least 21 months and not more than 10 years of service, or to about 29 percent of those eligible to reenlist. These bonuses had an average contract value of about \$11,340. In addition, the Navy awarded bonuses, which averaged \$9,190, to 7 percent of the people with 10 to 14 years of service who reenlisted in fiscal year 1984.

In reviewing these bonuses, we found that the Navy occasionally paid bonuses to people who reenlisted in occupational specialties and years-of-service zones that were over 100-percent staffed. However, where this was done, the future manpower needs of the specialty, taken as a whole, were significantly understaffed. We reported that the Navy also authorized bonuses for ratings at experience levels where reenlistment rates were already quite high, as in the case of people in certain ratings with 10 to 14 years of service. However, the Navy paid these bonuses when (1) staffing was considered to be critically short, and retaining even a few additional people was important to fleet operations; and (2) the marginal cost—the cost of an additional reenlistment—was less than the cost to recruit and train a replacement.

¹⁷Military Compensation Issues. Statement of Kenneth J. Coffey before the Subcommittee on Manpower and Personnel, Senate Committee on Armed Services, April 7, 1983.

¹⁸Navy Management and Use of the Selective Reenlistment Bonus Program (GAO/NSIAD-85-143, Sept. 9, 1985).

Conclusions

Superfund employees, like federal employees in general, receive less in pay than their private-sector counterparts for comparable work, according to the government's pay survey. This occurs because the alternative pay rates proposed by the President, and not disapproved by the Congress, have been lower than the comparability adjustments indicated by the President's Pay Agent. Moreover, some former Superfund employees were able to obtain sizable increases in their annual pay by leaving the program for jobs in the private sector.

OPM's special pay rates have been successful in narrowing the pay gap in selected occupations, and in the process, these rates have helped agencies to be more competitive and encouraged employees to stay longer. However, in some occupations, these special pay rates are now at the maximum permitted by law. In addition, we consider the increasing growth in the use of this program to be a symptom of, and not a solution to, the overall pay comparability issue. Moreover, if this issue were resolved, we believe the special rate program could be used more effectively to address any unique pay problems adversely affecting the recruitment and retention of federal employees.

Among the Superfund technical and scientific occupations we studied, only Superfund engineers, like all federal engineers, received special pay rates. While EPA could request special rates from OPM for other Superfund occupations, it will need to show that (1) it is experiencing recruitment and retention problems because of the disparity between federal and private-sector pay and (2) alternative means, such as improved working conditions, job redesign, and training, will not resolve these problems.

OPM and the Navy's China Lake demonstration project reportedly have helped address pay and retention problems. However, until this project is fully tested and evaluated, we believe it would be premature to apply its concepts to the entire federal work force, or even to other work settings, such as Superfund.

DOD's reenlistment bonus program has been effective in retaining military personnel. While this concept of bonuses could possibly be used to help recruit and retain civilian personnel, we question whether bonuses are needed for this purpose, since OPM already has a special pay rate program to address these problems.

EPA is now considering the recommendations of an internal study, which called for improving Superfund compensation through bonuses and

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added fringe benefits. As a general rule, we have opposed separate pay systems for specific employee groups, suggesting instead that any changes be addressed at 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. We would not be opposed, however, to any changes that EPA might make in its internal awards, provided the changes are permissible under the present pay and compensation system applicable to all federal employees.

Superfund Employees Need More Training

Superfund employees believe they need more training to effectively carry out Superfund response actions, according to respondents to our survey and a special study done by EPA. Remedial design and action, cost recovery, and legal case development were just some of the areas in which employees voiced the need for additional training.

Superfund employees who responded to our questionnaire and program managers we interviewed had mixed views on the Superfund training now available. While many of them were satisfied, many identified problems in such areas as course content and delivery, management commitment to training, and the time employees have available to attend training.

EPA is developing a more structured and organized training program that, if fully implemented, should resolve most of these problems. In addition, staffing is being increased, which may help lighten employee work loads, thereby providing employees with more time to attend training. Training funds budgeted for Superfund have also been substantially increased.

How Superfund Employees Are Trained

EPA's training for Superfund employees consists of on-the-job training (OJT) and a wide variety of courses sponsored by headquarters and the regions. We found that courses are generally taken at the initiation of the employee, the encouragement of the supervisor, or the requirement of EPA.

According to some program managers, OJT is the primary vehicle for training new employees. Most OJT occurs when an employee works with a more senior employee until the former becomes familiar with the program. This can take as little as 3 months to as much as a year, depending on the position involved and the experience level of the new employee. For example, an employee entering as a grade 9 would usually require more training than someone entering as a grade 13.

EPA provides a substantial variety of training courses for Superfund employees. The courses offered cover the following four areas: (1) management, law, and administration; (2) safety; (3) program and operation; and (4) technical and scientific matters. Each quarter OSWER issues a training calendar that lists the courses available to all hazardous waste staff and a course catalog containing detailed information on the subject matter and type of course presentation.

In addition, EPA has established a number of required courses for its remedial project managers and on-scene coordinators. These required courses are listed in table 5.1. (Some of the additional courses available from EPA are shown in table 5.5.)

Table 5.1: Required Courses for Remedial Project Managers and On-Scene Coordinators

Courses

Personal Protection and Safety
Project Officer Certification
Grants Management
Superfund Orientation
Community Relations
Remedial Investigation and Feasibility Study^a
Construction Management^a
Hazardous Materials Incident Response Operations^b

^aNot required for on-scene coordinators

^bNot required for remedial project managers

Source: EPA.

During fiscal years 1985 and 1986, OSWER conducted about 300 hazardous waste training sessions in a variety of courses. About 17,000 staff from EPA, state and local governments, other federal agencies, and consultants attended these sessions. EPA was not able to provide us with separate data on the number of Superfund employees who participated in these training sessions.

Our survey of 526 current Superfund employees showed that the training courses they attended increased somewhat during fiscal years 1985 and 1986. In those 2 years, they attended an average of about 1.8 and 2.3 training courses and spent an average of about 7 and 8 days, respectively. Seventeen percent of the current employees had not taken any courses in fiscal year 1986, compared with 26 percent in fiscal year 1985.

Additional Training Needs of Superfund Employees

According to our survey, 61 percent of current employees believed they needed additional training on Superfund tasks, many of them in several areas. EPA's Superfund work force planning project also found that employees needed additional training on Superfund tasks. In addition, this project identified the knowledge, skills, and abilities (KSAs) that employees needed to improve relative to these tasks, as well as employee interest in attending EPA's present training courses. While EPA's present training courses provide some of the types of training

employees need, some courses may need to be revised or new courses developed.

Employees Need More Training to Carry Out Superfund Tasks

In our questionnaire we asked current Superfund employees to indicate which of 18 Superfund tasks they performed and whether their training for that task, including OJT, is at a level they feel they need to be comfortable working on that task. On the basis of these responses, 61 percent of current employees said they needed training on at least one task; about 38 percent needed training on at least three tasks.¹ Table 5.2 shows the percentage of current employees who felt a need for training, by number of tasks.

Table 5.2: Percentage of Current Employees Needing Training, by Number of Superfund Tasks

| Number of tasks requiring training | Percentage of respondents |
|---|----------------------------------|
| None | 39 |
| One | 11 |
| Two | 12 |
| Three | 8 |
| Four | 7 |
| Five or more | 23 |
| Total | 100 |

The areas in which training was most often thought needed were remedial design and action, contracts management, negotiations and settlements, legal case development, and cost recovery. As shown in table 5.3, at least 20 percent of current employees indicated that they needed training in each of these areas.

¹Employees can work on several tasks and therefore have a need for training on more than one task. Table 5.3 shows the 18 tasks included in our questionnaire.

Table 5.3: Current Employees' Training Needs by Superfund Tasks

| Task | Percentage of technical employees | |
|---|-----------------------------------|--------------------|
| | Working on task | Requiring training |
| 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 |

Training Needs Identified by EPA's Superfund Work Force Planning Project

EPA's Superfund work force planning project, which was completed in January 1987 (see ch. 2), also indicated that employees had a desire for more training on Superfund tasks in order to perform them more effectively. The project surveyed 1,532 Superfund employees from all occupations who charged 25 percent or more of their work time to Superfund; responses were received from 1,282 employees (84 percent). From the 29 tasks on which respondents were asked to comment,² respondents desired training on an average of 7 tasks. On average, 52 percent of the respondents indicated that they needed training for more effective performance.

The eight areas in which employees most often expressed a need for training included procurement/contracts, remedial investigation and feasibility studies, remedial action, remedial design, negotiations and settlements, quality control and assurance, responsible-party oversight,

²These 29 tasks included 16 of the 18 tasks covered by our questionnaire.

and cost recovery. These included the three areas most often identified in our survey.

Various Types of Training Are Needed

The project also concluded that training should focus on helping Superfund staff acquire the KSAs necessary to accomplish critical Superfund tasks. On the basis of surveys of program managers, the project identified nine critical tasks (see ch. 2) and the KSAs required to carry them out. The project then compared these KSAs with those possessed by the Superfund employees surveyed to identify the KSAs current staff need to acquire or expand in order to perform their work well. The KSAs in which improvement will be required are shown in table 5.4. In addition, the project also identified the KSAs that will need to be acquired or expanded through position-specific training for key positions required to carry out these critical tasks.

Table 5.4: Knowledge, Skills, and Abilities That Will Require Improvement for Critical Superfund Tasks

| Knowledge of | Skills in | Ability to |
|--|--|---|
| 1. Industrial processes and environmental losses | 1. Using latest developments for treating hazardous materials. | 1. Plan, organize, and execute analytical and technical studies. |
| 2. Oncology, toxicology, biotechnology, ecology and related disciplines. | 2. Managing chemical risk assessment projects | 2. Administer environmental regulations for chemical substances. |
| 3. Current concepts and practices in organic chemistry. | 3. Developing regulatory packages. | 3. Develop policies and guidelines applicable to state programs |
| 4. Hydrogeology and groundwater movement variables. | 4. Conducting interviews, investigations, and document searches and preparing/presenting evidence. | 4. Analyze budget issues. |
| | 5. Using investigative techniques. | 5. Provide technical guidance on health and environmental risk of toxic substances. |
| | 6. Reviewing, evaluating, and modifying clean-up treatment techniques. | |
| | 7. Designing and modifying treatment processes and making adjustments for on-site application. | |

Source: EPA's January 1987 Superfund work force planning project report.

Besides identifying tasks and KSAs in which additional training was needed, the project identified the demand for specific training courses and the reasons employees desired these courses. For the most part, the majority of respondents wanted this training to become more effective in their current positions. Table 5.5 shows the percentage of project respondents who desired training in specific areas or courses, and the percentage who desired this training to perform more effectively.

Table 5.5: Superfund Employee Needs for Available Training Areas

| Training need area | Percentage of project respondents | |
|--|-----------------------------------|---|
| | Wanting training | Citing effective performance as reason ^a |
| Other regulations that affect Superfund programs | 47 | 74 |
| Superfund regulations | 53 | 72 |
| Resource Conservation and Recovery Act regulations | 54 | 66 |
| Groundwater-related training | 46 | 65 |
| Project management | 41 | 61 |
| Time management | 39 | 61 |
| Risk management | 38 | 61 |
| Field monitoring technologies | 38 | 57 |
| Clean-up technologies | 49 | 52 |
| Stress management | 37 | 52 |
| Remedial engineering | 29 | 52 |
| Construction management | 22 | 52 |
| Contingency planning | 21 | 50 |
| Emergency response mitigation techniques and practices | 30 | 47 |

^aAs a percentage of those wanting training
 Source: EPA's January 1987 Superfund work force planning project

The Superfund work force planning project recommended that EPA (1) review and assess both the training needs and the staffs' training desires identified by this project in designing new or modifying existing training courses, (2) devote training resources to carrying out those functions that will become increasingly more important aspects of Superfund operations—management and administration and procurement and contracts management, (3) consider the KSAs identified by program managers in establishing essential areas to be covered in course content, and (4) devote special training efforts to raising the level of KSAs for critical tasks among incumbents in key Superfund positions.

OSWER plans to consider the project's findings in connection with its ongoing efforts to develop a structured training program, discussed later in this chapter.

Employees and Program Managers Have Mixed Views on Superfund Training

In addition to citing a need for more training, current employees and program managers had mixed views on Superfund training. Most employees and managers expressed satisfaction with the training received, yet many also identified problems pertaining to (1) course content and delivery, (2) training program structure and management commitment to training, (3) the heavy Superfund work load, and (4) budget restrictions on training.

Satisfaction With Present Training Program

As shown in table 5.6, our survey showed that current employees were generally more satisfied than dissatisfied with the EPA training courses taken and the OJT they received. However, more employees were satisfied with EPA training courses than with OJT.

Table 5.6: Current Employee Satisfaction With Superfund Training

| Type of training | Percentage of employees | | |
|---------------------|-----------------------------|------------------------------------|--------------------------------|
| | Very or generally satisfied | Neither satisfied nor dissatisfied | Very or generally dissatisfied |
| Training courses | 58 | 25 | 17 |
| On-the-job training | 44 | 23 | 33 |

For the most part, the program managers we interviewed also were satisfied with the training employees received. Most of the headquarters branch chiefs stated that Superfund-related training, including OJT, provided employees with the skills needed to carry out the program. They did state that more training would be preferable, especially for new employees. Program managers in the six regions were also generally satisfied with the training employees received.

Course Content and Delivery

Our survey of current technical employees showed that about half believed that some of the courses offered by EPA are not specific to Superfund tasks. Program managers at four of the six regions also had concerns with the training courses available from EPA. These concerns fell into two areas.

First, more courses are needed that are directly applicable to Superfund response actions; currently, some courses are too general. As an example, one regional official stated that the region had sent its project managers to a training course in contracts management, as directed by headquarters. However, project managers found that the course material was not applicable to Superfund work.

Second, courses need to be better publicized and offered more frequently and on a regularly scheduled basis. In addition, about half of the current employees also believed that the courses offered are not well-publicized. OSWER issues a quarterly calendar showing the dates and places that various training courses will be held, but these calendars are only sent to office and division directors, branch chiefs, training coordinators, and others who have expressed an interest in obtaining them. Consequently, some employees may learn too late—or not at all—as to the dates various courses are to be held. OSWER, however, plans to develop a regular schedule for its various course offerings as part of its ongoing efforts to develop a structured and organized training program.

Program Organization and Structure and Management Commitment

In the six regions, several program managers stated that training was an area that needed to be better organized and structured. For example, one unit chief said that there was no formal program. In another region, officials stated that training should be formalized and consistent nationally. In yet another region, the Superfund branch chief said that training could be better organized and that it should be given top priority at the national level.

Our survey also showed that 32 percent of current employees considered management's lack of commitment to training a hindrance to their obtaining needed training. According to OSWER's training coordinator, management has not been sufficiently committed to meeting the increasing demands for training at the regional and state levels, even though current activities have been useful in providing critical training in several areas. He stated that training has not been anyone's priority and although top management says there is a need for training, management has not yet provided the staff necessary to manage an effective training program.

Work Load and Funding

Of the seven problems our questionnaire presented to current employees, the heavy Superfund work load was the one problem that most hindered employees from obtaining needed training. In all, 77 percent of current employee respondents believed the following statement was somewhat or very true: "My work load is too heavy to allow me time to take courses." About one-third believed this statement was very true. In addition, 35 percent of current employees said they had supervisors who lacked the time to provide needed OJT.

Program managers at five of the six regions as well as program officials at EPA headquarters also said that the heavy work load in the Superfund program was a constraint to training. Moreover, some of these officials stated that the heavy work load would become more severe with the reauthorization of the Superfund program. Some of them indicated that if they were given additional FTEs, more staff could be released from their duties to take needed training. As noted in chapter 2, staffing levels for the Superfund program were increased significantly for fiscal year 1987, but EPA did not expect that it would be able to fill many of these positions that year.

In addition, funds were not always available to provide employees with needed training. Over half (56 percent) of current employees believed that budget restrictions prevent them from obtaining needed training. Funding also was considered somewhat of a problem by managers in two of the six regions. For example, in one of the regions, the Superfund branch chief stated that the funding allocated to training should be increased and that employees should be allowed to take more training from external sources. Specifically, this official said that the region should encourage its employees to take more graduate level college courses and provide more funds to do this.

Training funds for the Superfund program were substantially reduced during fiscal year 1986 because of the delays encountered in the program's reauthorization. For example, OSWER had \$4.7 million budgeted for training in fiscal year 1986, but only about \$2.8 million of this was actually spent. The remainder was reprogrammed to fund other Superfund activities until the program could be reauthorized. As a result, there were no training funds available from OSWER during the second or third quarters of the fiscal year. However, for fiscal years 1987 and 1988, OSWER has budgeted \$6.7 million and \$8.7 million, respectively. Besides the training funds made available by OSWER, which pays for headquarters and regional staff training, the regions also have other funds available that can be used in support of Superfund training.

EPA Efforts to Improve Superfund Training

In response to a recognized need for additional training in the hazardous waste area, including Superfund, the Assistant Administrator, OSWER, established a training work group in January 1985. Its goal was to ensure that EPA headquarters, regional, and state personnel in the hazardous and solid waste programs receive the training necessary to conduct their functions effectively. One of the group's key activities was to develop and issue a training strategy for OSWER.

OSWER's training strategy report, prepared by International Business Services, Inc., Washington, D.C., and issued in February 1986, found a number of problems with the organization and structure for carrying out Superfund training. Specifically, the report stated that there was no consistency in the training approach within OSWER's program offices in that only one of its three program offices had an established training organization. The report also noted a general lack of commitment to training, as evidenced by the resources (staffing and funds) devoted to training during fiscal year 1985. It attributed these problems to the lack of a comprehensive training plan or strategy.

In addition, in addressing the training needs identified in OSWER's fiscal year 1986 needs assessment, the training strategy report cited a need for

- an enhanced commitment to training and that OSWER must assume responsibility for training oversight and assistance;
- an expanded national training strategy to provide a program built on functional responsibility and program objectives and oriented toward user needs and performance improvement;
- mechanisms to provide wider dissemination of training in the most cost-efficient manner, which will require greater coordination both within OSWER and other EPA offices and federal agencies; and
- meeting the changing requirements for training inherent in then-pending legislation for reauthorizing the Superfund program.

The training strategy report presented a series of recommendations to improve training program operations by implementing a structured OSWER-wide training program, based on improving performance and enhancing OSWER's capability to meet training needs. Consistent with the report's recommendations, the training work group has undertaken or plans to undertake the following activities:

- Developing a document outlining policies, procedures, and roles and responsibilities for the OSWER training organization and the management of training resources.
- Developing an OSWER management plan containing detailed work plans and rationale for activities to be conducted in implementing the strategy.
- Conducting an overall curriculum review and modifying the courses and/or developing new courses as needed. (This effort is to draw on the findings of the Superfund work force planning project.)

- Developing and implementing a course monitoring and evaluation system to assess the impact of training on actual job performance.
- Establishing a regular or periodic needs assessment process to determine future and emerging training needs.
- Coordinating interagency and intra-agency training activities to maximize the effectiveness of training resources.
- Continuing ongoing support in the areas of production of the quarterly training calendar, courses currently under development, and the groundwater training project. (This is to include establishing a regular schedule for OSWER's various course offerings.)

OSWER's proposed training policies and procedures, which were issued in draft in January 1987, consolidate OSWER training guidance into one basic document. The draft provides a clear definition of the training responsibilities of various organizational entities and sets forth policies and establishes procedures for various training and training-related activities.

OSWER's training implementation plan, issued in April 1987, identifies the major projects and activities that need to be conducted over the next 2 years to implement the structured training program called for in OSWER's training strategy report. These projects/activities were separated into four major areas: organization and structure (training management), curriculum and course development, training delivery mechanisms, and monitoring and evaluation.

According to the OSWER training coordinator, although management has approved the management implementation plan, the policy document was still under review as of May 8, 1987. This official voiced the opinion that management's commitment to training will become evident when management approves and decides on a level of funding to implement the policy document.

Conclusions

Superfund employees need more training to help them effectively carry out response actions, according to our survey and an EPA study. However, present Superfund training courses may have to be revised or new courses developed if these needs are to be met.

EPA recognizes that it needs a more structured and organized training program to better meet the training needs of Superfund employees. Plans and policies have already been drafted to provide a focused and

coordinated program, an improved training capacity, and stronger commitment to training. If effectively implemented and funded, these plans and policies should help resolve problems regarding course content and delivery, organization and structure, and management commitment.

While training funds were scarce during fiscal year 1986, this appears to have been a temporary problem associated with delays in the program's reauthorization. Superfund staffing was increased significantly for fiscal year 1987. But unless these increases are used to relieve employee work load, employees could still have a problem obtaining needed training.

Recommendation

To meet present as well as future training needs, we recommend that the Administrator, EPA, direct OSWER to implement its plans and proposed policies for improving the Superfund training program.

Agency Comments and Our Evaluation

EPA's Acting Assistant Administrator (OPPE) stated that EPA has already recognized the need for a more formal, structured national Superfund training program intended to improve job performance and that efforts are currently underway to implement our recommendation (see app. IV). He stated that OSWER created the Office of Program Management and Technology earlier this year, which has begun implementation of recommendations in the OSWER Training Strategy and the Superfund work force planning project. He added that training strategy recommendations are scheduled for full implementation in fiscal year 1988 and the Superfund work force planning project recommendations are planned for full implementation in fiscal year 1989.

In addition, the Acting Assistant Administrator stated that the Administrator is strongly committed to the recommended employee training and technology transfer and has established a formal work group to examine training and technology transfer activities Agency-wide. Furthermore, he stated that the accomplishments in the Superfund program based on the work group's recommendations serve as models for the Agency.

We support EPA's efforts to improve its Superfund training program. As previously stated, these efforts, if effectively implemented and funded, should resolve the problems we found.

Survey of EPA Superfund Staffing and Compensation—Current Employees



U.S. GENERAL ACCOUNTING OFFICE SURVEY OF EPA SUPERFUND STAFFING AND COMPENSATION - CURRENT EMPLOYEES

INTRODUCTION

(1-4)
1 (5)
089341 (6-11)

The U.S. Congress requires that the General Accounting Office (GAO) review employee turnover and staffing and training needs in the Environmental Protection Agency's Superfund program. As a current employee of the Superfund program, your attitudes are important for us to get a broad representation of views about this issue. Please take a few minutes to fill out this questionnaire and return it in the enclosed post-paid envelope. Your assistance is very much appreciated.

Because we want your candid answers, we are providing a pledge of confidentiality. This means that your answers will never be reported in any way that could identify you personally.

Tom Storm will be glad to talk with you if you have any questions about this survey. Please call him at (FTS) 382-4326 or collect at (202) 382-4326. If the return envelope is misplaced, please send your completed questionnaire to:

Tom Storm
U.S. General Accounting Office
441 O Street NW, Room 4476
Washington, DC 20548

Your response within two weeks will help us avoid costly follow-up mailings. Thank you for your help.

1. Do you currently work in the Superfund program an average of at least eight hours per week? (CHECK ONE) (12)

N= 526

1. 100.0 Yes - GO TO QUESTION 2

2. 0.0 No (PLEASE EXPLAIN)

| If you checked 2, please STOP HERE |
| and return the questionnaire in the |
| envelope provided. Thank you. |

2. Overall, how satisfied or dissatisfied are you with your job in the Superfund program? (CHECK ONE) (13)

N= 517

1. 19.3 Very satisfied

2. 55.7 Generally satisfied

3. 13.7 Neither satisfied
nor dissatisfied

4. 8.7 Generally dissatisfied

5. 2.5 Very dissatisfied

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Compensation—Current Employees**

3. How strongly do you agree or disagree with the following statements? (CHECK ONE FOR EACH STATEMENT)

(14-20)

| | NEITHER AGREE | | | | | DOESN'T APPLY TO ME (6) |
|--|--------------------------|---------------------------|------------------------|------------------------------|-----------------------------|----------------------------------|
| | STRONGLY AGREE (1) | GENERALLY AGREE (2) | HOR DISAGREE (3) | GENERALLY DISAGREE (4) | STRONGLY DISAGREE (5) | |
| a. I like working for Superfund because of the importance of its mission, that is, working toward a better environment. N=525 | 62.9 | 30.9 | 5.3 | 0.6 | 0.4 | 0.0 |
| b. My work environment allows me to conduct my duties in a professional manner. N=523 | 16.4 | 39.8 | 11.7 | 19.3 | 12.6 | 0.2 |
| c. The amount of paperwork required for my job hurts the progress of my Superfund projects. N=525 | 20.4 | 34.1 | 24.8 | 16.2 | 2.3 | 2.3 |
| d. I spend too much time on work that should be done by clerical/administrative staff. N=522 | 29.3 | 30.1 | 15.9 | 17.6 | 4.4 | 2.7 |
| e. The amount of time I have to complete my work is usually adequate. N=524 | 4.2 | 39.3 | 12.2 | 29.0 | 14.9 | 0.4 |
| f. My travel for Superfund keeps me away from home more than I like. N=523 | 2.9 | 7.8 | 27.5 | 33.3 | 17.2 | 11.3 |
| g. I attend too many community meetings. N=526 | 1.1 | 1.9 | 18.7 | 24.8 | 16.0 | 37.4 |

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4. Please indicate below how satisfied or dissatisfied you are at the present time with each of the following. (CHECK ONE FOR EACH ITEM)

(21-30)

| | VERY SATIS- FIED (1) | GENERALLY SATIS- FIED (2) | NEITHER SATISFIED NOR DISSATIS- FIED (3) | GENERALLY DISSATIS- FIED (4) | VERY DISSATIS- FIED (5) | DOESN'T APPLY TO ME (6) |
|--|-------------------------------|------------------------------------|---|---------------------------------------|----------------------------------|----------------------------------|
| N-473 a. Your salary | 2.5 | 32.8 | 14.2 | 33.6 | 16.9 | 0.0 |
| N-521 b. Fringe benefits available to you (including retirement, leave, holidays) | 9.2 | 54.3 | 15.9 | 15.5 | 4.6 | 0.4 |
| N-520 c. Opportunities for promotion | 1.9 | 23.1 | 16.9 | 35.8 | 21.3 | 1.0 |
| N-521 d. Your immediate supervisor | 27.6 | 42.8 | 13.8 | 8.8 | 6.9 | 0.0 |
| N-526 e. Amount of recognition you receive from EPA for good work performance | 6.8 | 37.1 | 14.8 | 27.4 | 13.7 | 0.2 |
| N-520 f. EPA regional management | 3.7 | 32.1 | 26.3 | 20.4 | 9.0 | 8.5 |
| N-524 g. Program guidance from EPA headquarters | 1.0 | 23.3 | 26.3 | 31.5 | 11.1 | 6.9 |
| N-525 h. Conditions of your physical work environment (space, condition of facilities, etc.) | 3.2 | 24.2 | 11.0 | 26.1 | 35.4 | 0.0 |
| N-525 i. Utilization of your technical skills | 6.3 | 50.3 | 17.3 | 14.7 | 7.4 | 4.0 |
| N-522 j. Progress made in cleaning up hazardous waste | 2.7 | 24.1 | 22.4 | 33.9 | 13.6 | 3.3 |

k. Please add any other aspects of your job that you would like to mention. (31)

63.9 - Had no comments
36.1 - Had comments

N=526

5. During the next 12 months, do you think you will seek employment outside of the Superfund program? (CHECK ONE)

- N-525 (32)
1. 14.5 Definitely yes
 2. 21.1 Probably yes
 3. 27.0 Uncertain
 4. 26.5 Probably no
 5. 10.9 Definitely no

6. Since you began working in the Superfund program, have you applied for or actively sought employment outside of the Superfund program, including other jobs at EPA? (CHECK ONE)

- N=525 (33)
1. 43.4 Yes -- GO TO NEXT QUESTION
 2. 56.6 No -- SKIP TO QUESTION 9

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7. How long ago did you most recently look for a job outside of Superfund, even if it was another EPA job? (CHECK ONE)

N=228 (34)

1. 67.56 months ago or less
2. 19.37 to 12 months ago
3. 9.613 to 24 months ago
4. 3.5 More than 2 years ago

8. How much of a reason, if any, was each of the following in your decision to look at other jobs? (CHECK ONE FOR EACH ITEM) (35-45)

| | MAJOR REASON (1) | MINOR REASON (2) | NOT A REASON (3) | DOES NOT APPLY TO ME (4) |
|---|---------------------|---------------------|---------------------|-----------------------------|
| a. Immediate increase in salary N=227 | 52.9 | 27.3 | 19.4 | 0.4 |
| b. Better benefits (retirement, insurance, etc.) N=228 | 17.1 | 25.4 | 55.7 | 1.8 |
| c. More opportunity for future advancement N=226 | 71.7 | 17.7 | 10.2 | 0.4 |
| d. New work location N=226 | 19.5 | 20.8 | 57.1 | 2.7 |
| e. Change to another career N=224 | 15.6 | 16.5 | 64.3 | 3.6 |
| f. Uncertainty over Superfund reauthorization N=225 | 8.0 | 20.9 | 68.9 | 2.2 |
| g. Too many levels of review N=226 | 20.8 | 29.2 | 48.2 | 1.8 |
| h. Too much paperwork N=226 | 20.8 | 28.8 | 49.1 | 1.3 |
| i. Too much out-of-town travel N=226 | 3.1 | 10.6 | 80.5 | 5.8 |
| j. To avoid exposure to hazardous substances N=226 | 2.7 | 6.2 | 81.0 | 10.2 |
| k. To return to school N=226 | 1.8 | 2.7 | 79.2 | 16.4 |

l. Are there any other reasons you looked at other jobs?

(46)

55.5 - Had no comments
44.5 Had comments
N=229

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9. How would you describe your morale as a member of the Superfund staff? (CHECK ONE) (47)
N=524

1. 9.9 Very high

2. 36.1 High

3. 34.5 Average

4. 14.1 Low

5. 4.8 Very low

6. 0.6 Uncertain

7. 0.0 No basis to judge

10. Are you employed full time in the Superfund program? (CHECK ONE) (48)
N=526

1. 74.0 Yes - SKIP TO 12

2. 26.0 No - GO TO NEXT QUESTION

11. Since October 1, 1985, what percentage of your regular 40-hour work week have you spent on Superfund activities? (ROUND TO NEAREST WHOLE PERCENTAGE) (49-51)
N=134

Range=.1-1.0

____ % of regular hours on Superfund

Mean=.59

Median=.50

12. How many hours a week, on the average, have you worked overtime since October 1, 1985? Give paid and unpaid extra hours separately. (IF NONE, ENTER ZERO AND SKIP TO QUESTION 15) (52-53)

____ hours per week paid overtime

N=412

Range=0-40

AND

Mean=1.71

Median=0

(54-55)

____ hours per week unpaid overtime

N=453

Mean=5.16 Median=4

IF FULL-TIME SUPERFUND EMPLOYEE
SKIP TO QUESTION 15

**Data not reported due to problems with reliability.

13. Of all the overtime hours you reported in the previous question, what percentage are for Superfund job responsibilities? (IF NONE, ENTER ZERO AND SKIP TO QUESTION 15.) (56-58)

** % of paid overtime hours for Superfund responsibilities

AND

** % of unpaid overtime hours for Superfund responsibilities (59-61)

14. Is the number of hours that you work in excess of your regular duty hours more than you like, less than you would like, or about the right amount? (CHECK ONE FOR EACH TYPE OF OVERTIME) (62-63)

| | PAID OVERTIME | UNPAID OVERTIME |
|-------------------------------------|---------------|-----------------|
| 1. Much more than I like | ** | ** |
| 2. Somewhat more than I like | ** | ** |
| 3. About the right amount | ** | ** |
| 4. Somewhat less than I would like | ** | ** |
| 5. Much less than I would like | ** | ** |
| 6. No basis to judge not applicable | ** | ** |

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| | | |
|---|---|--|
| | | DUP (1-4) 2 (5) <u>089341</u> (6-11) |
| WORK LOAD | | |
| 15. Overall, do you feel that your current Superfund work load is too heavy, too light, or just about right? (CHECK ONE) N=522 (12) | | |
| 1. 21.3 Much too heavy | | |
| 2. 38.9 Somewhat too heavy | | |
| 3. 30.7 Just about right | | |
| 4. 6.7 Somewhat too light | | |
| 5. 0.8 Much too light | | |
| 6. 1.7 Don't know; no basis to judge | | |
| 16. What is the primary function of your work unit? (CHECK ONE) N=524 (13) | | |
| 1. 8.8 Removal | | |
| 2. 19.1 Remedial | | |
| 3. 23.5 Enforcement | | |
| 4. 5.2 Emergency response | | |
| 5. 4.8 General Counsel | | |
| 6. 4.6 Contracts/grants administration | | |
| 7. 7.8 Program management/support | | |
| 8. 13.0 Environmental services | | |
| 9. 13.4 Other (PLEASE SPECIFY) | | |
| | 17. How many Superfund employees work in your unit? (GIVE FULL-TIME EQUIVALENT NUMBER. FOR EXAMPLE, IF TWO PEOPLE WORK HALF-TIME, COUNT THAT AS ONE PERSON.) N=507 Mean=13.21 (14-19) Range=0-200 Median=10 _____ people | |
| | 18. Do you feel that your unit currently needs additional employees? (CHECK ONE) N=522 (20) | |
| | 1. 62.3 Definitely yes | } GO TO NEXT QUESTION |
| | 2. 20.1 Probably yes | |
| | 3. 6.5 Uncertain | } SKIP TO 20 |
| | 4. 6.1 Probably no | |
| | 5. 1.3 Definitely no | |
| | 6. 3.6 NO BASIS TO JUDGE | |
| | 19. How many additional employees does your unit need? (GIVE FULL-TIME EQUIVALENT NUMBER. FOR EXAMPLE, IF TWO PEOPLE WORK HALF-TIME, COUNT THAT AS ONE PERSON.) N=414 Mean=5.70 (21-25) Range=.1-60 Median=4 _____ people | |

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Compensation—Current Employees**

USE OF SKILLED PERSONNEL

20. For each type of skilled personnel listed below, please check column A to indicate whether or not you need assistance from that type of person to accomplish the Superfund tasks to which you are currently assigned. If you don't need that type of skilled personnel, skip to the next type. If you do need that type, please check column B to show whether or not obtaining the services of that type of personnel, either from contractors or within EPA, has been a problem. (26-41)

IF COLUMN A IS "YES", ANSWER COLUMN B.

| | (A) | | (B) | | |
|--|--|-----------|---|-------------------------|-------------------------|
| | Is help from this type of skilled person needed for your tasks? (CHECK ONE) | | Has obtaining help from such personnel been a problem? (CHECK ONE) | | |
| | YES (1) | NO (2) | MAJOR PROBLEM (1) | MINOR PROBLEM (2) | NOT A PROBLEM (3) |
| a. Hydrologist N=462/336 | 73.6 | 26.2 | 20.8 | 43.2 | 36.0 |
| c. Toxicologist N=454/326 | 72.0 | 28.0 | 24.5 | 37.4 | 38.0 |
| d. Civil engineer N=434/243 | 56.0 | 44.0 | 8.6 | 24.7 | 66.7 |
| e. Soils/geotechnical engineer N=434/259 | 59.9 | 40.1 | 13.9 | 40.5 | 45.6 |
| f. Engineering geologist N=430/233 | 53.3 | 46.7 | 10.3 | 37.3 | 52.4 |
| g. Chemist N=468/367 | 78.8 | 21.2 | 19.9 | 31.9 | 48.2 |
| h. Chemical engineer N=430/238 | 55.3 | 44.7 | 12.6 | 29.4 | 58.0 |
| i. Industrial hygienist N=413/176 | 41.2 | 58.8 | 20.5 | 33.0 | 46.6 |

j. What other skilled personnel have you had problems gaining access to in order to accomplish your Superfund tasks? (42)

59.0 - Had no comments
41.0 - Had comments

N=524

21. Since January 1, 1986, how many times, if any, did you have to delay your Superfund tasks for a week or more because you could not get access to needed skilled personnel? (IF NONE, ENTER ZERO.) (45-45)

N=494
Range=0-100
Mean=4.04 Median=1
_____ (times since January 1986)

22. Since January 1, 1986, to what extent, if any, has the lack of skilled personnel caused you problems in assuring the quality of the Superfund tasks on which you work? (CHECK ONE) (46)

- N=512
1. 12.7 Great extent
 2. 26.4 Moderate extent
 3. 25.4 Some extent
 4. 35.5 Little or no extent

**Appendix I
Survey of EPA Superfund Staffing and
Compensation—Current Employees**

23. Some people have suggested establishing a pool of technical experts (specialists) within each region to assist project managers in carrying out their Superfund duties. Would you favor or oppose having such a pool? (CHECK ONE)
N=520 (47)

- 1. 39.0 Strongly favor
- 2. 29.2 Favor somewhat
- 3. 10.2 Neither favor nor oppose
- 4. 7.9 Oppose somewhat
- 5. 3.8 Strongly oppose
- 6. 9.8 No basis to judge; don't know

24. Does your region currently have such a pool of experts? (CHECK ONE)
N=495 (48)

- 1. 24.2 Yes
- 2. 38.8 No
- 3. 18.4 Don't know
- 4. 18.6 Do not work in a region

TRAINING

25. Below is a list of tasks for the Superfund program. For each task, please indicate in Column A whether or not you have primary responsibility for that task. If you answer "yes" for column A, please designate in column B whether your training for this task, including on-the-job training (OJT), is at a level you feel you need to be comfortable working on this task.

(49-60)

IF COLUMN A IS "YES", ANSWER COLUMN B

| | (A) | | (B) | | |
|--|---------------------------------------|--------|---|-----------------|----------------------|
| | Do you work on this task? (CHECK ONE) | | Is your level of training for this task more or less than needed? (CHECK ONE) | | |
| | YES (1) | NO (2) | MORE THAN NEEDED (1) | ABOUT RIGHT (2) | LESS THAN NEEDED (3) |
| REMEDIAL TASKS: | | | | | |
| a. Preliminary assessment N=455/131 | 28.8 | 71.2 | 10.7 | 62.6 | 26.7 |
| b. Site inspection N=455/137 | 30.1 | 69.9 | 8.8 | 62.0 | 29.2 |
| c. RI/FS N=448/218 | 49.6 | 50.4 | 5.5 | 58.7 | 35.8 |
| d. Remedial design N=440/179 | 40.7 | 59.3 | 1.7 | 27.9 | 70.4 |
| e. Remedial action N=443/197 | 44.5 | 55.5 | 2.5 | 36.5 | 60.9 |
| f. Oversight of federal facilities N=429/84 | 20.0 | 80.0 | 3.6 | 52.4 | 44.0 |

(CONTINUED ON NEXT PAGE)

**Appendix I
Survey of EPA Superfund Staffing and
Compensation—Current Employees**

(CONTINUED FROM PREVIOUS PAGE)

(61-84)

IF COLUMN A IS "YES", ANSWER COLUMN B

| | (A) | | (B) | | |
|--|---------------------------------------|--------|---|-----------------|----------------------|
| | Do you work on this task? (CHECK ONE) | | Is your level of training for this task more or less than needed? (CHECK ONE) | | |
| | YES (1) | NO (2) | MORE THAN NEEDED (1) | ABOUT RIGHT (2) | LESS THAN NEEDED (3) |
| REMOVAL TASKS: | | | | | |
| g. Removal investigation N=451/126 | 28.2 | 71.8 | 3.2 | 58.7 | 38.1 |
| h. Removal action N=449/133 | 29.6 | 70.4 | 3.8 | 53.4 | 42.9 |
| i. On-scene monitoring and oversight N=448/146 | 33.0 | 67.0 | 3.4 | 51.4 | 45.2 |
| OTHER TASKS: | | | | | |
| j. Contracts management N=464/302 | 65.9 | 34.1 | 6.3 | 55.3 | 38.4 |
| k. Identification of PRP N=438/189 | 43.6 | 56.4 | 2.1 | 60.8 | 37.0 |
| l. Oversight of PRP N=442/197 | 45.2 | 54.8 | 4.1 | 58.9 | 37.1 |
| m. Negotiations/settlements N=442/237 | 54.1 | 45.9 | 5.1 | 53.6 | 41.4 |
| n. Administrative orders N=440/208 | 47.5 | 52.5 | 5.3 | 61.1 | 33.7 |
| o. Legal case development N=439/197 | 44.9 | 55.1 | 4.1 | 50.3 | 45.7 |
| p. Cost recovery N=431/173 | 40.6 | 59.4 | 3.5 | 48.0 | 48.6 |
| q. State programs and liaison N=436/211 | 48.6 | 51.4 | 2.8 | 59.2 | 37.9 |
| r. Legal consultation N=424/125 | 29.7 | 70.3 | 2.4 | 69.6 | 28.0 |
| s. Please describe any other tasks for which you think you need additional training. N=524 | (55) | | | | |
| 72.9 - Had no comments | | | | | |
| 27.1 - Had comments | | | | | |

26. How satisfied or dissatisfied are you with the on-the-job training you received in the Superfund program? (CHECK ONE)
N=522 (56)

- 1. 12.3 Very satisfied
- 2. 31.4 Somewhat satisfied
- 3. 23.6 Neither satisfied nor dissatisfied
- 4. 22.8 Somewhat dissatisfied
- 5. 10.0 Very dissatisfied

**Appendix I
Survey of EPA Superfund Staffing and
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27. Please give the number of courses and number of class days for the EPA training courses you attended in FY 1985 and FY 1986 that were related to your duties in the Superfund program. (ROUND CLASS DAYS TO NEAREST WHOLE NUMBER) (87-92)

| | NUMBER OF COURSES | NUMBER OF CLASS DAYS |
|-------------------------------------|---------------------------------|----------------------------------|
| FY85(October 1984 - September 1985) | N=407 Range=0-10 Median=2 | N=385 Range=0-90 Median=5 |
| (93-98) | | |
| FY86(October 1985 - September 1986) | N=466 Range=0-14 Median=2 | N=456 Range=0-100 Median=5 |

28. Now, please assess the overall usefulness of the EPA sponsored courses that you reported in the previous question. How satisfied or dissatisfied are you with these courses for improving your performance of Superfund tasks? (CHECK ONE) (99)
N=475

- 1. 8.4 Very satisfied
- 2. 49.5 Generally satisfied
- 3. 14.9 Neither satisfied nor dissatisfied
- 4. 13.5 Generally dissatisfied
- 5. 3.6 Very dissatisfied
- 6. 10.1 No basis to judge

29. Below are some reasons that are sometimes given to explain why needed training is not obtained by employees. Please check the box that describes how true or not each statement is for you personally. (CHECK ONE FOR EACH STATEMENT)

(100-106)

| | VERY TRUE (1) | SOMENHAT TRUE (2) | NOT TRUE (3) | NO BASIS TO JUDGE (4) |
|--|------------------|----------------------|-----------------|--------------------------|
| a. Budget restrictions keep me from taking the courses I need. N=506 | 20.4 | 35.8 | 36.2 | 7.7 |
| b. My work load is too heavy to allow me time to take courses. N=507 | 34.5 | 42.4 | 20.9 | 2.2 |
| c. The courses I need are not available at EPA. N=507 | 20.5 | 43.6 | 29.2 | 6.7 |
| d. My immediate supervisor lacks the time to provide the OJT I need. N=502 | 13.3 | 22.1 | 56.0 | 8.6 |
| e. Management is not committed to training courses. N=510 | 10.6 | 21.0 | 62.4 | 6.1 |
| f. The courses offered are not well-publicized. N=504 | 14.1 | 36.9 | 47.1 | 6.0 |
| g. The courses offered by EPA are not specific to Superfund tasks. N=504 | 9.7 | 40.3 | 40.5 | 9.5 |

h. Are there any other reasons that you cannot obtain the training you need?

N=522
74.9 - No comments
25.1 - Comments

(107)

**Appendix I
Survey of EPA Superfund Staffing and
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| | |
|--|---|
| | DUP (1-4) |
| | 3 (5) |
| | 089341 (6-11) |
| BACKGROUND | |
| 30. Do you currently work at EPA headquarters or in an EPA region? (CHECK ONE) | 32. Are you currently in a supervisory or nonsupervisory position? (CHECK ONE) |
| N=526 | N=524 |
| 1. 16.3 Headquarters | 1. 20.8 Supervisory -- How many people report directly to you? (15-20) |
| 2. 75.1 Region | Range=1-60 |
| 3. 8.6 Other (PLEASE SPECIFY) | Mean=11.41 |
| | Median=9 |
| | _____ people |
| | 2. 79.2 Nonsupervisory |
| 31. Please check the category that best describes your current role or function in the Superfund program. (CHECK ONE) | 33. Which of the following academic areas of study, if any, describe your scientific background. (CHECK ALL THAT APPLY) |
| N=521 | (21-27) |
| 1. 24.0 Remedial/enforcement project manager | 1. 5.1 Toxicology |
| 2. 12.9 Branch, section, or unit chief | 2. 15.8 Ecology |
| 3. 9.2 On-scene coordinator | 3. 10.8 Hydrology |
| 4. 1.2 Health specialist | 4. 13.7 Geology |
| 5. 11.5 Legal counsel/specialist | 5. 31.6 Chemistry |
| 6. 2.7 Site investigation officer | 6. 40.7 Other science specialty (PLEASE SPECIFY) |
| 7. 2.7 Public affairs/communications specialist | 7. 24.9 NO SCIENCE SPECIALTY |
| 8. 5.4 Contracts administrator/specialist | |
| 9. 10.2 Laboratory manager/technician | 34. How many total years have you worked for the federal government, including military service? (ROUND TO NEAREST YEAR) |
| 10. 1.5 Information management specialist | N=523 |
| 11. 18.8 Other (PLEASE SPECIFY) | Mean=9.48 |
| | Range=1-40 |
| | Median=8 |
| | _____ years |

**Appendix I
Survey of EPA Superfund Staffing and
Compensation—Current Employees**

35. How many years have you worked for EPA? (ROUND TO NEAREST YEAR) (30-31)
N=520 Range=1-28
Mean=7.05 Median=6
____ years

36. How long have you worked in the Superfund program? (CHECK ONE) (32)
N=522
1. 3.1 6 months or less
2. 10.3 7 to 12 months
3. 23.4 13 to 24 months
4. 41.6 25 months to 5 years
5. 21.6 Over 5 years

37. What is your present GS grade and series? (33-37)
N=515 Range=4-15
GS- 12 SERIES _____ Average
N=291

38. In what year were you born? (38-39)
N=516 Range=1916-1964
51 Median
19____

39. What is your sex? (CHECK ONE) (40)
N=515
1. 33.0 Female
2. 67.0 Male

40. What is your ethnic background? (CHECK ONE) (41)
N=514
1. 88.5 White
2. 5.6 Black
3. 2.1 Hispanic
4. 0.0 American Indian/
Alaskan Native
5. 2.7 Asian
6. 1.0 Other (PLEASE SPECIFY)

41. Thank you for your help. Please add any comments you wish in the space below. N=526 (42)
66.5 - No comments
33.5 - Comments

faf:089341:1/86

Survey of Former Superfund Employees



U.S. GENERAL ACCOUNTING OFFICE
SURVEY OF FORMER SUPERFUND EMPLOYEES

INTRODUCTION

(1-4)
1 (5)
089341 (6-11)

The U.S. Congress requires that the General Accounting Office (GAO) review employee turnover in the Environmental Protection Agency's Superfund program and the extent to which employees left to take jobs for better pay and benefits. As a former Superfund employee, we'd like to find out your reasons for leaving the Superfund program, the type of work you subsequently took, and what might have been done differently to encourage you to stay. Because we want your candid opinions, all responses are confidential. Your answers will never be reported in any way that could identify you personally.

We need your response to represent former employees of the Superfund program. We hope you can take a few minutes to fill out this questionnaire and return it in the enclosed postage-paid envelope. Your help is greatly appreciated.

Your response within two weeks will help us avoid costly follow-up mailings. Please call Tom Storm collect at (202) 382-4326 if you have any questions about this survey. If the return envelope is misplaced, please send your completed questionnaire to:

Mr. Tom Storm
U.S. General Accounting Office
441 G Street NW, Room 4476
Washington, DC 20548

Thank you for your help.

1. Did you leave the Superfund program to take another job, either at EPA or elsewhere? (CHECK ONE)

N-117

- 1. 100 Yes -- SKIP TO QUESTION 3
- 2. 0 No -- GO TO NEXT QUESTION

2. If you did not leave to take another job, then why did you leave the Superfund Program? (CHECK ONE)

- 1. Retired
- 2. Fired
- 3. Medical reasons
- 4. Returned to school
- 5. Didn't leave, still work for Superfund
- 6. Other (PLEASE SPECIFY)

STOP HERE since you did not leave Superfund in order to take another job. Please return the questionnaire in the envelope provided. Thank you.

**Appendix II
Survey of Former Superfund Employees**

3. What was the month and year that you left Superfund? (GIVE TWO-DIGIT EQUIVALENT, JANUARY=01, ETC.)

N=115 (14-17)
 _____ (TWO DIGITS) _____ (TWO DIGITS)
 (MONTH) (YEAR)

4. After leaving the Superfund program, where did you work next? (CHECK ONE)

- N=116 (18)
- 1. 44.8 Private sector
 - 2. 7.8 State/local government
 - 3. 1.7 Academia
 - 4. 7.8 Another federal agency
 - 5. 31.9 Another office or program area within EPA
 - 6. 6.0 Other (PLEASE SPECIFY)
- _____
- _____

In Questions 5-9, please refer to the job you took immediately after leaving Superfund.

5. Did that job relate to the area of hazardous waste management? (CHECK ONE)

- N=116 (19)
- 1. 71.6 Yes
 - 2. 28.4 No

6. Are you still at that job? (CHECK ONE)

- N=116 (20)
- 1. 90.5 Yes
 - 2. 9.5 No

7. Was that job full-time or part-time? (CHECK ONE)

- N=116 (21)
- 1. 100.0 Full-time
 - 2. 0.0 Part-time

8. Did your annual base salary (excluding overtime) increase, decrease, or remain about the same at that job? (CHECK ONE)

- N=116 (22)
- 1. 65.5 Increased --GO TO NEXT QUESTION
 - 2. 30.2 Stayed about the same -- SKIP TO QUESTION 10
 - 3. 4.3 Decreased -- SKIP TO QUESTION 10

9. Approximately how much of a yearly increase in base pay did you receive at that job? (ROUND TO NEAREST THOUSAND)

N=76 R=1/22 Mean=7.40 Median=6⁽²³⁻²⁴⁾
 \$ 6,000 increase in base pay

10. Did your benefits increase, decrease, or stay about the same at that job? (CHECK ONE FOR EACH TYPE OF BENEFIT) (25-29)

| | INCREASE (1) | STAYED SAME (2) | DECREASE (3) |
|-------------------------------|-----------------|-----------------------|-----------------|
| a. Retirement N=115 | 28.7 | 56.5 | 14.8 |
| b. Vacation N=116 | 11.2 | 56.0 | 32.8 |
| c. Sick leave N=116 | 11.2 | 71.6 | 17.2 |
| d. Medical Insurance N=115 | 40.0 | 53.9 | 6.1 |
| e. Life Insurance N=112 | 42.9 | 53.6 | 3.6 |

f. What other benefits increased or decreased? (30)

N=115

40.9 percent had comments
 58.3 percent had no comments

**Appendix II
Survey of Former Superfund Employees**

11. The following statements may or may not describe reasons why you chose to leave the Superfund program. For each statement, please tell us in column A how much of a reason it was for your decision to leave. If you check "major" or "minor" reason in column A, please tell us in column B whether or not you would have stayed at Superfund if the factor had changed to your satisfaction.

(51-50)

If "MAJOR" or "MINOR" REASON in column A, please fill out column B.

| | (A) How much did this factor contribute to your leaving? (CHECK ONE) | | | (B) Would you have stayed if this factor had changed positively for you? (CHECK ONE) | | | | |
|--|--|---------------------|---------------------|--|---------------------|------------------|--------------------|----------------------|
| | MAJOR REASON (1) | MINOR REASON (2) | NOT A REASON (3) | DEFINITELY YES (1) | PROBABLY YES (2) | UNCERTAIN (3) | PROBABLY NO (4) | DEFINITELY NO (5) |
| | a. Immediate increase in salary N=115/70 | 40.0 | 22.6 | 37.4 | 22.9 | 40.0 | 18.6 | 11.4 |
| b. Better benefits (retirement, insurance, etc.) N=114/29 | 7.0 | 19.3 | 73.7 | 13.8 | 24.1 | 24.1 | 27.6 | 10.3 |
| c. More opportunity for future advancement N=114/90 | 66.7 | 15.8 | 17.5 | 37.8 | 36.7 | 14.4 | 7.8 | 3.3 |
| d. New work location N=113/36 | 21.2 | 13.3 | 65.5 | 19.4 | 33.3 | 19.4 | 22.2 | 5.6 |
| e. Excessive work load N=114/34 | 19.3 | 12.3 | 68.4 | 14.7 | 38.2 | 20.6 | 23.5 | 2.9 |
| f. Change to another career N=114/19 | 10.5 | 8.8 | 80.7 | 10.5 | 36.8 | 21.1 | 21.1 | 10.5 |
| g. EPA regional management N=114/52 | 28.1 | 19.3 | 52.6 | 30.8 | 38.5 | 13.5 | 13.5 | 3.8 |
| h. Program guidance from EPA headquarters N=114/43 | 19.3 | 19.3 | 61.4 | 11.6 | 27.9 | 32.6 | 23.3 | 4.7 |
| i. Improvement in physical work environment (space, condition of facilities, etc.) N=114/40 | 16.7 | 20.2 | 63.2 | 17.5 | 25.0 | 22.5 | 30.0 | 5.0 |
| j. Desire for less out-of-town travel N=114/10 | 3.5 | 6.1 | 90.4 | 30.0 | 20.0 | 40.0 | 10.0 | 0.0 |

(CONTINUED ON NEXT PAGE)

**Appendix II
Survey of Former Superfund Employees**

(CONTINUED FROM PREVIOUS PAGE)

(51-64)

If "MAJOR" or "MINOR" REASON in
column A, please fill out column B.

How much did this factor contribute to your leaving? (CHECK ONE)
Would you have stayed if that factor had changed positively for you? (CHECK ONE)

| | MAJOR REASON (1) | MINOR REASON (2) | NOT A REASON (3) | DEFI- NITELY YES (1) | PROB- ABLY YES (2) | UNCER- TAIN (3) | PROB- ABLY NO (4) | DEFI- NITELY NO (5) |
|---|---------------------|---------------------|---------------------|-------------------------|-----------------------|--------------------|----------------------|------------------------|
| k. Problems with immediate supervisor at EPA N=115/37 | 16.5 | 15.7 | 67.8 | 27.0 | 37.8 | 18.9 | 10.8 | 5.4 |
| l. Too much paperwork N=114/41 | 15.8 | 21.9 | 62.3 | 12.2 | 26.8 | 41.5 | 17.1 | 2.4 |
| m. Too many internal and external reviews N=115/44 | 23.5 | 18.3 | 58.3 | 9.1 | 40.9 | 29.5 | 15.9 | 4.5 |
| n. Disillusionment with EPA's progress in cleaning up hazardous waste N=115/49 | 22.6 | 23.5 | 53.9 | 26.5 | 32.7 | 28.6 | 10.2 | 2.0 |
| o. To avoid exposure to hazardous substances N=115/3 | 0.0 | 2.6 | 97.4 | 0.0 | 33.3 | 66.7 | 0.0 | 0.0 |
| p. Poor utilization of your technical skills N=114/52 | 22.8 | 26.3 | 50.9 | 30.8 | 40.4 | 19.2 | 9.6 | 0.0 |
| q. Poor clerical/administrative support N=115/43 | 19.1 | 21.7 | 59.1 | 16.3 | 23.3 | 30.2 | 27.9 | 2.3 |

r. Are there any other reasons you left Superfund?
N=115
47.8 - Had no comments
52.2 - Had comments

(65)

**Appendix II
Survey of Former Superfund Employees**

12. Overall, do you believe that your Superfund work load was too much, too little, or about right? (CHECK ONE) (66)

- N=117
- 1. 14.5 Much too much
 - 2. 28.2 Too much
 - 3. 42.7 About right
 - 4. 12.0 Too little
 - 5. 2.6 Much too little
 - 6. 0.0 No basis to judge

13. When you left the Superfund program, how long had you worked for the federal government, including military service? (ROUND TO NEAREST YEAR) (67-68)

N=116 Range=0-29 Mean=7.92
7 years Median

14. When you left Superfund, how long had you worked for EPA? (ROUND TO NEAREST YEAR) (69-70)

N=116 Range=0-21 Mean=5.94
5.5 years Median

15. How long did you work for the Superfund program? (CHECK ONE) (71)

- N=116
- 1. 6.9 6 months or less
 - 2. 13.8 7 to 12 months
 - 3. 25.0 13 to 24 months
 - 4. 54.3 25 months to 5 years

16. When you last worked for Superfund, did you work at EPA headquarters or in an EPA region? (CHECK ONE) (72)

- N=117
- 1. 21.4 Headquarters
 - 2. 73.5 Region
 - 3. 5.1 Other (PLEASE SPECIFY)

17. Please check the category that best describes your role or function in the Superfund program. (CHECK ONE) (73-74)

- N=117
- 1. 31.6 Project manager (remedial/enforcement)
 - 2. 14.5 Branch, section, or unit chief
 - 3. 4.3 On-scene coordinator
 - 4. 1.7 Health specialist
 - 5. 15.4 legal counsel/specialist
 - 6. 1.7 Site investigation officer
 - 7. 2.6 Public affairs/communications specialist
 - 8. 2.6 Contracts administrator/specialist
 - 9. 2.6 laboratory manager/technician
 - 10. 1.7 Information management specialist
 - 11. 21.4 Other (PLEASE SPECIFY)

**Appendix II
Survey of Former Superfund Employees**

18. Which of the following academic areas, if any, describe your scientific background? (CHECK ALL THAT APPLY) (75-81)

- N=117
- 1. 6.8 Toxicology N=8
 - 2. 14.5 Ecology N=17
 - 3. 11.1 Hydrology N=13
 - 4. 12.0 Geology N=14
 - 5. 26.5 Chemistry N=31
 - 6. 45.3 Other science specialty N=53
(PLEASE SPECIFY)
 - 7. 27.4 NO SCIENCE SPECIALTY N=32

19. Overall, how satisfied or dissatisfied were you with your position in the Superfund program? (CHECK ONE) (82)

- N=117
- 1. 19.7 Very satisfied
 - 2. 41.9 Generally satisfied
 - 3. 6.8 Neither satisfied nor dissatisfied
 - 4. 24.8 Generally dissatisfied
 - 5. 6.8 Very dissatisfied

20. What was your grade level and step when you a) began working in the Superfund program, b) left the program, and c) currently, if applicable. If currently working but not for the federal government, please enter your current annual base salary.

a) When you joined Superfund:
 Range=3-15 (83-84)
 GS grade 12 Median
 N=113

b) When you left Superfund:
 Range=4-15 (85-86)
 GS grade 12 Median
 N=112

c) Currently:
 Range=6-15 (87-88)
 GS grade 13 Median
 N=43
 OR
 Range=\$11,000-\$90,000 (89-91)
 Salary: \$ 45,500 per year
 N=70
 OR

If not currently employed, please check this box! (92)

N=5
 21. What is your sex? (93)
 N=116
 1. 72.4 Male
 2. 27.6 Female

Appendix II
Survey of Former Superfund Employees

22. What is your ethnic background?
(CHECK ONE)

(94)

N=117

1. 90.6 White

2. 6.0 Black

3. 1.7 Hispanic

4. 0.0 American Indian/
Alaskan Native

5. 1.7 Asian

6. 0.0 Other (PLEASE SPECIFY)

23. In what year were you born?

(95-96)

N=117

19 52 Median

24. Thank you for your help. If you
have any other comments, please write
them in the space below.

(97)

50.9 - Had no comments
49.1 - Had comments

faf:089341:1/86

Turnover in State Superfund Programs

In 7 of the 12 states we contacted, state officials said that they had a problem with employee turnover. Pay was seen as an important factor in employee decisions to leave but other factors, such as better fringe benefits, promotion opportunities, and job security, also were important. Turnover also caused delays in carrying out the state's Superfund program, including the state's participation in the federal Superfund program.

States in which officials saw a turnover problem included California, Florida, Illinois, Indiana, New Jersey, Ohio, and Pennsylvania. It was not, however, considered a problem in Massachusetts, Michigan, Minnesota, New York, and Wisconsin.

Table III.1 shows the quit rates for fiscal years 1985 and 1986 for 10 of the 12 states we contacted. We were not able to obtain all the data needed to compute these rates for either California or New York. The data are presented for information purposes only. Comparisons should not be made between states, as we were not able to obtain consistent data for all the states. For example, some states were able to provide data specifically for their Superfund program, whereas the data for New Jersey are for the state's entire hazardous waste management program. Other inconsistencies may also exist.

Table III.1: Quit Rates for Hazardous Waste/Superfund Activities for Selected States

| State | Quit rates for fiscal year | |
|---------------|----------------------------|------|
| | 1985 | 1986 |
| Florida | 30.5 | 13.1 |
| Illinois | 3.0 | 1.8 |
| Indiana | 100.0 | 12.5 |
| Massachusetts | 25.6 | 16.5 |
| Michigan | 1.9 | 1.5 |
| Minnesota | 6.0 | 5.1 |
| New Jersey | 8.8 | 6.4 |
| Ohio | 17.5 | 24.6 |
| Pennsylvania | a | 9.1 |
| Wisconsin | 0.0 | 0.0 |

^aNot available

According to the data provided by those state officials reporting turnover to be a problem, about half of the employees who left in fiscal years 1985 and 1986 did so to take jobs in the private sector. These state officials generally cited many of the same factors rated by former EPA employees as reasons for leaving the Superfund program (see ch. 3),

with pay increases and promotion opportunities being the two most frequently mentioned.

Below are some examples of the comments we obtained from state officials reporting a turnover problem, including the impact this turnover has had on states' Superfund activities.

An Indiana official attributed turnover there to the low salaries and stated that turnover delays ongoing projects and impairs the state's ability to fully respond to its own and EPA's projects.

An Ohio state official said that turnover caused delays because of the down time associated with vacant positions, recruiting, and training.

In Illinois, a state official considered the state to be a training ground for EPA's Chicago Regional Office.

Turnover in Florida was also attributed to low salaries, but a state official there said that pay increases for the state's environmental employees may soon help alleviate this problem. According to the official, turnover slowed the state's program because quality was not sacrificed to speed up completions. Turnover also resulted in a loss of project continuity and increased training costs.

In New Jersey, a state official told us that the state's Superfund program had lost 5 to 6 professionals to contractors just since SARA was authorized, and that Superfund turnover was presently 15 percent—300 percent higher than the rate for all state environmental employees. This official stated that turnover resulted in lower productivity until new employees could be trained, which takes about 2 years.

Comments From the Environmental Protection Agency

Note: GAO comments supplementing those in the report text appear at the end of this appendix.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

SEP 1 1987

OFFICE OF
POLICY, PLANNING AND EVALUATION

Mr. Hugh J. Wessinger
Senior Associate Director
Resources, Community and
Economic Development Division
General Accounting Office
441 G Street, N.W.
Washington, D.C. 20548

Dear Mr. Wessinger:

I am responding to your letter of July 13 transmitting the General Accounting Office (GAO) draft report, "Superfund: Improvements Needed In Workforce Management" (GAO/RCED-87-154). In accordance with Public Law 96-226, the Environmental Protection Agency (EPA) reviewed and provides the following comments on the report. The comments are divided in two parts: comments on the report's recommendations and comments on the information presented in the report.

Comments on the recommendations

The draft report recommends that EPA examine the costs and benefits of using more objective techniques to determine staffing requirements in the Superfund program. EPA has already conducted a Work Force Planning Study by procuring the services of a highly reputable contractor. The contractor, in fulfilling the stated obligations, conducted the work using accepted techniques and processes to accomplish the study. The Office of Solid Waste and Emergency Response (OSWER) did not request the contractor to use additional forecasting techniques when conducting the study because such techniques must be project specific and are difficult to develop when applied to a newly reauthorized program that has yet to be implemented.

The second recommendation in the draft report concerns the use of productivity measures to gauge the appropriateness of Superfund work force size and skill mix. EPA believes that fulfillment of this recommendation would be impractical to carry out as each site is unique. Each Superfund cleanup site has its individual characteristics that are not comparable to another site, including such factors as geology, hydrology, contaminants, volume, and public involvement.

See comment 1.

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The report's third recommendation concerns the implementation of plans and proposed policies for improving Superfund training. EPA has already recognized the need for a more formal, structured national Superfund training program intended to improve job performance.

Efforts are currently underway to implement recommendations in the GAO draft report. OSWER established the Office of Program Management and Technology to implement concurrently the recommendations contained in the OSWER Training Strategy and the Superfund Work Force Planning Study. Full implementation of the OSWER Training Strategy recommendations is scheduled for FY 1988 and the recommendations in the Superfund Work Force Planning Study are scheduled for implementation in FY 1989.

See comment 2

Comments on the report

Staffing Shortages

--Background

The draft report states that the Superfund program was understaffed "by as much as 600 full-time employees in early 1987." I would like to provide some background information regarding the period before reauthorization, in order to provide a context for the changes in the program's staffing levels in FY 1986 and FY 1987. I would also like to comment on the timing of the GAO survey and discuss how that may have skewed some of the data relied on in this draft report.

While awaiting the reauthorization of CERCLA taxing authority, which expired on September 30, 1985, the Administrator implemented the Superfund Contingency Plan effective August 14, 1985. This Plan was designed to conserve dwindling Superfund resources and retain and protect the program's staff. The basic strategy underlying the Contingency Plan was to maintain emergency response capability, bring ongoing remedial activity underway to a logical stopping point, and support the contract and personnel infrastructure to the maximum extent practicable so that program momentum could be restored quickly following reauthorization. As part of the Plan, a hiring freeze was put into effect for eight months from August 15, 1985 through April 1986 while the Agency awaited Congressional action on reauthorization. Budgeting was done on a month-to-month basis.

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Comments From the Environmental
Protection Agency

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Superfund Reauthorization was enacted on October 17, 1986, more than a year after the Contingency Plan was implemented. This was the time period in which GAO chose to conduct its survey. In early 1987, the Agency was moving away from the constraints of the Contingency Plan in order to regain program momentum. At this time the Regions were indeed understaffed due to the delay in reauthorization. The Agency lapsed 173 Full Time Equivalents (FTEs) in FY 1986 because of the overall uncertainty concerning Superfund reauthorization.

In anticipation of the large workload and hiring increase that was facing EPA, the Agency initiated the Superfund Work Force Planning Project in November 1985. The project produced a Phase II Report in June 1986 which identified the skills Superfund employees would need. Subsequently, the Superfund Recruitment Task Force was established in October 1986. The Task Force, lead by the Personnel Management Division, marshalled Headquarters and Regional expertise to develop a strategy to hire the additional 600 FTEs provided in FY 1987 and 300 FTEs in FY 1988. The objective was to identify qualified and skilled people and assist EPA managers in hiring and retaining them. The first major initiative of the Task Force was to encourage the Superfund program managers to begin hiring up to their FY 1986 ceiling, which, due to the uncertainty of reauthorization and the hiring freeze, had not been done. The Task Force did this in order to assist the Agency in gaining momentum after a period of inactivity and increase our ability to absorb 900 Superfund workyears over a two year period.

Development of the FY 1987-1988 Superfund budgets occurred between October 1986 and January 1987, with submission to the Office of Management and Budget in early December 1986. By January, the Agency had done a thorough review to evaluate the likely impacts that the new SAKA amendments would have on our program priorities and planned workload.

In February 1987 the Regions received their Superfund work-year ceilings for FY 1987. The GAO final report should note that the Agency prepared budget and workforce estimates for FY 1987 and 1988 in less than half the usual time allotted for budget formulation and preparation.

--FY 1987 Positions Going Unfilled

The GAO draft report states that "EPA expects that a considerable number of its full-time positions will go unused during FY 1987". GAO states that 773 FTE positions were unfilled at the beginning of FY 1987. This figure was derived

See comment 3.

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by subtracting the number of Superfund FTEs used in FY 1986 (1643 FTEs out of a ceiling of 1816) from the ceiling appropriated to EPA for FY 1987 (2416 FTEs). GAO stated that EPA would use only 300 FTEs out of the 733 FTEs. In fact, according to a July 31, 1987 FTE Utilization report by the Comptroller of EPA, the Agency will use 535 FTEs out of those 733 FTEs. This would be 235 more FTEs than the GAO projections.

Furthermore, as a result of the major recruiting campaign conducted by Headquarters and the Regions, EPA now expects to have 2500 Superfund employees on-board by the end of FY 1987. In FY 1988, if the current pace of hiring continues, the Agency will be very close to full utilization of its request of 2716 workyears.

See comment 4.

--Turnover Rates

The draft report states that the Superfund turnover rate surpassed federal turnover rates in FY 1986. According to GAO, advancement opportunities were cited as the most significant reason for Superfund employees leaving the Superfund program. The GAO report should also cite that the delays in reauthorization and the consequent uncertainty regarding the future of Superfund also affected the program's ability to retain key staff.

See comment 5

The report should note that as a way to address the "advancement" issue, guidance has been issued by the Agency's personnel office that permits promotion for occupations such as Superfund Regional Project Manager/On-Scene Coordinator to the GS-13 and 14 levels in the Regions. Twenty-five such positions are currently in place and more are being considered.

See comment 6.

Staffing Skills and Training

The GAO report needs to state that the Superfund Work Force Planning project was conducted in anticipation of the Superfund Amendments and Reauthorization Act (SARA) to identify the types of occupations and requisite skills needed to perform Superfund tasks. This point is not brought out in the report. The report should also state that the Office of Solid Waste and Emergency Response (OSWER) has established an implementation work group which will advise the Assistant Administrator for Solid Waste and Emergency Response of the best methods to incorporate project recommendations into existing management systems, including the identification of skill requirements in determining staffing requirements.

See comment 7

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Earlier this year, OSWER created the Office of Program Management and Technology to implement recommendations in the Office of Solid Waste and Emergency Response (OSWER) Training Strategy and the Superfund Work Force Planning Study. Implementation of these recommendations is underway. The Office of Solid Waste and Emergency Response Training Strategy recommendations are scheduled for full implementation in FY 1988 and the Superfund Work Force Planning Project recommendations are planned for full implementation in FY 1989. Administrator Lee Thomas is strongly committed to the recommended employee training and technology transfer; in fact, he has established a formal workgroup to examine training and technology transfer activities agencywide. Accomplishments in the Superfund program based on the work group's recommendations serve as models for the Agency.

See comment 8.

The GAO report states that EPA is reviewing a project recommendation concerning employee retention issues which called for improving Superfund compensation through bonuses and added fringe benefits for employee retention purposes. This issue was related to career enhancement strategies (i.e., employee growth) and was recommended by Superfund managers during EPA-conducted managerial interviews. The reference to bonuses pertained to internal awards mechanisms which would not require Office of Personnel Management (OPM) and OMB involvement. The reference to fringe benefits included non-monetary compensation.

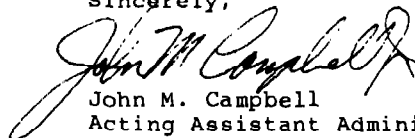
See comment 9

The GAO report also states that EPA information confirmed their findings. The Agency believes that statement should be re-worded to more accurately reflect the fact that our information was collected and submitted to GAO before the GAO study began.

See comment 10.

Thank you for the opportunity to comment on the draft report. I hope that this information is helpful to your staff in preparation of the final report.

Sincerely,



John M. Campbell
Acting Assistant Administrator

The following are GAO's comments on the Acting Assistant Administrator's letter dated September 1, 1987.

GAO Comments

1. EPA's comments on our first two recommendations and our evaluation of these comments are discussed in chapter 2.
2. EPA's comments on our third recommendation and our evaluation of these comments are discussed in chapter 5.
3. This information has been incorporated to the extent appropriate in chapter 2.
4. Chapter 2 has been updated to reflect the current projected utilization of FTEs.
5. This information has been incorporated into chapter 3.
6. Chapter 3 discusses this guidance and the status of its implementation at the time of our field visits. This data has been updated to show that 25 positions are currently in place.
7. This information has been incorporated into chapter 2.
8. This expands on EPA's comments regarding our recommendation on Superfund training and this data along with our evaluation is included in chapter 5.
9. This information has been incorporated into chapters 3 and 4.
10. The Executive Summary and chapter 5 have been revised accordingly.

Major Contributors to This Report

Resources, Community, and Economic Development Division, Washington, D.C.

Hugh J. Wessinger, Senior Associate Director, (202) 275-5489
Lawrence J. Dyckman, Group Director
Thomas J. Storm, Evaluator-in-Charge
Margaret C. Earman, Evaluator
Brian G. O'Malley, Computer Systems Analyst
Fran A. Featherston, Social Science Analyst
Michael P. Fruitman, Reports Analyst
Tajuana Leach, Secretary

Boston Regional Office

Ellen M. Crocker, Regional Management Representative
Thomas A. Phelan, Jr., Site Manager
Elmer L. Johnson, Evaluator
Robert M. Ballard, Evaluator

Chicago Regional Office

James B. Musial, Regional Assignment Manager
David C. Hoffman, Site Manager
David R. Moton, Evaluator
David C. Trimble, Evaluator

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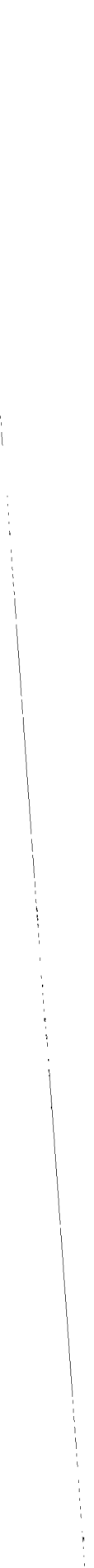
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