

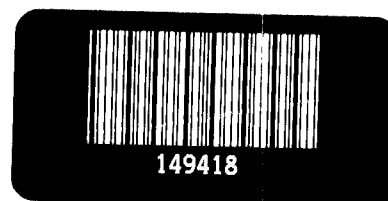
GAO

Report to the Chairman, Committee on
Governmental Affairs, U.S. Senate

May 1993

SAFETY AND HEALTH

Key Independent Oversight Program at DOE Needs Strengthening



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**Resources, Community, and
Economic Development Division**

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May 17, 1993

The Honorable John Glenn
Chairman, Committee on
Governmental Affairs
United States Senate

Dear Mr. Chairman:

As requested, we have evaluated the effectiveness of the Site Representative Program implemented by the Department of Energy's Environment, Safety, and Health Office in overseeing activities affecting safety and health at the agency's facilities. We are recommending that the Secretary of Energy take several steps to strengthen the ability of this program to provide independent internal oversight.

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from the date of this letter. At that time, we will send copies to appropriate congressional committees; the Secretary of Energy; and the Director, Office of Management and Budget. We will also make copies available to others upon request.

This work was performed under the direction of Victor S. Rezendes, Director, Energy and Science Issues, who may be reached at (202) 512-3841. Other major contributors to this report are listed in appendix I.

Sincerely yours,

J. Dexter Peach
Assistant Comptroller General

Executive Summary

Purpose

Over the last decade, GAO, the National Research Council, the Occupational Safety and Health Administration (OSHA), and the Department of Energy (DOE) have identified at DOE's contractor-operated facilities numerous problems that pose safety and health risks to workers and the public. One of these assessments, an October 1987 report by the Council, recommended strengthening DOE's Environment, Safety, and Health (ES&H) Office by giving it a permanent and significant presence at DOE sites. In response, in March 1988, the ES&H Office established the Site Resident Program—stationing inspectors at key sites to routinely monitor contractors' compliance with DOE's safety and health requirements.

The Chairman of the Senate Committee on Governmental Affairs asked GAO to evaluate the effectiveness of this program. Specifically, he asked GAO to assess its implementation before and after an April 1991 restructuring, as well as DOE's responsiveness to the site residents' findings.

Background

Responsible for independently overseeing activities affecting safety and health at DOE's contractor-operated facilities, the ES&H Office established the Site Resident Program by stationing inspectors at five DOE field offices—Idaho, Oak Ridge, Richland, Rocky Flats, and Savannah River. The site residents were responsible for monitoring compliance at sites under the responsibility of these field offices, such as the Hanford Site and the Rocky Flats Plant. In May 1989, the Secretary of Energy established a policy that required line management—at headquarters and in the field—to ensure and assess contractors' compliance with safety and health requirements. Despite this change, the National Research Council emphasized in a December 1989 report that independent oversight within DOE was still essential. Furthermore, in December 1990, OSHA recommended that the ES&H Office develop a more vigorous oversight system. Subsequently, the Secretary directed the ES&H Office to report to him on the adequacy of line management's performance of its occupational safety and health responsibilities.¹

To fulfill this new role, in April 1991 the ES&H Office changed the focus of the Site Resident Program—from monitoring compliance to assessing field offices' performance in directing and overseeing contractors' occupational

¹DOE established a separate Office of Nuclear Safety in September 1989 to independently oversee activities affecting nuclear safety at DOE facilities. This office established its own site resident program in September 1990. Under a restructuring of the Department announced in April 1993, the Office of Nuclear Safety will be abolished and its oversight functions, including its site resident program, will be reassigned to the ES&H Office.

safety and health programs. The office also renamed the program the Site Representative Program and divided its management between the two suboffices responsible for the oversight of activities affecting workers' safety and health.

Results in Brief

Since its inception in 1988, the ES&H Office's Site Representative Program has not provided the vigorous independent oversight envisioned by the National Research Council and OSHA. In our review of the program's implementation prior to the 1991 restructuring, we found that staffing constraints limited the program's coverage of DOE sites. Furthermore, the ES&H Office lacked a systematic approach for using the site residents' observations to evaluate safety and health performance. Finally, the DOE Order on the program did not require line management to respond to the site residents' findings. In this environment, line management did not adequately address some significant safety and health issues cited by the site residents, posing unnecessary risks to workers.

In restructuring the program in 1991, the ES&H Office made a number of improvements, but fundamental problems persist. We found that the program's oversight capability continues to be limited by staffing constraints and the lack of a systematic process for using site representatives' observations to evaluate the performance of DOE sites. In addition, new problems further limit this oversight capability—the program's coverage of occupational health has ceased, the program has not established minimum training requirements for the site representatives, and the site representatives are not fulfilling the program's requirements regarding the amount of time they should spend touring work areas to identify safety problems. Finally, the ES&H Office's ability to ensure the resolution of identified issues continues to be limited by the lack of requirements specifying how line management should respond to findings. Moreover, line management continues to inadequately address some safety issues cited by the site representatives, potentially posing unnecessary risks to workers.

Principal Findings

Site Resident Program Had Limited Effectiveness

In responding to the October 1987 report by the National Research Council, the ES&H Office originally planned to establish a nationwide

program consisting of 50 to 70 inspectors located at 10 to 15 sites and to use the Nuclear Regulatory Commission's (NRC) resident inspector program as a model. However, the staffing level of the program never reached more than 12 inspectors, located at five sites. Furthermore, unlike NRC, the ES&H Office did not provide detailed guidance to its site residents and did not establish a process for using their observations to systematically evaluate safety performance. As a result, the program did not cover some major DOE sites and did not consistently monitor activities across sites. Also, the ES&H Office had a limited ability to compare sites' performance, determine performance trends, and prioritize assessments.

The ES&H Office also had little ability to ensure the resolution of safety and health problems identified by its site residents because the DOE Order on the program did not specify whether or how line management should respond to their findings. Furthermore, the ES&H Office did not follow up on the site residents' findings to determine the adequacy of responses. In the absence of specific requirements, the field offices did not adequately address some significant safety and health problems cited by site residents. For example, from July 1989 to February 1991, the Idaho site residents issued many findings on violations of OSHA's standards; however, in a June-August 1991 assessment at Idaho, the ES&H Office identified many serious violations (such as improper labeling of hazardous chemicals) similar to those cited earlier by the site residents.

**Program Has Been
Restructured, but
Problems Continue**

In restructuring its Site Resident Program in April 1991, the ES&H Office made some improvements. For example, it made the program's assessment approach more systematic and uniform by developing requirements for the site representatives to conduct routine assessments of occupational safety programs, such as those in which employees raise complaints, and by increasing guidance to the site representatives. However, while the ES&H Office increased the program's scope from five to nine field offices and from 17 to over 70 sites, it did not increase staffing. As a result, the site representatives have been able to perform only a portion of the required assessments at their assigned sites. For example, between August 1991 and October 1992, the site representatives were able to perform occupational safety assessments at fewer than a third of the sites for which they are responsible. In addition, the office responsible for occupational health dropped out of the program, discontinuing the program's coverage of this area, even though past assessments have shown potential health hazards to be a continuing significant problem at DOE facilities.

Although OSHA had recommended that oversight be performed by well-trained staff, the ES&H Office has not established minimum training requirements for the site representatives. According to most of the site representatives, they need training in specific safety areas that they are required to assess, such as electrical safety. Also, although the program's managers state that the site representatives should spend 20 to 30 percent of their time touring work areas independently of scheduled assessments to identify safety problems, we found that the site representatives are spending 5 percent or less of their time on this activity. Finally, the ES&H Office does not yet have a system in place to use the site representatives' observations to produce overall evaluations of the performance of DOE sites. Without such a process, the ES&H Office still has a limited ability to compare performance across sites, determine performance trends, and target its work accordingly.

The ES&H Office now requires its site representatives to follow up on their findings. However, DOE still has not instituted an Order specifying how line management should respond to these findings. In this environment, for over 80 percent of the findings, the responsible line management official did not respond to the ES&H Office within 2 months, as requested. Furthermore, the follow-up performed by the site representatives has indicated that while line management has initiated many actions to address problems cited, it is often slow in addressing problems or undertakes actions that are not adequate to resolve the problems. For example, the site representatives found in August 1992 that the Oak Ridge Field Office had not adequately responded to three findings issued in November 1991 regarding inadequacies in its oversight of contractors' and subcontractors' construction safety practices. In November 1992, an Oak Ridge subcontractor's employee doing construction work died after being severely injured by a large falling tank. In a report on this accident, the field office stated that inadequacies in its safety oversight were a contributing cause.

Recommendations

GAO is recommending that the Secretary of Energy (1) reestablish the Site Representative Program's coverage of occupational health, determine the number of staff the program needs to monitor activities affecting safety and health, and adjust staff accordingly; (2) establish minimum training requirements for the site representatives; (3) readjust work priorities to ensure that the site representatives spend 20 to 30 percent of their time touring work areas independently of scheduled assessments; (4) require the ES&H Office to develop a systematic process for evaluating the

performance of DOE sites; and (5) issue a new DOE Order specifying how line management should respond to site representatives' findings, including required time frames for responding.

Agency Comments

GAO discussed the facts in this report with the Director of the Site Representative Program and officials of the Offices of Defense Programs and Nuclear Energy who are responsible for responding to the program's findings. The Director and these officials generally agreed with the facts presented but emphasized that the ES&H Office and line management have, respectively, made great efforts to improve the Site Representative Program and correct problems related to workers' safety and health. GAO recognizes these efforts but also highlights the need for strengthening independent safety and health oversight within DOE. As requested, GAO did not obtain written agency comments.

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Abbreviations

DOE	Department of Energy
ES&H	environment, safety, and health
GAO	General Accounting Office
INEL	Idaho National Engineering Laboratory
NRC	Nuclear Regulatory Commission
ONS	Office of Nuclear Safety
OSHA	Occupational Safety and Health Administration
SALP	Systematic Assessment of Licensee Performance

Introduction

The Department of Energy (DOE) conducts a wide variety of activities at facilities throughout the United States, including contractor-operated research and development laboratories, sites for producing and testing nuclear weapons, and sites where environmental cleanup is occurring. DOE's nine field offices oversee these activities. DOE's Office of Environment, Safety, and Health (ES&H) is responsible for providing independent internal oversight of DOE's and contractors' activities affecting the environment, safety, and health at the agency's facilities.¹

Since 1980, we, the National Research Council, the Occupational Safety and Health Administration (OSHA), and DOE—in assessing DOE facilities' performance in areas affecting safety and health—have identified numerous problems posing risks to workers and the public. These assessments have recommended that DOE strengthen its independent internal oversight of these facilities. In response to one of these assessments—an October 1987 National Research Council report on safety at DOE's defense production reactors—DOE in 1988 established the Site Resident Program within the ES&H Office.² The program has maintained site residents near key facilities to routinely monitor the effectiveness of DOE and its contractors in ensuring the safety and health of workers at these facilities. The ES&H Office restructured the program in 1991, changing its focus from reviewing contractors' compliance with safety and health requirements to examining DOE's performance in overseeing contractors.

¹On April 2, 1993, as this report was in the final processing stages within GAO, the new Secretary of Energy announced a restructuring of the agency. Until this restructuring, each of DOE's field offices reported to one of four headquarters offices—the Office of Energy Research and the Offices of the Assistant Secretaries for Defense Programs, Nuclear Energy, and Environmental Restoration and Waste Management. Also, the Assistant Secretary for Environment, Safety, and Health reported to the Office of the Under Secretary but had direct access to the Secretary on matters concerning independent oversight. Under this announced restructuring, DOE's field offices will be retitled operations offices and will report to a new Associate Deputy Secretary for Field Management. The ES&H Office will be placed within the Office of the Secretary, along with a number of other offices that perform Department-wide functions. The ES&H Office continues to be responsible for providing independent internal oversight of activities affecting the environment, safety, and health at DOE facilities.

²Safety Issues at the Defense Production Reactors, National Research Council (National Academy Press, Oct. 1987). The National Research Council is the principal operating agency of the National Academy of Sciences and the National Academy of Engineering.

Reviews Recommend Strong Internal Oversight of Activities Affecting Safety and Health

Over the past decade, external reviewers of facilities operated for DOE by contractors have identified serious problems that pose risks to workers and the public. These reviewers have repeatedly recommended that DOE strengthen its independent internal oversight of activities affecting safety and health at these facilities. In May 1989, the Secretary of Energy began major initiatives aimed at improving DOE's performance in these areas. However, since 1989, reviewers have continued to find serious safety and health problems at facilities and to recommend that the agency further strengthen its independent internal oversight.

Early Reports Called for Strengthening Internal Oversight

GAO, DOE, and National Research Council reports from 1980 to 1988 identified numerous serious deficiencies in contractors' work practices. These deficiencies raised questions about the performance of "line management"—DOE headquarters, DOE field offices, and contractors—in ensuring compliance with safety and health requirements at the agency's facilities. The prevalence and seriousness of these deficiencies indicated that within DOE a culture emphasizing nuclear weapons production over safety and health existed.

During the early 1980s, a task force at DOE and we recommended major organizational changes to strengthen the agency's independent internal oversight of activities affecting safety and health. Specifically, in 1981, the task force found that DOE's reliance on contractors to ensure safety at the agency's nuclear reactors was too great.³ During the early 1980s, we repeatedly recommended that DOE increase the authority, independence, and visibility of its internal organization charged with overseeing activities affecting safety and health at the agency's facilities.⁴ In response to these reports, DOE established the ES&H Office in 1985 and undertook other initiatives aimed at strengthening oversight, for instance, conducting appraisals of safety and health performance at the agency's facilities.

³A Safety Assessment of Department of Energy Nuclear Reactors, DOE Nuclear Facilities Personnel Qualifications and Training Committee (DOE/US-0005, Mar. 1981).

⁴Better Oversight Needed for Safety and Health Activities at DOE's Nuclear Facilities (EMD-81-108, Aug. 4, 1981); Better Oversight Needed for Safety and Health Activities at DOE's Nuclear Facilities (EMD-82-36, Jan. 27, 1982); DOE's Safety and Health Oversight Program at Nuclear Facilities Could Be Strengthened (GAO/RCED-84-50, Nov. 30, 1983).

Despite these changes, the National Research Council recommended that DOE further strengthen its independent internal oversight.⁵ In an October 1987 report on safety at DOE's defense production reactors, the Council recommended strengthening the ES&H Office by giving it a "permanent and significant" presence at DOE facilities to continuously monitor safety. The Council also recommended that the ES&H Office be more involved in "the resolution of key safety issues on a timely and effective basis." The report explained that these improvements were needed because previous safety audits by the office had been "episodic and narrowly focused" and because continuous independent expert judgment of field offices' and contractors' performance was essential to ensure safety. In response, DOE reorganized its ES&H Office in 1988 and established the Site Resident Program, stationing inspectors at key DOE facilities to routinely monitor activities affecting safety and health.

Secretary of Energy Undertook Major Initiatives in 1989

In May 1989, in order to improve how DOE functions, the Secretary of Energy established a management philosophy that required DOE's line management to be fully responsible for its own activities, including those concerning environmental protection and the health and safety of workers and the public. This responsibility included ensuring that contractors comply with environmental, safety, and health requirements. The Secretary subsequently instituted major organizational changes aimed at meeting this responsibility. Among these changes was a requirement that line management establish self-assessment organizations at DOE headquarters, field offices, and contractors' sites to evaluate the agency's and contractors' performance of their responsibilities for the environment, safety, and health.

In June 1989, the Secretary undertook a number of major initiatives aimed at improving DOE's performance in areas affecting the environment, safety, and health. These initiatives included directing that the environment, safety, and health take precedence over production; establishing "Tiger Teams" to conduct assessments of major DOE facilities' compliance with environmental requirements;⁶ and requiring that DOE set milestones for fully complying with OSHA's standards. In September 1989, the Secretary

⁵We also recommended that DOE further strengthen its independent internal oversight. See *Nuclear Health and Safety: Oversight at DOE's Nuclear Facilities Can Be Strengthened* (GAO/RCED-88-137, July 8, 1988); *Ineffective Management and Oversight of DOE's P-Reactor at Savannah River, S.C., Raises Safety Concern* (GAO/T-RCED-88-68, Sept. 30, 1988); *Energy Issues* (GAO/OCG-89-16TR, Nov. 1988).

⁶The Secretary subsequently directed that these assessments cover safety and health as well as the environment.

also created the Office of Nuclear Safety (ONS) to oversee activities affecting nuclear safety at DOE's facilities, removing this responsibility from the ES&H Office.⁷

Recent Reports Also Recommend Strengthening Internal Oversight

Since 1989, external reviewers and DOE have continued to identify serious safety and health problems at DOE facilities. For example, in March 1990, we reported that DOE's progress in correcting previously identified safety and health problems had been slow.⁸ In December 1990, OSHA reported that serious noncompliance with its standards existed at DOE facilities.⁹ DOE's Tiger Teams have also continued to report the existence of serious safety and health problems at the agency's facilities.

External reviewers have also continued to recommend that DOE strengthen its independent internal oversight regarding safety and health. Specifically, in December 1989, the National Research Council, expanding on its October 1987 report, issued a report covering DOE's management of activities throughout the nuclear weapons complex that affect the environment, safety, and health.¹⁰ In this report, the Council further emphasized the importance of independent internal oversight in monitoring line management's performance in these areas and in ensuring that identified issues are resolved. The report stressed that although the Secretary of Energy had made line management responsible for ensuring compliance with environmental, safety, and health standards, independent internal oversight was still essential to "provide a second set of eyes" to monitor compliance at all levels and ensure that any issues are resolved before an adverse effect occurs. According to the Council, when DOE overseers find deficient practices, they should attempt to ensure that line management corrects the problems found. When this avenue does not result in appropriate corrective actions, the overseers should have the

⁷Under the departmental restructuring announced in April 1993, ONS will be abolished and the responsibility for its oversight programs will be reassigned to the ES&H Office. As DOE defines it, this oversight includes all systems and activities that can influence the potential for an uncontrolled release of fission products or for nuclear criticality.

⁸Nuclear Health and Safety: Need for Improved Responsiveness to Problems at DOE Sites (GAO/RCED-90-101, Mar. 28, 1990).

⁹Evaluation of the U.S. Department of Energy's Occupational Safety and Health Program for its Government-Owned Contractor-Operated Facilities, OSHA (Dec. 1990). This review was carried out in response to a request by the Secretary of Energy that OSHA assist him in determining the actions needed to ensure that DOE has an exemplary safety and health program in place at its contractor-operated facilities.

¹⁰The Nuclear Weapons Complex: Management for Health, Safety, and the Environment, National Research Council (National Academy Press, Dec. 1989).

authority to bring these problems to the attention of higher levels of management, the Council concluded.

DOE responded that the creation of the ONS elevated independent internal oversight for nuclear safety; that the ES&H Office provided such oversight concerning the environment, nonnuclear safety, and health; and that line management was required to establish programs for monitoring activities affecting the environment, safety, and health.

Although DOE facilities are exempt from OSHA's authority to enforce compliance with OSHA's standards for occupational safety and health, DOE requires its contractors to comply with these standards.¹¹ In its December 1990 report on DOE's efforts to ensure workers' safety and health at the agency's facilities, OSHA concluded that the ES&H Office was not adequately staffed, funded, or empowered to conduct effective and independent oversight. OSHA found that many of the findings made by the ES&H Office's site residents had been ignored. To remedy this situation, OSHA recommended that DOE strengthen the office's ability to oversee contractors' and field offices' performance in areas affecting safety and health. While OSHA also recommended that line management's responsibility for safety and health be strengthened, the agency emphasized that strong independent internal oversight was necessary because the field offices are hampered by a conflict of interest in assessing contractors' performance: In assessing contractors, field offices are reporting on their own ability to manage the contractors. OSHA recommended that the ES&H Office develop and implement a more vigorous oversight system, including compliance monitoring and program evaluations carried out by a cadre of well-trained inspectors. Furthermore, OSHA recommended that the ES&H Office have real authority to influence financial awards or organizational prestige.

In response to OSHA's recommendations, the Secretary of Energy declared that line management was fully responsible for managing occupational safety and health programs, including self-assessment, and that the ES&H Office was responsible for monitoring and auditing DOE's and contractors'

¹¹Currently, OSHA and DOE have a memorandum of understanding between them that establishes their working relationship and delineates DOE's authority for ensuring the safety and health of workers at the agency's contractor-operated facilities. The memorandum describes types of technical assistance OSHA may provide DOE upon request (for instance, training, consultation, and reviews of the agency's performance), with DOE reimbursing OSHA for costs. In July and October 1992, the House Committee on Education and Labor and the Senate Committee on Labor and Human Resources, respectively, reported legislation to the 102nd Congress that would give OSHA jurisdiction over DOE's nuclear facilities. The 102nd Congress did not vote on this legislation, but it was reintroduced in the 103rd Congress in March 1993.

management of these activities. He directed that agency staff undertake a number of initiatives aimed at strengthening DOE's occupational safety and health programs as well as the ES&H Office's independent oversight. Initiatives undertaken by the ES&H Office included a reorganization to improve its coverage of occupational safety, a revised DOE Order on occupational safety and health programs for contractors' employees, and a new DOE program to recognize and reward contractors for excellence or significant improvements in their performance regarding occupational safety and health.

DOE Establishes Site Resident Program

DOE's ES&H Office established the Site Resident Program in March 1988, modeling it on the Nuclear Regulatory Commission's (NRC) resident inspector program, which permanently stations safety inspectors at nuclear power plants. DOE's site residents served as on-site "eyes and ears" for the ES&H Office, providing independent observations of activities at contractor-operated facilities. Site residents focused on inspecting work practices to determine whether contractors were complying with DOE's requirements for nuclear safety, workers' safety and health, and radiation protection. Findings were issued in daily, weekly, monthly, and special reports. In September 1990, ONS established its own site resident program to monitor nuclear safety at DOE facilities. Subsequently, the ES&H Office's Site Resident Program discontinued its coverage of nuclear safety.

Staffing of the ES&H Office's Site Resident Program grew from 5 site residents in 1988 to a peak of 12 in 1990. The program stationed these inspectors at five DOE field offices—Idaho, Oak Ridge, Richland, Rocky Flats, and Savannah River. The site residents were responsible for monitoring safety and health practices at sites under the responsibility of these field offices, including the Idaho National Engineering Laboratory (INEL), the Oak Ridge Y-12 Plant, the Hanford Site, the Rocky Flats Plant, and the Savannah River Site.

At the outset of the program, site residents' findings of major safety and health problems played a key role in the shutdowns of two key facilities, the P Reactor at Savannah River and Building 771 at Rocky Flats, and work stoppages at other facilities. From 1988 to 1991, site residents issued over 2,000 findings of safety and health deficiencies to DOE field offices. About 20 percent of these deficiencies were considered to represent a significant risk or noncompliance requiring immediate or prompt action.

DOE Restructures Site Resident Program

After the Secretary of Energy instituted in May 1989 his new philosophy that DOE's line management must be fully responsible for its own activities, line management became responsible for monitoring contractors' compliance with safety and health requirements. Since this was the main focus of site residents' activities, the ES&H Office decided to change the mission of the Site Resident Program. However, the office directed site residents to continue to assess contractors' compliance to allow line management time to set up its new activities for self-assessment.

In April 1991, after determining that line management was, for the most part, structured to oversee its facilities, the ES&H Office restructured the Site Resident Program. The office gave the program a new name, the Site Representative Program, and a new goal—to support the office's new role of advising the Secretary and senior DOE officials on whether line management is adequately carrying out its responsibilities for ensuring workers' safety and health. To meet this goal, the ES&H Office also changed the program's assessment approach—from inspecting for compliance with safety and health requirements to assessing line management's performance in providing direction to and oversight of contractors' occupational safety and health programs. In these "performance assessments," site representatives evaluate field offices' and contractors' implementation of these programs by reviewing DOE's and contractors' policies, programs, and management systems and directly observing work practices on a sampling basis to determine whether these programs are effective. Monthly reports by the site representatives, along with less frequent assessments by the ES&H Office's headquarters, will provide a basis for annual reports to the Secretary on the status of line management's occupational safety and health programs.

The ES&H Office also made other major changes in the program in response to OSHA's December 1990 recommendations for strengthened safety and health oversight. The ES&H Office broadened the program's scope to cover all DOE field offices and facilities, not just those at the five locations where site representatives are stationed. It also instituted a program of routine occupational safety assessments and developed for the site representatives more guidance on conducting assessments and reporting the results. In addition, the office now formally transmits site representatives' reports to headquarters' senior management rather than to field offices' management.

The ES&H Office also divided the management of the program between two suboffices, the Office of Safety and Quality Assurance and the Office of

Health. Previously, the Office of Safety and Quality Assurance managed the program by itself. This office had been responsible for the oversight of activities affecting occupational safety and health until the ES&H Office created the Office of Health in March 1990, giving it responsibility for oversight concerning occupational health, including workers' protection from hazardous chemicals and radiation. After the Site Representative Program was restructured in April 1991, the Office of Health assumed responsibility for those site residents with backgrounds in occupational health. However, in February 1992, Secretary Watkins transferred to ONS the responsibility for the oversight of radiation protection, and the Office of Health discontinued its participation in the Site Representative Program. Consequently, the ES&H Office's Site Representative Program now focuses on occupational safety, including areas such as fire prevention and construction safety. ONS' site resident program broadened its coverage of nuclear safety to include radiation protection.

In general, the ES&H Office conducts a variety of activities aimed at enhancing and independently overseeing DOE's and contractors' activities affecting occupational safety and health. The office formulates the agency's standards related to occupational safety and health, provides technical assistance to line management in implementing these standards, and assesses line management's performance. In addition to having the Site Representative Program, the ES&H Office has two other ongoing assessment activities that cover occupational safety and health: "Tiger Team Progress Assessments" and assessments of line management's activities aimed at restarting operations at facilities shut down for safety reasons or starting up operations at new facilities. During the first type of assessments, ES&H Office staff follow up on Tiger Teams' assessments at major DOE sites, generally 2 to 3 years later, to evaluate line management's progress in addressing the problems cited.¹² During the second type of assessments, ES&H Office staff observe line management's reviews of facilities' operational readiness and conduct their own assessments of readiness. In addition to these ongoing assessment activities, the ES&H Office performs other reviews, including special reviews of DOE facilities' operations in response to needs identified by line management or to evaluate potential generic safety and health problems.

The ES&H Office has a total of about 300 full-time positions. The Site Representative Program currently has 10 site representative staff, located at the same five sites as under the former program. As of January 1993, the

¹²From June 1989 to July 1992, Tiger Teams conducted assessments at 35 sites. According to ES&H Office officials, as of March 1993, DOE had completed progress assessments at eight sites.

program had issued to DOE's line management about 150 findings, which cite potentially significant weaknesses in occupational safety programs. In contrast to the former program's findings of individual safety and health deficiencies, these findings cite broad issues concerning DOE's direction to and oversight of contractors.

Objectives, Scope, and Methodology

Concerned about DOE's ability to conduct independent internal oversight of activities affecting safety and health at the agency's facilities, the Chairman of the Senate Committee on Governmental Affairs asked us to evaluate the effectiveness of the ES&H Office's Site Resident Program before and after its restructuring in April 1991. We subsequently agreed with the Chairman's office to assess the former and current effectiveness by reviewing the ES&H Office's implementation of the program as well as line management's responsiveness to the program's findings on safety and health issues. To accomplish these objectives, we (1) reviewed recommendations to DOE from external organizations regarding independent internal oversight of activities affecting safety and health, (2) reviewed relevant DOE directives, orders, and procedures, (3) obtained information from NRC regarding its resident inspector program, (4) interviewed former and current ES&H Office officials and site representatives regarding the implementation of the program, (5) interviewed line management officials at DOE field offices and headquarters regarding the processes they have used for responding to the program's findings,¹³ (6) collected and analyzed data from five DOE field offices and the ES&H Office on the status of findings, and (7) examined available evidence from the ES&H Office's assessments to determine whether DOE's line management responded adequately to these findings. We did not verify the data on the status of the program's findings, except to the extent that we checked consistency.

We conducted our review between July 1991 and March 1993. Our work was carried out in accordance with generally accepted government auditing standards. As requested, we did not obtain formal written comments on a draft of this report from DOE. However, we discussed the facts presented in the report with the Director of the ES&H Office's Site Representative Program and officials of the Offices of Defense Programs and Nuclear Energy who are responsible for responding to the program's findings and incorporated their views where appropriate.

¹³We interviewed officials from the Idaho, Oak Ridge, Richland, Rocky Flats, and Savannah River Field Offices and from the Offices of the Assistant Secretaries for Defense Programs, Nuclear Energy, and Environmental Restoration and Waste Management.

Site Resident Program Had Limited Effectiveness

In response to the National Research Council's 1987 recommendations for strong independent internal oversight, the ES&H Office originally planned to establish a nationwide site resident program consisting of 50 to 70 inspectors, similar to NRC's resident inspector program. However, we found that the ES&H Office never implemented these plans. The office could obtain only 12 site residents and never developed a systematic approach comparable to NRC's for using its Site Resident Program to assess line management's performance in areas affecting safety and health.

According to the National Research Council's 1989 report, DOE overseers should attempt to ensure that line management resolves identified problems concerning safety and health. However, we found that the ES&H Office had little ability to ensure that problems identified by its site residents were resolved because the DOE Order on the Site Resident Program did not specify line management's responsibilities for responding to the site residents' findings. Also, the ES&H Office did not follow up on the site residents' findings to determine the adequacy of line management's responses.

We found that in this environment, the processes developed by the field offices for resolving the site residents' findings did not ensure that the identified safety and health problems were adequately addressed. Follow-on studies by OSHA and DOE indicate that the field offices did not adequately address some significant safety and health problems identified by the site residents. In some cases, these inadequate responses posed unnecessary risks to workers. For example, in the summer of 1991, a Tiger Team identified many "serious" violations of OSHA's standards at the Idaho National Engineering Laboratory (INEL) that were similar to deficiencies the site residents had reported from July 1989 to February 1991. OSHA defines a serious violation as one where there is a substantial probability that death or serious physical harm could result.

Program's Coverage Never Reached Expectations

In response to the National Research Council's October 1987 report, the ES&H Office originally planned to station 50 to 70 site residents to monitor safety, health, and environmental performance at 10 to 15 sites by 1990. However, by that year, staffing of the program only reached 12 residents, located at five sites.

According to the former Deputy Assistant Secretary responsible for the Site Resident Program, in early 1988, there was much resistance from line management to the concept of a field presence for the ES&H Office, and,

therefore, the office could obtain an initial staff of only eight site residents. Later, when the office tried to increase staffing, it could obtain only a maximum of 12 site residents. Furthermore, the ES&H Office's plans to have the program cover line management's environmental performance were dropped.

This shortfall in coverage constrained the ability of the program to carry out its mission. According to current and former site residents, staffing was not adequate to enable them to carry out their mission of monitoring contractors' safety and health performance at their assigned sites, which are large and complex. One site resident, for example, was responsible for monitoring the Rocky Flats Plant, a 364-acre manufacturing complex consisting of about 7,000 employees and over 100 buildings, while another site resident was responsible for monitoring the Hanford Site, a 560-square-mile site consisting of about 15,000 employees and numerous facilities, including nuclear waste sites, reactors, and laboratories. Also, the program did not have sufficient staff to assign site residents to cover other major sites with safety and health problems, as identified in the Tiger Teams' reports, such as the Pantex Plant, in Amarillo, Texas, and the Lawrence Livermore National Laboratory, in Livermore, California.

The distribution of staff also did not keep pace with changes in the program's scope. The ES&H Office chose the original five sites because they contained nuclear facilities. However, when DOE transferred the responsibility for nuclear safety to ONS in 1989, the ES&H Office did not carry out its original plans to expand coverage to sites without nuclear facilities.

Assessment Approach Was Not Systematic

The ES&H Office originally modeled its Site Resident Program on NRC's resident inspector program, which permanently stations inspectors at nuclear power plants to conduct routine unannounced safety inspections. NRC provides its resident inspectors with detailed guidance on how to perform their duties. NRC also uses their observations, along with other available information, to periodically evaluate and rate safety performance at nuclear power plants. Our review found that, in contrast, DOE's ES&H Office provided little guidance to its site residents on how to perform their duties. As a result, site residents used various methods for conducting and reporting assessments. In addition, we found that the ES&H Office did not use its site residents' observations to systematically evaluate contractors' performance in areas affecting safety and health, which limited the office's ability to compare performance across sites, determine performance

trends, and target assessments at areas in which performance was the weakest.

**Monitoring Was
Inconsistent Across Sites**

The guidance NRC provides to its resident inspectors includes detailed procedures on conducting inspections and writing inspection reports. In addition, NRC requires its resident inspectors to complete a series of training courses. In contrast, the ES&H Office gave its site residents little written direction regarding how they were to conduct and report assessments and did not require them to complete specified training courses.

According to former program managers, when they established the program, they had little time to develop detailed procedures and training requirements like NRC's because they had to establish a presence in the field immediately in order to obtain independent firsthand observations about serious safety and health deficiencies and bring them to line management's attention. Therefore, they hired experienced individuals and gave them flexibility to do their work.

With little direction from headquarters, the site residents used different methods for conducting and reporting assessments and transmitting reports to the field offices. For example, the site residents at Idaho focused on issuing broad assessments of Idaho facilities' performance in various safety and health areas, such as fire protection and workers' training in hazardous waste operations. In contrast, the site residents at Savannah River focused on issuing discrete findings about observed instances of contractors' noncompliance with DOE's requirements, such as a finding that workers were eating, drinking, and smoking in radiological control areas. In restructuring the program in April 1991, the ES&H Office identified headquarters' lack of direction to the site residents and the resulting inconsistency in their approaches as problems needing correction.

**ES&H Office Did Not
Systematically Assess Line
Management's
Performance**

NRC uses its resident inspectors to observe nuclear power plant licensees' safety performance and to identify potential problems. Once a problem is identified, NRC may assign specialists to conduct an in-depth inspection of the managerial weaknesses that allowed the problem to occur. Furthermore, NRC's procedures require the agency to conduct what it calls a Systematic Assessment of Licensee Performance, or SALP, about every 15 months. During a SALP, NRC staff integrate available data and observations

about a licensee and rate performance in various functional areas, using specific evaluation criteria outlined in NRC's procedures. Staff also identify reasons for strong or weak performance. NRC resident inspectors' observations are a major source of the information used in this process. The assessments identify trends in licensees' safety performance and are used by NRC to target its inspection resources at the weakest areas of licensees' performance.

In response to the National Research Council's 1987 recommendations for strengthening independent oversight in DOE, the ES&H Office planned to develop an oversight approach that would have capabilities similar to NRC's. In particular, the office planned to annually evaluate contractors' performance in areas affecting safety and health, on the basis of the results of site residents' inspections as well as other assessments by the office. In a report to the Secretary, the Assistant Secretary for Environment, Safety, and Health noted that these annual performance evaluations would integrate available observations about contractors' performance and would diagnose the reasons for this performance. The evaluations also would provide a systematic approach for targeting the ES&H Office's assessments at problem facilities, but this approach would be viable only if the office obtained sufficient staffing, both at headquarters and in the field, the report explained.

According to a former Deputy Assistant Secretary for Safety, Health, and Quality Assurance, the ES&H Office did not conduct the proposed evaluations because it was not able to obtain an adequate number of inspectors, either in the field or at headquarters, to produce the needed amount of inspection data. Also, this official explained, the office's staff lacked adequate training and qualifications to develop and implement such a process.

The ES&H Office did periodically send to headquarters' senior management memos assessing contractors' performance at the sites for which the site residents were responsible. These memos were based on site residents' reports as well as other available information, such as reports of safety incidents. The memos—which were produced quarterly or on a less frequent basis during 1990 for the Hanford Site, the Rocky Flats Plant, and the Savannah River Site—generally discussed the main safety and health issues identified at those sites. However, we found that, unlike NRC's SALP process, the ES&H Office's process for conducting these assessments did not involve evaluating and rating each site's performance in various functional areas, using specified criteria.

The lack of a structured method, including performance ratings, for producing overall evaluations of contractors' performance in areas affecting safety and health limited the ES&H Office's ability to compare sites' performance and determine trends in performance. Former managers of the Site Resident Program told us that through their periodic memos to headquarters' senior management, the ES&H Office attempted to use site residents' reports and other available information to compare sites' performance and identify trends but did not do so in a formal, systematic manner. Furthermore, we found that the office could not compare all sites or identify year-to-year trends because these memos covered only a few sites for 1 year. When asked the extent to which the ES&H Office was able to determine trends, the former Director of the program told us that, on the basis of the available information, the office could conclude that DOE had made improvements in ensuring safety and health since 1980, but that further improvements were needed.

The lack of a systematic method for evaluating contractors' performance and identifying trends over time also limited the ES&H Office's ability to formally target assessments at the weakest performers. Though former managers of the program told us that they were able to develop a sense of how well line management was performing and what the main safety and health issues were and that their perceptions influenced decisions regarding what assessments to conduct, there was no special effort to document or quantify this process. Without a systematic approach, there was little assurance that the ES&H Office targeted assessments at the weakest areas of performance.

Line Management Did Not Adequately Respond to Site Residents' Findings

According to the National Research Council, the ES&H Office should attempt to ensure that line management resolves identified problems affecting safety and health. However, the DOE Order on the Site Resident Program did not specify line management's responsibilities for responding to the site residents' findings. In addition, the ES&H Office did not follow up to determine whether line management had adequately responded to these findings. As a result, the ES&H Office had little ability to ensure that identified problems were remedied. We found that in this environment, field offices did not adequately address some significant safety and health problems cited by the site residents. For example, the Rocky Flats Office has no record of its responses to site residents' findings issued from June to August 1989 regarding potential hazards to workers at excavation sites at the Rocky Flats Plant. In November 1991, the site representatives

reported on continued deficiencies in excavation safety, including OSHA violations posing an imminent danger to workers.

**ES&H Office Had Little
Ability to Ensure
Resolution of Issues**

The National Research Council's October 1987 report recommended that the ES&H Office play a role in resolving key safety issues. The Council's December 1989 report elaborated on this point by recommending that the office attempt to ensure that responsible line managers correct identified problems affecting safety and health. The report also stipulated that when this avenue was not successful, the ES&H Office should bring these problems to the attention of higher levels of management.

Despite the Council's recommendations, the ES&H Office had little ability to ensure the resolution of safety and health issues identified by its site residents because DOE did not issue formal requirements specifying line management's responsibilities for responding to site residents' findings. DOE's October 1988 Order formally establishing the Site Resident Program did not specify whether or how line management should respond to findings other than stating that line management was responsible for ensuring contractors' compliance with DOE's safety requirements. According to a former Deputy Assistant Secretary responsible for the program, the Order did not contain specific requirements because line management was resistant to the program and because obtaining line management's agreement on specific requirements would have been difficult.

In December 1989, the ES&H Office did establish for the Site Resident Program internal procedures that called for field offices to transmit action plans, including schedules, for resolving underlying safety issues to the office's headquarters for review and approval. These procedures noted that the field offices could enter information on the resolution of findings into the program's data base. However, according to ES&H Office officials, no formal requirement existed for field offices to submit action plans or to report on the resolution of findings. In contrast, the Secretary required line management, in responding to Tiger Teams' assessments, to submit action plans, with milestones, to the ES&H Office for review and approval. In April 1990, the Secretary issued a notice calling on line management to be responsive to the findings of internal and external oversight organizations. However, this notice did not specify how line management should respond, such as what information it should provide on planned and completed corrective actions.

Although the program's procedures called for ES&H Office staff to follow up on the site residents' findings to determine the adequacy of corrective actions, the office did not send any headquarters staff to do so and did not require the site residents themselves to do so. According to the former Director of the program, the ES&H Office did not conduct follow-up because of a lack of staff. The office had established a data base in late 1988 for transmitting the site residents' reports and tracking the status of findings but never entered into it any information on the status of findings.

The National Research Council recommended that the ES&H Office raise issues up the chain of command if the responsible line managers did not take appropriate corrective actions. The memos the ES&H Office periodically sent to senior headquarters officials described the main safety and health issues the residents had reported to the field office management. However, we found that because the ES&H Office did not follow up on the findings, these memos contained limited information on the adequacy of the actions that the responsible managers at field offices or contractors had taken to resolve these issues.

Line Management's Handling of Findings Was Not Adequate

Without any formal requirements for responding to site residents' findings, field offices frequently handled them inadequately. The field offices provided little information to the ES&H Office on how they planned to correct the problems cited. Also, the procedures the field offices used to address the findings did not always ensure that the underlying causes of safety and health problems were corrected. Finally, field offices' and contractors' responses to findings were often delayed, and some field offices have no records of responses for many of the findings.

Through interviews with field office and ES&H Office officials, we found that the field offices generally did not provide the ES&H Office an opportunity to review how they planned to correct the deficiencies the site residents identified. As noted earlier, the Site Resident Program's procedures called for field offices to submit action plans to the ES&H Office's headquarters for approval, although the DOE Order contained no such requirement. We found that the Richland and Rocky Flats offices did submit descriptions of planned actions for approval, but only to their site residents, not the ES&H Office's headquarters.

Field offices did not always ensure that contractors' corrective actions addressed the underlying causes of the deficiencies cited by the site residents. In a July 1990 memo to line management, Secretary Watkins

emphasized that managers, in planning actions to correct environmental, safety, and health deficiencies, should evaluate the deficiencies to determine the "underlying basic problem or root cause" and develop corrective actions aimed at the root cause. However, only the Rocky Flats Office required its contractors to analyze the site residents' findings for this purpose. From our review of files documenting responses to site residents' findings at each of the five field offices, we found that few showed a process of identifying and addressing the underlying causes of the deficiencies cited. Most described corrective actions that targeted the specific deficiency cited.

Responses to findings were often delayed. Although most of the field offices established time frames, ranging from 10 to 30 days, for the responsible contractors or DOE managers to respond to the site residents' findings, actual responses often exceeded these time frames. Managers sometimes submitted responses more than 18 months late. For example, in June 1989, the Oak Ridge site resident issued a finding regarding inadequate respiratory protection at the Portsmouth facility, and although the field office required the responsible manager to submit a written response by July 1989, he did not do so until May 1991. In another instance, the Savannah River Site Field Office assigned to its suboffice that manages the site's reactors the responsibility for responding to 76 findings issued by site residents from October 1989 to December 1990. These findings included deficiencies in fire protection and ensuring the quality of the air workers breathe. However, this suboffice did not track the dates of responses to these findings and did not close any of them until after we started requesting their status in March 1992.

Finally, we found that at the Idaho, Rocky Flats, and Savannah River field offices, gaps exist in the tracking of responses to site residents' findings:

- The Idaho site residents started issuing findings in July 1989. The Idaho Field Office had no centralized system in place for tracking responses to these findings. The office reported to us that it considers all of the daily findings the site residents issued to be closed, but for many of these findings, the office does not have a record of the responses or of the date the findings were closed.
- The Rocky Flats site residents began issuing findings in March 1988. The Rocky Flats Office did not track responses to these findings before August 1990 and has no record of responses to findings issued before that time.

- The Savannah River site residents started issuing findings in March 1988. The Savannah River Field Office did not institute a centralized system for tracking responses to these findings until October 1989 and has incomplete records of responses to findings issued before that time.

**Some Safety and Health
Issues Were Not
Adequately Addressed**

Although field offices' records indicate that contractors undertook many actions to correct safety and health problems cited by the site residents, evidence from a number of sources indicates that field offices and contractors did not always adequately respond to the site residents' findings. In particular, the field offices and contractors did not adequately address some significant safety and health problems, posing some unnecessary risks to workers.

In 1990, OSHA conducted a comprehensive review of efforts by DOE headquarters, field offices, and contractors to ensure workers' safety and health at DOE facilities. OSHA reported that the site residents' findings had no immediate impact and were often ignored. In a January 1991 draft report on weaknesses in the Site Resident Program, officials of the ES&H Office acknowledged that they believed most of the findings were unresolved. Also, the site residents told us about inadequacies in the field offices' responses to their findings. Problems included field offices' approving corrective actions that did not address the underlying causes of the deficiencies cited and therefore did not prevent their recurrence, lessons learned not transmitted from one facility to others, and inadequate progress in resolving serious problems.

Table 2.1 shows field offices' data on the number of site residents' findings issued in daily reports and the number and percentage remaining open as of September 30, 1992, the latest date for which comparable data on these findings were available. Because of gaps in field offices' tracking of responses to site residents' findings, the table does not include all findings issued in daily reports.

**Chapter 2
Site Resident Program Had Limited
Effectiveness**

**Table 2.1: Status of Daily Findings
Issued by Site Residents From
April 1989 to March 1991**

Field office	Number of findings	Number open	Percentage open
Idaho	79	0	0
Oak Ridge	303	15	5
Richland	72	25	35
Rocky Flats	43	8	19
Savannah River	267	25	9
Total	764	73	10

Note: The figures for Rocky Flats apply only to those daily findings issued in August 1990 or after, and the figures for Savannah River apply only to those daily findings issued in October 1989 or after. Also, the Savannah River Field Office closed some site residents' findings if they were similar to other findings already being tracked. Some of these other findings remain open.

Daily findings represented almost 70 percent of all site residents' findings. Site residents also issued findings in weekly and monthly reports, but these summarized findings in the daily reports. In addition, site residents at the Idaho Field Office, unlike the other site residents, put most of their effort into producing special reports focusing on contractors' overall performance in various safety and health areas. According to the Idaho Field Office, 17, or 23 percent, of the 73 findings issued in these special reports remained open as of September 1992.

Open findings have been open for over a year and a half. According to field office officials, most remain open because actions to correct the deficiencies cited have not yet been completed. While in some cases, corrective actions are scheduled for completion at a future date, in other cases, corrective actions are overdue or the field office has not obtained a response from its contractor. Some findings remain open because the field office has not yet verified corrective actions that the contractor has reported are complete.

More recent assessments of DOE's and contractors' performance in areas affecting safety and health, including assessments by the Site Representative Program, have identified significant safety and health problems cited earlier by the site residents, indicating that the responses to the original findings did not adequately address the problems cited. In some cases, inadequate responses posed unnecessary risks to workers. We identified the following examples of safety and health problems that were not adequately addressed:

- DOE requires its contractors to comply with OSHA's and DOE's standards for construction safety. In daily reports issued from June 1989 to September 1990, site residents cited 34 findings concerning deficiencies in construction safety at the Oak Ridge facilities. In particular, the residents cited repeated significant violations of OSHA's requirements for protecting workers from falls, including a situation that posed an imminent danger to construction workers, and attributed these deficiencies to a lack of adequate oversight. By September 1991, the Oak Ridge Field Office had closed out most of these findings. Responses generally consisted of corrections to each specific deficiency cited but also included some commitments to identify and implement longer-term corrective actions. However, in September 1991, the Oak Ridge site residents examined this area again and found that the field office's oversight had not been effective in reducing violations of requirements for construction safety within the Oak Ridge complex. Regarding protecting workers from falls, the site residents cited a worker's near fatal fall, which had been preceded by 14 serious violations within a 4-month period. In addition, during a routine tour of a construction site at the Y-12 Plant, a site resident had identified a situation posing an imminent danger to workers—seven construction workers were erecting scaffolding at heights of up to 50 feet without fall protection.
- DOE also requires its contractors to comply with OSHA's and its own standards for occupational safety and health. From July 1989 to February 1991, site residents issued many findings regarding deficiencies in occupational safety and health at Idaho. However, a Tiger Team's assessment, conducted from June to August 1991, found many serious deficiencies similar to those identified earlier by the site residents. In one instance, in January 1990, site residents at INEL reviewed in one building at the site the activities required by OSHA to inform workers about the identities and hazards of the chemicals they are exposed to in the workplace. The site residents reported that the "hazard communication" program in place was not adequate, issuing three findings that cited violations such as the improper labeling of chemicals and inadequate training of workers. The Idaho Field Office submitted a response to this report in March 1990 but had no tracking system to record when corrective actions were completed. The Tiger Team assessors later found no hazard communication deficiencies in the specific building the site residents had visited but found many such deficiencies in other buildings at INEL. Most of these deficiencies were classified as serious violations of OSHA's requirements.
- DOE requires its contractors to implement programs that control the status of potentially dangerous equipment, in order to comply with OSHA's

standards. In a December 1990 report, the Richland site resident cited significant deficiencies in the contractor's "lockout/tagout program," as it is called, throughout the Hanford Site, pointing out that conditions presenting a threat of injury or death existed for workers. In response, the contractor committed to comply with OSHA's lockout/tagout standards. In August and September 1991, the site resident reviewed this area again and found that significant deficiencies still existed at the Hanford Site and that the field office's oversight of contractors had not been effective in preventing them.

- DOE requires its contractors to comply with OSHA's standards for protecting workers from hazards on excavation sites, such as falling equipment. In daily reports issued from June 1989 to January 1991, the Rocky Flats site residents cited seven findings regarding deficiencies in excavation safety. A December 1990 finding cited a situation posing an imminent danger to workers: The contractor had not taken measures required by OSHA to ensure that workers in a hole 8 feet deep could escape in the event of a cave-in or that equipment above the workers would not fall on them. Because the Rocky Flats Office did not start formally tracking responses to site residents' findings until August 1990, it has no record of responses to the first five findings, issued from June to August 1989. The contractor submitted a response to the December 1990 finding in January 1991, but the Rocky Flats Office rejected this response, and the contractor did not submit a revised response until December 1991, 7 months after the deadline established by the field office. In November 1991, the site residents again reported on continued deficiencies in excavation safety, including violations posing an imminent danger to workers, and concluded that the field office's oversight of the contractor was not adequate to prevent the recurrence of such deficiencies. In particular, the site residents pointed out that the underlying causes of the imminent danger situation that had occurred in December 1990 had not been determined and addressed.
- DOE requires its contractors to comply with its standards for protecting workers from exposure to radiation. The Savannah River site residents issued many findings of contractors' noncompliance with these standards. In particular, from November 1988 to February 1991, the site residents issued in daily reports 21 findings that cited noncompliance with the site's radiation protection procedures. However, the Savannah River Field Office lacks records of responses to some of the findings issued before October 1989, when it instituted its centralized tracking system. By February 1991, the field office had closed out 10 of the findings on the basis of a variety of completed actions to correct the deficiencies cited. Noncompliance with procedures had also been cited as a concern in the

ES&H Office's 1988 comprehensive review of radiation protection at the Savannah River Site. However, in a February 1991 report following up on this 1988 review, the Savannah River Field Office concluded that noncompliance with radiation protection procedures was still a major sitewide problem.

Conclusions

From March 1988 until its restructuring in April 1991, the ES&H Office's Site Resident Program achieved some results, as evidenced by the numerous corrective actions undertaken in response to site residents' findings. However, in contrast to the National Research Council's expectations and the ES&H Office's plans, the office did not establish a significant presence at DOE sites. With only 12 residents at five sites, the program's ability to monitor line management's performance in areas affecting safety and health was limited. Furthermore, the ES&H Office was unable to make the most effective use of the few site residents it did have because it never developed a systematic approach for using their observations to evaluate line management's safety and health performance. Finally, in contrast to the Council's recommendations, the ES&H Office had little ability to ensure that line management adequately resolved safety and health issues identified by its site residents. In this environment, the processes developed by the field offices for handling the site residents' findings were not adequate to ensure the resolution of identified safety and health problems. As a result, field offices did not adequately address some significant identified problems, which posed unnecessary risks to workers.

Program Has Been Restructured, but Problems Remain

We found that in restructuring its Site Resident Program in April 1991, the ES&H Office made a number of improvements that could enhance the program's ability to oversee DOE field offices' and contractors' performance in areas affecting safety and health. In particular, the program, which was renamed the Site Representative Program, now covers all DOE sites, provides greater guidance to the site representatives, evaluates line management's implementation of safety programs, and follows up on its findings to determine the adequacy of line management's corrective actions. However, weaknesses in the program persist despite OSHA's December 1990 recommendations for strengthening the ES&H Office's ability to conduct safety and health oversight.

Like the former program's, the new program's coverage of line management's performance is still limited because of staffing constraints. In addition, the ES&H Office has discontinued the program's coverage of occupational health. The new program's ability to monitor line management's performance regarding occupational safety is limited because the program has not established minimum training requirements for the site representatives and the site representatives are not fulfilling the program's requirements regarding the amount of time they should spend touring work areas to identify safety problems. The ES&H Office is still not making the most effective use of monitoring by the site representatives because it still has no systematic process in place to use their observations to produce overall evaluations of field offices' and contractors' performance. Finally, the ES&H Office's ability to ensure the resolution of safety and health issues identified by site representatives is still limited because DOE still has no formal requirement specifying line management's responsibilities for responding to site representatives' findings.

Although line management has begun many initiatives to improve safety programs in response to the site representatives' findings, we found that an environment persists in which line management's responses are often inadequate. Line management has usually not responded to the site representatives' findings within 60 days, as requested by the ES&H Office. Also, in following up 3 to 10 months after findings were issued, the site representatives have often found that the responsible line managers have not adequately addressed the problems cited. Inadequate responses may pose unnecessary risks to workers. For example, in November 1992, a subcontractor's employee performing construction work at an Oak Ridge facility was severely injured by a large falling tank, after inappropriate equipment had been used to lift it, and died afterward. Before this

accident, the site representatives had issued findings regarding inadequacies in the Oak Ridge Field Office's oversight of contractors' and subcontractors' construction safety practices and had found that the office had not adequately responded to some of these findings. In its report on the November 1992 accident, the field office stated that inadequacies in its safety oversight were a contributing cause.

Problems With Coverage Continue

OSHA's December 1990 report had found that the ES&H Office was not adequately staffed to effectively conduct independent oversight of activities affecting workers' safety and health. OSHA recommended that the office establish a vigorous oversight program, including independent monitoring by a cadre of inspectors. As part of its response to this report, the office has expanded the geographical scope of its Site Representative Program to cover all DOE sites; however, we found that staffing for the program has not kept pace. Furthermore, the office has discontinued the program's coverage of occupational health, even though noncompliance with OSHA's standards in this area has posed potential risks to workers at many DOE facilities.

Geographical Scope of Program Expanded but Staffing Has Not Kept Pace

In November 1991, the ES&H Office's Office of Safety and Quality Assurance expanded the geographical scope of the Site Representative Program to cover all DOE field offices and facilities, not just those at the five locations where the site representatives are stationed. This change had the stated aim of improving their ability to support the ES&H Office's mission of overseeing the safety performance of DOE's line management. This change has expanded the scope of the program greatly, from five to nine field offices and from 17 to over 70 facility sites.¹ Some of the new sites are very large. The Los Alamos National Laboratory, for example, is situated on 43 square miles of land and consists of 2,500 buildings and about 12,000 employees.

Although the geographic coverage of the program has increased greatly, its staffing has not increased. According to officials of the Office of Safety and Quality Assurance, following the restructuring of the program they planned to increase staffing to have 16 site representatives. However, the officials had to discontinue hiring in November 1991 because the agency imposed a hiring freeze on the ES&H Office. The program currently has 10 site representatives in the field. In July 1992, the ES&H Office did assign 10

¹One of the five original offices, the Rocky Flats Office, is not one of DOE's principal field offices but does report directly to DOE headquarters.

headquarters staff, who are specialists in various occupational safety areas, to work with the site representatives in completing some assessments.

For fiscal year 1993, the ES&H Office has a total of about 300 full-time positions, but only the 10 site representatives, about 3 percent of the office's employees, are located in the field. In contrast, DOE has a total of about 20,000 full-time positions, of which about 12,700, or 64 percent, are located in the field. Furthermore, as of September 1992, the latest date for which such information was available, DOE was responsible for overseeing about 149,000 employees of contractors at its facilities throughout the United States.

Most of the site representatives told us that they consider staffing to be inadequate to fulfill the program's mission at their assigned sites. About half expressed concerns that the program is badly understaffed, given the number of sites the site representatives must cover and the assessment schedules they must meet. We found that because staffing has not kept pace with the increase in geographic coverage, the site representatives cannot fulfill some of the program's key requirements, as in the following instances:

- The site representatives cannot fulfill a requirement that they perform assessments in eight core areas of occupational safety at their assigned sites within a year. From August 1991 to October 1992, a period of 15 months, they were only able to perform assessments in four to six of these areas at each of the field offices where they are stationed—Idaho, Oak Ridge, Richland, Rocky Flats, and Savannah River. During this same period, they only performed assessments in two to four of these areas at each of the field offices for which they were newly assigned responsibility—Albuquerque, Chicago, Nevada, and San Francisco. All of these assessments covered 23 facility sites under the responsibility of these field offices, fewer than a third of the total number assigned to the site representatives to cover.
- Most of the site representatives told us that they cannot keep aware of safety program activities at all of the sites for which they are responsible, although the procedures of the Site Representative Program require them to do so.

The Director of the program also told us that he believes staffing is inadequate to cover worker safety programs at all DOE field offices and facility sites. He believes the program needs a minimum of eight additional

site representatives assigned to new sites to do so. He noted that the site representatives' overtime averages 25 to 35 percent, and each is responsible for too many sites.

Coverage of Occupational Health Discontinued

In April 1991, the ES&H Office split the management of the Site Representative Program between its Office of Safety and Quality Assurance and its Office of Health. The site representatives of the Office of Safety and Quality Assurance were responsible for a range of occupational safety areas such as fire protection and construction safety, while the site representatives of the Office of Health were responsible for two areas of occupational health: radiation protection and industrial hygiene.²

The program's procedures, which the two offices established jointly, called for site representatives of these two offices to routinely monitor the performance of line management's occupational safety and health programs, respectively, and to report monthly on their findings. Starting in August 1991, the Office of Safety and Quality Assurance required its site representatives to perform these functions, but the Office of Health did not do the same for its site representatives. Instead, the Office of Health mainly used its site representatives to assist headquarters in performing other types of assessments, such as reviews of line management's activities aimed at restarting operations at facilities shut down for safety reasons, and in preparing assessment guidance. Office of Health managers told us that they used their site representatives for these purposes because staffing was constrained and because they planned to develop a new approach for assessments, different from the approach adopted by the Office of Safety and Quality Assurance, before starting a program of routine assessments of occupational health programs. However, in February 1992, the Office of Health discontinued its participation in the Site Representative Program after Secretary Watkins transferred responsibility for the oversight of radiation protection to ONS.

The Office of Health continues to be responsible for independent internal oversight of line management's performance concerning industrial hygiene. Office of Health managers told us that they prefer to use headquarters staff, rather than site representatives, to periodically assess this performance. However, in fiscal year 1992, the Office of Health did not issue any reports that focus on line management's performance concerning industrial hygiene. The office did, however, have staff work on

²As defined by DOE, industrial hygiene includes recognizing, evaluating, and controlling environmental factors in the workplace, such as hazardous chemicals, that may cause sickness among workers.

**Chapter 3
Program Has Been Restructured, but
Problems Remain**

other assessments by the ES&H Office that covered industrial hygiene to some degree. These included Tiger Teams' assessments of activities affecting the environment, safety, and health at key DOE facilities and assessments of activities undertaken in restarting operations at facilities. In contrast, the Office of Safety and Quality Assurance, in fiscal year 1992, issued 39 reports by site representatives; these reports focused on line management's activities affecting occupational safety. In addition, this office had staff work on other assessments by the ES&H Office. The Office of Health manager responsible for overseeing activities affecting industrial hygiene stated that he believed his office conducted adequate oversight in this area through its support for other assessments by the ES&H Office.

DOE's and OSHA's past assessments covering industrial hygiene have shown potential hazards to be a continuing significant problem at DOE facilities, as shown by the following examples:

- At Oak Ridge, the ES&H Office's site residents cited numerous industrial hygiene deficiencies from May 1989 until November 1990. The more serious deficiencies included improper practices in removing and disposing of asbestos, the failure to provide respiratory protection for personnel working with toxic chemicals, and inadequate controls to prevent workers' exposure to carcinogenic materials.
- OSHA found that most of the 11 DOE facilities it reviewed from the fall of 1989 to the summer of 1990 did not routinely monitor workers' exposure to airborne contaminants, such as lead and silica.
- In a May 1991 analysis of findings from the first 16 Tiger Teams' assessments, DOE concluded that noncompliance with OSHA's standards for using toxic substances was a major occupational safety and health problem, reflecting a relatively high risk of injury or death for a small number of workers. In a February 1993 analysis of findings from the remaining 19 Tiger Teams' assessments, DOE concluded that inadequate systems to identify, control, and monitor chemical and environmental hazards in the workplace were a widespread serious problem. The Tiger Teams had identified several potentially significant risks of exposure to toxic and carcinogenic chemicals.
- In a May 1992 assessment at the Hanford Site, the ES&H Office found that a contractor had made inadequate progress in correcting deficiencies in industrial hygiene that were cited in a May-July 1990 assessment by a Tiger Team. In particular, the contractor's continued deficiencies in assessing hazards and implementing a program for monitoring exposure to chemicals constituted serious noncompliance with OSHA's regulations.

New Monitoring Approach Is More Systematic, but Problems Continue

In its December 1990 report, OSHA recommended that the ES&H Office establish an oversight system that included safety and health compliance inspections and program evaluations by well-trained inspectors. OSHA also recommended that the ES&H Office perform overall evaluations of field offices' and contractors' safety and health performance. In response, the office developed a new approach for evaluating field offices' and contractors' safety and health programs. However, we found that while this approach is more systematic than that used previously, it does not completely fulfill either the ES&H Office's original plan for the program or OSHA's recommendations. According to most of the site representatives, the training provided to them has not been adequate. In addition, the site representatives have significantly decreased the amount of time they spend touring work areas to identify safety problems. Finally, the ES&H Office does not yet have a system in place to integrate site representatives' observations with other available information in order to periodically evaluate field offices' and contractors' performance.

Site Representatives Receive More Guidance but Little Formal Training

In response to OSHA's December 1990 recommendations for strengthened occupational safety oversight, the Site Representative Program instituted a core program of routine assessments of occupational safety. This core program includes assessments of field offices' management of occupational safety programs and oversight in specific safety areas, such as construction safety; hazardous waste operations; and hazard recognition, evaluation, and control. While previously the ES&H Office allowed the site residents to decide what safety and health areas to assess, the office now requires them to perform assessments in all core areas at their assigned sites each year. The program has also developed detailed guidance for use by the site representatives in conducting and reporting the results of these assessments. Finally, while previously the site residents issued reports directly to the field offices, now the ES&H Office's headquarters reviews and issues site representatives' reports. As a result of these changes, the methods used by the site representatives to conduct and report assessments are now more uniform.

OSHA also had found that DOE safety and health staff needed additional training in understanding and applying OSHA's standards and had stressed that oversight assessments should be performed by well-trained staff. After restructuring the Site Representative Program in April 1991, the ES&H Office initially planned to require the site representatives to complete a number of courses, including general and specific occupational safety and health training, in order to ensure that they were adequately qualified to

perform their duties. However, according to the Director of the program, the office has not established these minimum training requirements and has not been able to provide much formal training to the site representatives because of the limited number of staff and his own and site representatives' heavy work load. Instead, the program has given priority to performing core assessments and issuing reports. We found that, on average, each site representative received about 2-1/2 days of training in fiscal year 1992.

Most of the site representatives told us that they do not consider the training provided to them to be adequate in preparing them to perform their duties. Most said they needed training in specific safety areas such as electrical safety, hoisting and rigging, and laboratory safety, which they are required to assess. Some expressed concerns that without this specialized training, they cannot adequately oversee line management's performance in these areas.

ES&H Office officials acknowledge that the site representatives do not receive as much formal training as would be desirable, but believe that compensatory measures they have taken have ensured that the site representatives are adequately prepared to assess line management's occupational safety performance. Before a hiring freeze took effect, the officials hired 5 site representatives with much experience in occupational safety. Also, the site representatives receive detailed assessment guidance and draw upon the expertise of consultants and headquarters specialists in performing their assessments. Finally, ES&H Office officials told us that they have prepared for each site representative an individual development plan that identifies additional training needed. According to these officials, the Site Representative Program has been working to match training needs with available courses and to schedule time for training.

**Site Representatives Now
Assess Safety Programs
but Spend Less Time
Observing Work Practices**

In calling for a vigorous independent program of internal oversight at DOE, OSHA recommended in its December 1990 report that the ES&H Office evaluate field offices' and contractors' safety and health programs. In restructuring the Site Resident Program in April 1991, the ES&H Office responded to this recommendation by requiring the site representatives to conduct "performance assessments," evaluations of DOE field offices' programs aimed at managing and overseeing contractors' occupational safety programs. These performance assessments include reviews of policies, procedures, and DOE's safety inspections; interviews with DOE's and contractors' management; and direct observations, on a sampling

basis, of contractors' work practices. According to ES&H Office officials, this approach is superior to the approach employing compliance inspections, which was used by the program in the past, because instead of focusing on identifying compliance deficiencies, it focuses on identifying weaknesses, in DOE's and contractors' programs, that cause observed compliance deficiencies. In responding to site representatives' findings, line management now must address the underlying causes of noncompliance.

OSHA's December 1990 report on DOE recommended that the ES&H Office independently monitor contractors' compliance with safety and health requirements in addition to evaluating programs. Furthermore, the National Research Council's December 1989 report had stressed that independent internal oversight is essential to "provide a second set of eyes" to monitor compliance and ensure that problems are reported and corrected before an adverse effect occurs. However, under the performance assessment approach, the site representatives have greatly decreased the amount of time they spend independently monitoring compliance at DOE facilities. On the basis of accounts by site representatives of how they spent their time under the former program, we calculated that they spent an average of 14 workdays per month, or 64 percent of their time, touring work areas in DOE facilities to monitor compliance and identify potential safety and health hazards. On the basis of their accounts of how they spend their time under the new assessment approach, we found that they now spend an average of 6 workdays per month, or 27 percent of their time, touring work areas.

The site representatives told us that although their visits to work areas were unannounced under the former program, they now generally notify line management in advance of visiting a work area. Furthermore, in September 1992, the Secretary directed DOE assessors to give 2 months' advance notice to field office and headquarters senior officials and to obtain their agreement prior to conducting an assessment at DOE field offices or facilities. According to the Director of the Site Representative Program, this provision applies to the assessment activities of the site representatives.

Although the program's new approach replaces routine compliance inspections with performance assessments, the program's procedures do require the representatives to spend 20 to 30 percent of their time on "independent assessment activities" in addition to conducting scheduled assessments. According to program managers, the purpose of this

requirement was to have the site representatives routinely visit DOE facilities to identify the types of safety deficiencies existing in the workplace. This activity would allow the site representatives to develop a greater knowledge of areas in which contractors' performance is weak. However, we found that because of their heavy work load of scheduled performance assessments, the site representatives spend little or no time touring work areas other than the time they spend doing this as part of performance assessments. Half of the site representatives told us that they spend no time touring work areas independently of scheduled assessments. The other half spend 5 percent or less of their time doing this. Some expressed concerns that this lack of time touring work areas independently of scheduled assessments significantly impairs their ability to identify safety problems at their sites. According to the program's Director, the ES&H Office has recognized this problem and has drafted a procedure that will require the site representatives to document the amount of time they spend touring work areas.

The ES&H Office had adopted its performance assessment approach because the Secretary had directed DOE's line management to assume responsibility for monitoring compliance with safety and health standards. However, site representatives' performance assessments have shown that field offices are not yet fully capable of doing so. Problems identified by the site representatives include gaps in the coverage of occupational safety and health, a lack of formalized inspection programs, inadequate staff to assess compliance, inadequate training for these staff, and inadequate systems for tracking deficiencies and analyzing trends. The site representatives have issued a number of such findings against each field office. For example, in a May 1992 assessment, site representatives found that the Nevada Field Office did not have a program in place to ensure that its staff received hazardous waste operations training, limiting their ability to recognize deficiencies in contractors' hazard control programs. In that same assessment, the site representatives also found that the Nevada Field Office could not ensure the safe performance of its contractor's activities at hazardous waste sites because it had not evaluated important elements of the contractor's relevant safety programs and had not documented or planned corrections for identified deficiencies in how workers are trained in hazardous waste operations.

According to OSHA, DOE field offices are also hampered by a conflict of interest in assessing contractors' compliance. This conflict arises because in reporting on contractors' compliance, the field offices are also reporting on their own effectiveness in managing the contractors. OSHA reported that

this conflict resulted in a tendency to report favorably on contractors' performance. Most of the site representatives told us that they agree with OSHA's finding. Some said they believe this tendency occurs only in some cases, while others said that they believe it occurs often. As evidence of this tendency, the site representatives cited instances in which field office managers portrayed contractors' safety and health performance more favorably than was warranted or did not report field office staffs' findings of deficiencies in contractors' compliance. For example, the Richland site representatives found that the San Francisco Field Office did not formally transmit to the Lawrence Livermore National Laboratory and the Stanford Linear Accelerator Center some of the field office staff's findings of safety deficiencies at these facilities.

ES&H Office Still Does Not Systematically Evaluate Line Management's Performance

As discussed in the previous chapter, in response to the National Research Council's October 1987 report, the ES&H Office had planned to develop a process for annually evaluating contractors' safety and health performance by integrating site residents' observations with other available information. The evaluations were to be comparable to NRC's Systematic Assessments of Licensee Performance (SALP), in which NRC staff, using specific criteria outlined in NRC's procedures, evaluate and rate the safety performance of nuclear power plants. However, the ES&H Office did not implement this annual evaluation process. In this regard, in December 1990, OSHA recommended that the ES&H Office produce overall assessments of field offices' and contractors' safety and health performance. OSHA also suggested that the ES&H Office rate the performance of field office managers.

The Deputy Assistant Secretary for Safety and Quality Assurance told us that the ES&H Office recognizes the need for having an integrated performance evaluation process, similar to NRC's SALP process. Such a process would allow the office to systematically compare the performance of sites, determine performance trends, and prioritize assessments. In responding to OSHA's recommendations, the ES&H Office has started to develop such a process and plans to use it to produce annual reports for the Secretary of Energy. According to ES&H Office managers, these annual reports will integrate the results of the site representatives' assessments with other available information about line management's occupational safety and health programs at headquarters and field offices. The purpose of the first annual report will be to establish baseline information on the overall status of these programs. The report also will assess whether adequate progress has been made in each functional area, such as hazard

abatement and construction safety, since OSHA's review of DOE in 1990. The ES&H Office has not yet developed a formal written procedure to guide this process. The office is currently preparing the report and plans to issue it for fiscal year 1993 to the new Secretary of Energy after review by the new head of the ES&H Office.

Although this first report may help clarify overall trends in DOE's performance concerning safety and health, it will not evaluate or rate the performance of specific field offices or contractors and so will not allow for comparisons of performance across sites or over time for specific sites. The Deputy Assistant Secretary for Safety and Quality Assurance told us that the ES&H Office decided not to report on individual field offices or contractors because it is too early to attempt this in this first year of producing an annual report. Also, the ES&H Office anticipates that line management would object to such an evaluation, particularly if it included ratings of line management's performance. He added that the ES&H Office could develop a process for evaluating and rating the performance of individual sites in the future if the Secretary directed the office to do so. The Director of the Site Representative Program told us that additional staff would be needed to produce the amount of performance data necessary for such an effort.

Line Management Has Not Adequately Responded to Site Representatives' Findings

In restructuring the Site Resident Program in April 1991, the ES&H Office has improved its methods for ensuring the resolution of issues cited by its site representatives. For example, the site representatives now follow up on their findings to determine the adequacy of corrective actions taken by line management. However, we found that the office's ability to obtain adequate responses to site representatives' findings is still limited because DOE still has no formal requirement that specifies line management's responsibilities for responding. In this environment, line management has not responded to findings within established time frames, has often not provided sufficient information to the ES&H Office on planned or completed corrective actions, and has not established formal procedures to ensure that these findings are adequately tracked and addressed. The follow-up performed by the site representatives has indicated that line management has initiated many actions to address problems cited in their reports but that line management is often slow in addressing problems or undertakes actions that are not adequate to resolve the problems. In one instance, the site representatives found, 6 months after issuing findings regarding the Rocky Flats Office's inadequate management and oversight

of programs to handle employees' safety concerns, that the office had done very little to address these problems.

ES&H Office Still Has Limited Ability to Ensure Resolution of Issues

Since restructuring its Site Resident Program, the ES&H Office has improved its methods for ensuring the resolution of safety and health issues identified by its site representatives. The office now formally transmits reports to senior officials at headquarters rather than to officials at the field offices. In transmitting the reports, the office now requests responses within 60 days. The office also has developed and is implementing new procedures calling for the site representatives to follow up on line management's responses to findings to determine their adequacy. Finally, the ES&H Office has developed and implemented a new data base for internal use in tracking the status of the findings.

Although these changes represent improvements, DOE still has not issued formal requirements specifying line management's responsibilities for responding to site representatives' findings. As discussed in the previous chapter, the original 1988 DOE Order on the Site Resident Program does not specify whether or how line management should respond to these findings. The ES&H Office has prepared a revised Order, with updated information on the restructured program, but has not yet attempted to obtain the Secretary's approval of it. According to the Director of the program, the office has not done so because of line management's resistance to the program. Furthermore, the draft revised Order still does not specify whether or how line management should respond to findings. In transmitting the site representatives' reports, the ES&H Office now refers to the Secretary of Energy's April 1990 notice that calls on line management to be responsive to findings of internal and external oversight organizations. However, this notice does not specify the responsibilities of line management in responding to these findings, such as what information line management should provide on planned or completed corrective actions.

In addition to requesting that senior headquarters officials respond to site representatives' reports within 60 days, the ES&H Office's letters transmitting these reports state that the closing out of findings will be based on the senior officials' recommendation and on verification by the ES&H Office. These letters also state that these officials are responsible for tracking the status of corrective actions. However, according to ES&H Office officials, DOE has no formal requirement for these officials to respond within the stated time frame, to notify the ES&H Office when they

consider corrective actions to be completed, or to track these corrective actions. Although findings now focus on weaknesses in occupational safety programs and may require broad, long-term corrective actions, there is no requirement that line management submit corrective action plans, with milestones, to the ES&H Office for approval. In contrast, such a requirement exists for officials responsible for responding to Tiger Teams' assessments.

The National Research Council's December 1989 report recommended that if the responsible line managers do not take appropriate actions to correct identified safety and health problems, the ES&H Office should have the authority to raise concerns up the chain of command in DOE, and ultimately to the Secretary.³ The Assistant Secretary for Environment, Safety, and Health may notify the responsible senior line management official if the ES&H Office is not satisfied with how this official has responded to findings of the site representatives. However, according to the Director of the program, no formal process exists to elevate such concerns to the Secretary if this avenue is not successful in obtaining an acceptable response.

**Line Management's
Handling of Findings Is Not
Adequate**

Line management's responses to the site representatives' findings are usually delayed. As of January 1993, the Site Representative Program had issued 154 findings concerning weaknesses in the field offices' management of occupational safety programs. For 126 of these findings, over 80 percent, the responsible senior line management official did not submit a response to the ES&H Office within 2 months, as requested. On average, late responses were submitted 4 months after the report was issued. For eight of the findings, responses were submitted 6 or more months after the report was issued. In addition, as of January 1993, the Assistant Secretary for Environmental Restoration and Waste Management had not responded to 10 findings issued 8 to 14 months previously, despite numerous requests for responses by the ES&H Office.

³In its December 1990 report, OSHA went further by recommending that the ES&H Office have real authority to influence financial awards or organizational prestige. In particular, OSHA recommended that the ES&H Office determine economic penalties and incentives aimed at achieving compliance. OSHA also recommended that DOE develop and implement stronger incentives for compliance so that contractors face immediate financial consequences for failing to provide an effective safety and health program. In response to these recommendations, the Secretary in December 1992 announced an incentives program consisting of initiatives to recognize and reward contractors for excellence or significant improvements in occupational safety and health performance. The ES&H Office is developing this program in cooperation with senior headquarters officials.

According to ES&H Office officials, when the ES&H Office receives a response from line management, the office reviews it to determine whether it adequately addresses the problem cited. The office has formally rejected one response. However, according to most of the site representatives, line management's responses do not always contain enough information to allow for judging the adequacy of planned corrective actions. The main problem is that responses often do not contain enough detailed information regarding planned actions, including milestones and the names of responsible personnel. According to about half of the site representatives, the lack of detailed information in the responses affects their ability to follow up on their findings to determine the adequacy of corrective actions. Without specific milestones, for example, the representatives may follow up prematurely, before corrective actions are fully under way. Without clear, detailed information on what corrective actions are planned, the representatives must spend additional time gathering this information before following up.

Although the ES&H Office has informed senior headquarters officials that site representatives' findings will be closed out on the basis of their recommendation and verification by the ES&H Office, none of the headquarters offices we reviewed has yet developed formal procedures for resolving these findings.⁴ According to program managers, as of January 1993, the ES&H Office had received from senior headquarters officials recommendations to close only two of the findings issued since September 1991. The ES&H Office has not yet followed up on these findings to verify that they should be closed.

Although the ES&H Office has informed the senior headquarters officials that they are responsible for tracking the status of corrective actions in response to site representatives' findings, none of the headquarters offices we reviewed is doing so. Headquarters officials told us that they rely on the field offices to track the status of corrective actions. However, they have not issued formal guidance to the field offices on this matter. In this climate, the Oak Ridge Field Office has not yet developed a system for tracking the status of corrective actions in response to site representatives' findings. Furthermore, two headquarters officials told us that because of the large number of assessments performed at the field office level, they cannot keep aware of field offices' progress in resolving findings.

⁴In reviewing the processes used by headquarters' line management for handling the site representatives' findings, we interviewed staff of the Offices of the Assistant Secretaries for Defense Programs, Nuclear Energy, and Environmental Restoration and Waste Management because these offices are responsible for responding to over 90 percent of these findings.

**Some Safety Issues Not
Adequately Addressed**

According to ES&H Office officials, in response to findings of the site representatives, DOE's line management is improving occupational safety programs by committing additional resources, increasing the level of oversight of contractors, and improving the training and qualifications of DOE staff. However, according to these officials, line management's responsiveness to the site representatives' findings has been mixed. The Director of the program told us that some field offices, particularly the Idaho and Savannah River field offices, have performed well in correcting problems cited by the site representatives, while some others have not. Most of the site representatives expressed concerns to us about the adequacy of corrective actions taken by line management. In particular, they expressed concerns about (1) corrective actions that do not address the underlying cause of the problems cited, (2) lessons learned not being disseminated across sites, and (3) slow progress in correcting problems cited.

The follow-up performed by the site representatives on their findings has indicated that while line management has initiated many actions to address problems cited, it is often slow in addressing problems or undertakes actions that are not adequate to resolve the problems. As of January 1993, the site representatives had followed up on 58 findings and decided to maintain 40, or 69 percent, in active status, which indicates that corrective actions had not yet been implemented, were inadequate, or had not progressed enough to allow their adequacy to be judged. Table 3.1 shows, by headquarters program office and field office, the number of findings issued, the number of late responses, the number followed up on by the site representatives, and the number changed to inactive status as of January 26, 1993.

**Chapter 3
Program Has Been Restructured, but
Problems Remain**

Table 3.1: Status of Findings Issued by Site Representatives Since September 1991

Headquarters office and field office	Findings	Responses submitted late or overdue	Findings followed up by site representatives	Inactive findings ^a
Defense Programs				
Albuquerque	6	6	2	0
Nevada	5	5	0	0
Rocky Flats	32	29	15	2
Savannah River	12	11	5	3
Environmental Restoration and Waste Management				
Richland	20	14	8	4
Energy Research				
Chicago	4	4	0	0
San Francisco	6	2	0	0
Nuclear Energy				
Idaho	23	14	10	4
Oak Ridge	46	41	18	5
Total	154	126	58	18

^aFor inactive findings, follow-up indicated that corrective actions are under way and sufficient to expect that when fully implemented, they will resolve the identified problem.

In many of the cases in which the site representatives followed up on a finding but maintained it in active status, corrective actions had not begun or were inadequate to address the safety issues cited—3 to 10 months after the finding was issued—as the following examples show:

- As described in the previous chapter, the Oak Ridge site representatives have issued numerous findings dating back to June 1989 regarding deficiencies in construction safety in Oak Ridge facilities. In November 1991, the site representatives issued six findings regarding the field office's inadequate oversight of contractors' and subcontractors' construction safety practices. In August 1992, the site representatives followed up on five of these findings and changed the status of only one from active to inactive. For this one finding, the field office had completed sufficient corrective actions. For two of the other findings, the field office had initiated corrective actions but these were not adequate to fully

correct the problems cited, and for one, the field office had undertaken corrective actions but their effectiveness could not yet be determined. For the one remaining finding, the field office had not taken corrective actions. In this case, the site representatives had found that the field office had not assigned adequate staff to oversee construction safety practices at Oak Ridge facilities. The field office responded that it believed staffing to be adequate and did not increase staffing. In November 1992, a subcontractor's employee doing construction work at an Oak Ridge facility died after being severely injured by a large falling tank. According to the field office's report on this accident, the tank fell because improper equipment had been used to lift it. The report identified inadequacies in the field office's oversight as a contributing cause of this accident.

- In November 1991, the Rocky Flats site representatives issued five findings regarding the field office's inadequate management and oversight of, respectively, DOE's and contractors' programs for addressing employees' complaints about safety at the site. In May 1992, the site representatives followed up on four of these findings and maintained all of them in active status. In the case of two of the findings, no corrective actions had been undertaken. Corrective actions were judged to be inadequate for the other two findings. Field office managers had cited insufficient resources and competing demands as the reasons why they had not done more to address the problems cited.
- In July 1992, the Richland site representatives issued one finding regarding the San Francisco Field Office's inadequate oversight of a contractor's programs to recognize, evaluate, and control hazards in the workplace. Specifically, they found that while the field office had identified deficiencies in these programs, it had not ensured that the contractor took adequate actions to correct these deficiencies. As a result, recognized unsafe working conditions, such as missing machine guards on potentially hazardous equipment, persisted. From January to March 1993, the site representatives followed up on this finding and maintained it in active status. According to their follow-up report, the field office informed them in January 1993 that it had not taken formal action in response to the finding because it had not received an official copy of the site representatives' report from its headquarters office. In March 1993, according to the follow-up report, the field office told the site representatives that the contractor had taken certain actions to correct deficiencies cited by the site representatives. However, the field office had not yet verified the adequacy of these actions.
- In May 1992, the Richland site representatives issued two findings regarding the field office's inadequate oversight of contractors' hoisting and rigging programs. The representatives had found that the field office

had not formally monitored contractors' hoisting and rigging operations. In August 1992, the site representatives followed up on these findings and maintained both in active status. They found that the field office had taken some steps to correct these problems but had not yet instituted routine assessments of contractors' hoisting and rigging activities.

Conclusions

Since restructuring the Site Representative Program in April 1991, the ES&H Office has made a number of improvements, particularly by expanding the program's geographical coverage, increasing guidance to the site representatives, performing evaluations of line management's safety programs, and following up on findings. However, more fundamental changes are needed to enable the program to provide the vigorous independent internal oversight envisioned by the National Research Council and OSHA.

With only 10 site representatives, the program's ability to monitor DOE's and contractors' safety performance at nine field offices and over 70 facility sites is very limited. Also, the elimination of the program's coverage of occupational health decreased the ES&H Office's ability to oversee DOE's and contractors' performance in this area. While assigning additional staff to the program and restoring its coverage of occupational health would remedy these problems, continuing to divide management of the program between the Office of Safety and Quality Assurance and the Office of Health could result in significant differences in the implementation of the program, as occurred previously. Assigning the program to one office would ensure that a more uniform approach is used to oversee activities affecting workers' safety and health.

The program's lack of minimum training requirements and the significant reduction in time spent observing work practices have also limited the program's ability to monitor DOE's performance in ensuring workers' safety and health. Requirements to complete specified training courses would help to ensure that the site representatives are adequately trained. In addition, ensuring that site representatives meet their requirements for spending a minimum amount of time observing work practices independently of scheduled assessments would help to ensure that the site representatives are familiar with the safety problems at their sites. While the performance assessments are valuable, independent unannounced tours of work areas in DOE facilities are also important in order to provide the "second set of eyes" the National Research Council envisioned and to

ensure that problems are identified and corrected before they place workers at risk.

Without a formal systematic process in place for producing evaluations of field offices' and contractors' safety and health performance, the ES&H Office has not made the most effective use of its site representatives. Evaluations, including ratings, of individual field offices' and contractors' performance would allow the ES&H Office to compare performance, determine trends over time, and target assessments at the weakest performers. Such a process would also enable the ES&H Office to exert greater influence on the decisions DOE's line management makes that affect workers' safety and health, such as budget allocations. Finally, periodic ratings would provide the Congress and the public with an objective measure of DOE's progress in improving safety and health performance at the agency's facilities.

Finally, the lack of formal requirements specifying how line management should respond to these findings has impeded the ability of the ES&H Office to obtain complete and timely responses to reports and to monitor line management's progress in correcting problems cited. By not responding adequately to some findings, line management may allow conditions to persist that pose unnecessary risks to workers. A DOE Order specifying how line management should respond to site representatives' findings would provide the needed direction.

Recommendations

To strengthen the ES&H Office's independent internal oversight through routine on-site monitoring of line management's performance, we recommend that the Secretary of Energy

- improve the Site Representative Program's coverage of line management's activities affecting occupational safety and health by reinstating the program's coverage of occupational health, determining the number of staff the program needs to effectively monitor DOE's performance in these areas, and staffing the program accordingly;
- improve the Site Representative Program's ability to monitor line management's performance by (1) establishing minimum training requirements to ensure that site representatives receive adequate training to perform their duties and (2) readjusting work priorities to ensure that the site representatives meet the requirement that they spend 20 to 30 percent of their time observing work practices in DOE facilities, through

unannounced visits, in addition to the time they spend doing this as part of scheduled performance assessments;

- more effectively utilize the monitoring performed by the site representatives by requiring the ES&H Office to develop a systematic process for periodically evaluating and rating—on the basis of site representatives' observations and other available information—individual field offices' and contractors' performance in areas affecting safety and health; and
- improve the ES&H Office's ability to ensure that the safety and health issues identified by the site representatives are resolved by issuing a new DOE Order specifying how line management should respond to site representatives' findings—in particular, (1) requiring line management to submit corrective action plans, with clear milestones, to the ES&H Office within specified time frames and report on completed corrective actions and (2) establishing a formal process for the ES&H Office to elevate concerns about line management's responsiveness to the Secretary.

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