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Report to the Ranking Minority Member, Committee on Governmental Affairs, U.S. Senate

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ENVIRONMENTAL AUDITING

A Useful Tool That Can Improve Environmental Performance and Reduce Costs

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The Honorable John Glenn
Ranking Minority Member
Committee on Governmental Affairs
United States Senate

Dear Senator Glenn:

As requested, we are reporting on the potential for federal agencies to improve their environmental performance and reduce costs by conducting environmental audits. This report (1) describes the experience of organizations that are leaders in environmental auditing and identifies the characteristics that distinguish their programs, (2) discusses the extent to which federal agencies use environmental auditing and the benefits that could accrue from its wider use, and (3) identifies obstacles and disincentives to the more effective use of environmental auditing by these agencies.

As arranged with your office, unless you publicly announce its contents earlier, we will make no further distribution of this report until 30 days after the date of this letter. At that time, we will send copies to the appropriate congressional committees and to the Administrator of the Environmental Protection Agency. We will also make copies available to others on request.

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

Sincerely yours,

Peter F. Guerrero
Director, Environmental
Protection Issues

Executive Summary

Purpose

As the estimated costs of cleaning up contamination on federal lands rise to hundreds of billions of dollars, environmental auditing is increasingly viewed as a way to foster better environmental practices in operating federal facilities. Environmental audits are comprehensive and systematic reviews of environmental performance used to improve compliance with environmental laws and minimize future environmental damage and cleanup costs.

The Ranking Minority Member of the Senate Committee on Governmental Affairs asked GAO to examine the potential for increasing the use of environmental auditing in the management of federal agencies' operations. Specifically, he requested that GAO (1) examine the experience of organizations that are leaders in environmental auditing and identify the characteristics that distinguish their programs, (2) determine the extent to which federal agencies use environmental auditing and the benefits that could accrue from its wider use, and (3) identify obstacles and disincentives to the more effective use of environmental auditing by these agencies.

Background

During a typical environmental audit, a team of qualified inspectors, either employees of the organization being audited or contractor personnel, conducts a comprehensive examination of a plant or other facility to determine whether it is complying with environmental laws and regulations. Using checklists and audit protocols and relying on professional judgment and evaluations of site-specific conditions, the team systematically verifies compliance with applicable requirements. The team may also evaluate the effectiveness of systems in place to manage compliance and assess the environmental risks associated with the facility's operations.

No laws currently require environmental auditing. Environmental auditing has been—and remains—largely a voluntary activity. Companies and public agencies that have adopted the practice have done so for sound business reasons. The adoption of environmental auditing by these organizations represents a management decision to seek compliance proactively, instead of simply reacting to crises. The Environmental Protection Agency's (EPA) 1986 policy on environmental auditing encouraged federal agencies subject to environmental laws to adopt environmental auditing to achieve and maintain compliance. The agency also acknowledged its own responsibility to provide technical assistance to help federal agencies design and initiate audit programs.

Results in Brief

Effective environmental audit programs have a number of characteristics in common, according to studies GAO reviewed. First and foremost, the programs have the strong support of their organization's management, stemming from top management's explicit commitment to compliance with environmental requirements. They also receive resources adequate to hire and train audit personnel, to perform audits of appropriate scope and frequency, and to promptly fix problems identified through the audit process. In addition, effective audit programs operate with freedom from internal or external pressure and employ quality assurance procedures to ensure the audits' accuracy and thoroughness. Private and public sector organizations that have effective environmental auditing have reported benefits that include, in addition to improved compliance, reduced exposure to civil and criminal liability, cost savings from operating efficiencies and avoided cleanups, and reduced environmental hazards.

Even though environmental liabilities are widespread throughout the federal sector, most agencies—aside from the Department of Energy (DOE) and the Department of Defense (DOD)—do little or no environmental auditing. GAO's review of two civilian agencies with significant environmental liabilities, the Department of the Interior's (DOI) Bureau of Land Management (BLM) and the Department of Transportation's (DOT) Federal Aviation Administration (FAA), showed that both agencies have begun to put in place some of the key elements of an environmental audit program. Improvements are still needed, however, to more fully address the agencies' environmental problems. Information from EPA indicates that most other civilian federal agencies are either beginning to develop an environmental audit program or have no program at all.

Obstacles and disincentives impede the further development of environmental auditing in civilian agencies. In particular, senior agency management has yet to make the same strong and explicit commitment to environmental auditing as have the organizations with effective programs. Civilian agencies may have little incentive to support environmental auditing as a means of achieving compliance because EPA and state environmental regulators have performed few, if any, inspections at many civilian agencies. GAO's work at BLM and FAA, along with information from EPA, further indicates that environmental auditing at civilian agencies is hampered because many agencies lack the necessary environmental expertise. Environmental auditing is also discouraged by (1) the inconsistent application by some EPA regions of the agency's policy on requests for audit reports and (2) current enforcement policies that provide managers with only vague assurance that taking the initiative to

audit for compliance and correct identified deficiencies will by some measure reduce penalties.

Principal Findings

Environmental Auditing Is Credited With Significant Benefits

Union Carbide, Allied Signal, and other companies contacted by GAO that previously faced enormous liabilities for pollution indicated that they currently experience fewer fines, cleanup costs, and legal problems—a turnabout they attribute chiefly to environmental auditing. One company official noted that "even the most hardline managers are beginning to recognize [environmental auditing's] value when they are presented with the . . . cost of remediation, permitting, and enforcement actions." DOE and Air Force officials were similarly supportive, citing a number of examples of significant cost savings and other benefits. DOE claimed, for example, that engineering studies at its Savannah River nuclear facility, spurred by an environmental audit, resulted in a decision to consolidate 14 separate water systems at a savings of over $120 million dollars. Air Force engineers estimated, conservatively, that environmental audits save one service command over $4.3 million yearly in fines and penalties, although Air Force lawyers believe the savings to be much higher. Notwithstanding such anecdotal accounts, however, GAO found that systematic and comprehensive data on the savings realized through environmental audits are not available.

Representatives of organizations using environmental auditing emphasized the importance of top management's commitment to a program's success. A formal environmental policy statement is often used by top managers to put employees, shareholders, and others on notice that environmental protection is integral to the organization's mission. In addition, some organizations consider environmental performance in compensation decisions for key personnel. Union Carbide officials, for example, told GAO that a facility manager's pay can be reduced if the facility's environmental performance is rated poorly. They added that the "surest way for a plant manager to be fired is to fail to follow up on an audit's findings by implementing appropriate corrective actions."

Environmental Auditing Among Federal Agencies Is Limited

While DOE and DOD have made significant progress toward developing effective environmental audit programs, many other federal agencies, some with potentially large environmental liabilities, have made more

limited progress. GAO's review of BLM and FAA showed that although these agencies have developed pilot audit programs, they still need to expand these programs and ensure that the programs become permanent. Information from EPA indicates that other federal agencies also have only fledgling audit programs or no programs at all. For example, a 1993 EPA survey of agency environmental officials disclosed that 8 of 19 agencies surveyed have no environmental audit program and that many of the remaining agencies' programs were, at best, rudimentary.

As the private sector's experience has shown, environmental audit programs can increase compliance with environmental laws and help avoid the costs of noncompliance. Furthermore, while the environmental audit programs at BLM and FAA are still under development, their pilot audits have already realized financial and environmental benefits. For example, an audit at FAA's Technical Center in New Jersey revealed that oil left outdoors in open containers for fire extinguisher training was overflowing and contaminating the ground when it rained. The audit manager stated that if the audit had not discovered the oil spillage and simple, low-cost measures had not been taken to correct it, the Center could have had to spend additional dollars investigating the contamination before the actual cleanup could even begin. He added that if the Center's audit program had been implemented in the 1960s, current cleanup costs, estimated at $25 million to $30 million, could have been avoided.

Agencies Face Obstacles in Developing Environmental Audit Programs

While some civilian federal agencies, such as BLM and FAA, have launched pilot environmental audit programs, obstacles impede the further development of environmental auditing in the civilian sector. According to environmental audit experts GAO interviewed, building strong environmental audit programs requires that senior managers take actions such as issuing statements notifying personnel of management's support for the program, providing adequate and reliable funding for the program, personally reviewing audit reports, and ensuring that environmental audit findings are promptly addressed. Senior managers at most civilian agencies have yet to take such steps.

Civilian agency managers may have little incentive to support environmental auditing because, under the current EPA and state inspection strategy, many civilian agencies have little risk of being inspected. BLM and FAA environmental officials explained that relatively few of their agencies' facilities have ever been inspected and that, as a result, agency managers see little need to use environmental auditing to

ensure compliance. EPA data show that a large portion of the civilian facilities inspected by federal and state inspectors in fiscal year 1994 belonged to a few civilian agencies, while few, if any, facilities belonging to other civilian agencies with substantial environmental liabilities were inspected.

Another obstacle to the wider use of environmental auditing by civilian agencies is that many lack the necessary technical expertise. EPA has recently taken steps to address civilian agencies' needs for environmental expertise, but GAO's work at BLM and FAA and information from EPA itself indicate that more sustained and regular technical assistance will be required. In particular, effectively encouraging environmental auditing in civilian agencies will require outreach to senior civilian agency managers on how environmental auditing can improve compliance with environmental laws, reduce exposure to environmental liabilities, and lower costs. Opportunities exist for EPA to deliver the needed technical assistance at low cost through cooperative efforts with experienced agencies, such as DOE and the Air Force, which have already developed environmental audit training programs and have demonstrated a willingness to share them with other agencies.

Another disincentive to environmental auditing results from EPA's treatment of environmental audits in enforcement actions against the sponsoring organization. To avoid discouraging the voluntary adoption of environmental auditing, EPA's 1986 policy statement notes that the agency "will not routinely request audit reports." However, members of the audit community explain that the inconsistent application of this policy by some EPA regional enforcement authorities has had a "chilling effect" that has impeded environmental auditing in both public and private organizations. Environmental officials report that an additional disincentive to auditing is created by EPA policies that encourage environmental auditing and the disclosure of violations but do little to assure regulated entities that such proactive behavior will be rewarded with any relief from penalties.

Recommendations

GAO recommends that the Administrator, EPA, (1) ensure that civilian federal agencies receive a measure of enforcement attention commensurate with the environmental risks posed by their operations, (2) use technical assistance and outreach to civilian federal agencies to improve agency managers' awareness and understanding of the benefits to be gained from environmental auditing, (3) require EPA regional offices to adhere to the agency's stated policy that EPA will not "routinely request"

environmental audit reports but will confine such requests to the exceptional situations outlined in the agency's 1986 policy statement on environmental auditing, (4) revise agency policies to encourage regulated entities to self-discover, report, and correct noncompliance by providing for reductions in the penalties for violations identified through environmental auditing.

Agency Comments

EPA, DOE, DOD/Air Force, and DOT/FAA provided written comments on a draft of this report, which are included in their entirety in appendixes III through VI of this report. EPA agreed generally with GAO's recommendations that it inspect civilian federal agencies and provide technical assistance to these agencies to encourage wider use of environmental auditing, but it questioned whether the report had (1) shown persuasively that there have been significant departures from its stated policy of not requesting copies of audit reports except under limited circumstances and (2) adequately demonstrated the need to change its audit policy to provide more explicit assurance that penalties would be mitigated for violations that were discovered, reported, and corrected as a result of voluntarily conducted audits. Citing the common belief among regulated companies and agencies that these issues do, in fact, discourage the wider use of voluntary environmental audits, GAO still maintains that the recommended actions are needed. EPA's comments and GAO's detailed responses are included in appendix III.

DOE, DOD/Air Force, and DOT/FAA agreed generally with GAO's findings and recommendations. They also provided information to supplement, clarify, and update points discussed in our draft report. Where appropriate, such information has been incorporated in the final report. DOI/BLM reviewed the draft but declined to provide written comments. The DOI Assistant Secretary for Land and Minerals Management stated that BLM would give the report's findings and recommendations careful consideration as the agency proceeds with the development of its environmental audit program.

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Abbreviations

ACC	Air Combat Command
BLM	Bureau of Land Management
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
DOD	Department of Defense
DOE	Department of Energy
DOI	Department of the Interior
DOJ	Department of Justice
DOT	Department of Transportation
EAR	Environmental Auditing Roundtable
ECAMP	Environmental Compliance Assessment and Management Program
EH&S	environmental, health, and safety
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FFCA	Federal Facility Compliance Act of 1992
FLPMA	Federal Land Policy and Management Act
FOIA	Freedom of Information Act
GAO	General Accounting Office
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
OEA	Office of Environmental Audit
OECA	Office of Enforcement and Compliance Assurance
OMB	Office of Management and Budget
PCBs	polychlorinated biphenyls
RCRA	Resource Conservation and Recovery Act of 1976
SEC	Securities and Exchange Commission
TSCA	Toxic Substances Control Act of 1976

Introduction

Starting in the late 1970s, a number of companies began to systematically evaluate their compliance with environmental requirements and assess the potential liabilities they faced as a result of noncompliance and the environmental damage caused by their operations. In some instances, these "environmental audits" were mandated by regulatory authorities. In other cases, they were undertaken voluntarily by corporate managers wanting to identify compliance problems and to avoid the associated fines, penalties, lawsuits, and criminal liability.

The practice of environmental auditing continued to develop and spread throughout the 1980s, partly because of the visibility and encouragement given to it by the Environmental Protection Agency (EPA), which viewed environmental auditing as a useful adjunct to traditional regulatory enforcement. Perhaps more importantly, the practice grew as top business managers increasingly recognized that compliance was too important to be left to chance. Increasingly, corporate managers came to view environmental auditing (1) as a powerful tool for monitoring and proactively managing compliance as well as overall environmental performance and (2) as a means of controlling the risks inherent in failing to meet legal requirements.

A Tool for Ensuring Compliance

While there is no single, universally recognized definition of environmental auditing, there is broad consensus on what environmental auditing consists of and what it seeks to accomplish. EPA has defined environmental auditing as a systematic, documented, periodic, and objective review by regulated entities of facility operations and practices related to meeting environmental requirements.[1] The agency notes that environmental audits can be designed to achieve a number of objectives, including verifying compliance with environmental laws and regulations, evaluating the effectiveness of systems already in place to manage environmental responsibilities, and assessing the risks from regulated and unregulated materials and practices employed in facilities' operations.

While the term environmental auditing, used in its broadest sense, can encompass a variety of evaluation methods and subjects, this report is concerned solely with the ongoing, periodic, and systematic evaluations of an organization's environmental performance conveyed in the definition adopted by EPA and other key organizations. Such environmental audits rely primarily on specific criteria, such as laws, regulations, and

[1]The International Chamber of Commerce and the Environmental Auditing Roundtable, a membership organization dedicated to furthering the development and professional practice of environmental auditing, have adopted definitions that closely resemble EPA's.

organizational policies relating to environmental protection. While these audits may also use as criteria standards and principles adopted by industry organizations and "best practices" identified through benchmarking and other studies, their hallmark is reliance on objective facts measured against some commonly recognized standard.

An effective and comprehensive environmental management program, as distinguished from a discrete environmental audit conducted at a particular facility, cannot be achieved overnight. It must be developed gradually and systematically over time, with the hiring and/or training of environmental personnel (including qualified environmental auditors), the building of basic environmental management systems and expertise, and the fostering of environmental awareness and sensitivity among the organization's members.

Impetus for Environmental Auditing

Environmental auditing emerged as a compliance management tool in the late 1970s, at a time of rapidly expanding environmental regulation and a number of highly publicized incidents of environmental pollution. Among the more significant environmental laws enacted during this period was the Resource Conservation and Recovery Act of 1976 (RCRA), which regulates hazardous wastes from their generation to their disposal and provides for cleanups at active facilities. Among the more notorious pollution incidents of the period was the 1975 contamination of the James River by the toxic chemical Kepone, resulting from activities at an Allied Chemical facility in Virginia. This and similar pollution incidents forcefully brought home to corporate managers the potential liability that unknown and unassessed compliance problems posed for their companies and for them personally.

The development of environmental auditing as a tool to assess and manage compliance was further spurred by actions of the Securities and Exchange Commission (SEC), which in the early 1970s began to require companies to disclose significant costs of complying with environmental standards. Beginning in 1977, SEC also required several large U.S. companies, including Allied Chemical, to undertake corporatewide audits to determine the true extent of the environmental liabilities they faced. The Commission believed, essentially, that these companies were understating their potential pollution-related liabilities in their annual financial statements and reports to stockholders. After complying with the SEC orders to audit their potential environmental liabilities, each of these companies established programs to conduct environmental audits on a regular basis.

Interest in environmental auditing received an additional boost in the early 1980s from the passage of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), which governs cleanups of hazardous waste sites. Liability for cleanups under CERCLA, coupled with heavy penalties for violations of RCRA rules and RCRA's requirements for corrective actions, caused many corporate officers to attach much greater importance to environmental compliance. To better ensure compliance and avoid potentially staggering costs, many companies decided to implement environmental audit programs. Because of the nature of their business and the environmental risks involved, major chemical-intensive companies were in the vanguard of this movement.

However, notwithstanding SEC and EPA settlements and orders mandating environmental auditing under particular circumstances, there has never been a general requirement for regulated entities to conduct environmental auditing. Environmental auditing has been—and remains—largely a voluntary activity. For the most part, companies and public agencies that have adopted environmental auditing have done so by choice, for sound business management reasons. Given the increasing complexity of environmental regulations and the potentially high cost of noncompliance, the top managers of these organizations have embraced environmental auditing as a means of identifying and correcting violations before they are discovered by others or develop into costlier liabilities. The adoption of environmental auditing by these organizations represents a management decision to seek compliance proactively, instead of simply reacting to crises. As one corporate legal officer commented in a survey conducted by the National Law Journal,

> "[e]nvironmental compliance is a legal, and is becoming a moral, necessity. Therefore, attention must be given first to correcting the most obvious deficiencies, second to being proactive and flushing out the latest deficiencies, and third to being proactive and, in a cost-effective manner, anticipating the next arena for regulation."

As most organizations have gained experience with compliance auditing and have sought to identify the root causes of problems discovered during their audits, they have expanded their programs to include an evaluation of their environmental management systems and an assessment of risks from materials and practices employed in their operations. These organizations have found that weaknesses in environmental management systems (e.g., inadequate policy guidance, employee training, and accountability) most commonly explain compliance problems, particularly recurrent problems.

Early Efforts to Promote Environmental Auditing

During the late 1970s, EPA's regulatory reform staff became attracted to environmental auditing as an innovative approach to help ensure compliance and a useful complement to traditional regulatory policing. Through contracted and internal studies, EPA gave heightened visibility to environmental auditing and fostered increased interest in it on the part of the regulated community, particularly private sector industrial firms. Starting in 1981, some of the most committed industrial practitioners of environmental auditing began to meet periodically to compare their auditing approaches and exchange experiences in achieving the goals of their voluntary self-assessment programs. This group, which early on began to admit EPA representatives to its meetings, constituted the nucleus of what came to be called the Environmental Auditing Roundtable (EAR). EAR was soon joined by other organizations that shared its objectives of advancing the practice of environmental auditing and developing standards for the conduct of environmental audits.

Beginning in 1983, EPA undertook a number of initiatives to encourage environmental auditing and generate information on the manner and extent of its use. EPA endorsed auditing at workshops and conferences, analyzed the attributes and benefits of effective private sector audit programs, and provided information and technical assistance to those interested in pursuing specific audit approaches. In 1984, the agency published the results of a major study entitled Current Practices in Environmental Auditing. This document provided an overview of the then-current state of the art and characterized in detail the audit programs of five industry pioneers in the field. In the same year, EPA sponsored a conference for federal agencies to emphasize that federal managers also need to know the actual and potential environmental problems associated with their facilities' operations. Environmental auditing, the agency noted, could be an invaluable tool for obtaining this knowledge.

In July 1986, EPA issued a policy statement on environmental auditing, which remains in effect. This policy statement

- encourages regulated entities to develop, implement and upgrade environmental audit programs;
- explains how EPA's inspection and enforcement activities may respond to regulated entities' efforts to ensure compliance through auditing;
- discusses circumstances under which EPA may request audit reports, in whole or in part;
- endorses environmental auditing at federal facilities; and

- outlines elements of effective audit programs as revealed by EPA's examination of mature and successful programs in the private sector.

In response to comments received on an earlier interim policy statement, EPA stressed that it was encouraging rather than mandating environmental auditing. It noted that "[b]ecause environmental auditing systems have been widely adopted on a voluntary basis in the past and because audit quality depends to a large degree upon genuine management commitment to the program and its objectives, auditing should remain a voluntary program." While the agency had considered requiring regulated entities to establish environmental audit programs, it was persuaded by comments from industry and by its own research that such an approach would discourage rather than encourage initiative and innovation in environmental auditing and would lead to audit programs that emphasized form over substance.

In March 1988, EPA sponsored a second conference on environmental auditing, specifically for federal agencies. At the conference the agency distributed to participants a document intended to serve as a ready reference source for those interested in acquiring further training in or information about environmental auditing. This was followed in August 1988 by the publication of a technical assistance document entitled Environmental Program Design Guidelines for Federal Agencies. In August 1989, EPA provided further technical assistance in the form of a Generic Protocol for Environmental Audits at Federal Facilities.

Little Progress Made in Promoting Environmental Auditing Among Federal Agencies

Executive Order 12088, issued in October 1978, directs federal agencies to comply with applicable environmental laws and regulations in the same manner as other regulated entities. Consistent with this order, EPA's 1986 policy statement on environmental auditing encouraged all federal agencies subject to environmental laws and regulations to institute audit programs to help ensure the adequacy of internal systems to achieve, maintain, and monitor compliance. The agency also acknowledged its own responsibility in this area, noting that to the extent feasible, it would provide technical assistance to help federal agencies design and initiate audit programs.

Notwithstanding EPA's policy statement, a 1987 EPA-sponsored survey suggested that the federal sector had a long way to go in developing effective environmental audit programs. As reported by EPA, only 9 out of the 36 federal agencies or organizational units surveyed at that time had

implemented fairly comprehensive environmental audit programs. A number of these—in particular, the Department of Energy (DOE) and certain Department of Defense (DOD) agencies—had done so in response to serious environmental problems caused by their past and current operations and the adverse publicity and criticism these problems had generated. For the remainder of the federal sector, little progress had been made in implementing environmental auditing. Moreover, as discussed in chapter 3, this situation is little changed today, as shown by EPA's most recent (1993) survey of federal agencies' environmental compliance programs.

In recent months, EPA has taken several initiatives to promote the greater use of environmental auditing by federal agencies. Since mid-1994, it has chaired an interagency work group responsible for revising and updating a complete set of multimedia environmental audit protocols for federal facilities. It is also updating the Environmental Audit Program Design Guidelines for Federal Agencies, first issued in 1988. Finally, it cosponsored, with DOE, a 4-day environmental audit training conference for federal agencies, held in March 1995.

Objectives, Scope, and Methodology

On July 30, 1993, the Ranking Minority Member of the Senate Committee on Governmental Affairs requested that we examine the potential for increasing the federal government's use of environmental auditing as a means of improving federal agencies' environmental performance and realizing cost savings. On the basis of subsequent discussions with the Ranking Minority Member's staff, we agreed to

- examine the experience of organizations that are leaders in environmental auditing and identify the characteristics that distinguish their programs;
- determine the extent to which federal agencies use environmental auditing and the benefits that could accrue from its wider use; and
- identify obstacles and disincentives to the more effective use of environmental auditing by these agencies.

To address the first objective, we reviewed the literature on environmental auditing; interviewed EPA officials who have been involved in the agency's efforts to study and promote environmental auditing; consulted with recognized private sector experts on the subject, including audit consulting firms and audit practitioners; and interviewed individuals in charge of the environmental audit programs of a number of corporations acknowledged to be leaders in the field. We also interviewed officials of

the Department of Energy and the Department of the Air Force, agencies that our research revealed to be recognized leaders in environmental auditing in the public sector. (See app. I for a listing of the companies and other organizations we consulted.)

To address the second and third objectives, we reviewed studies of federal agencies' environmental compliance programs prepared for EPA, reviewed prior GAO reports as well as reports issued by agencies' Inspectors General, the Congressional Research Service, the Congressional Budget Office, and others. We also interviewed EPA officials, including officials in the agency's Office of Enforcement and Compliance Assurance, and attended meetings and reviewed proceedings of the Civilian Federal Agency Task Force sponsored by EPA.

To determine what benefits federal agencies could gain by implementing environmental audit programs and to identify possible obstacles to the wider use of auditing by these agencies, we examined the relevant experience of private sector organizations that have made a strong commitment to environmental auditing and compliance. We also examined the environmental audit programs of DOE and the Department of the Air Force, which in recent years have taken significant steps to improve their environmental performance.

In addition, to obtain detailed insights into both the nature of civilian federal agencies' environmental audit programs and the barriers impeding their development, we examined in depth the activities undertaken to ensure compliance by two agencies: the Department of the Interior's (DOI) Bureau of Land Management (BLM) and the Department of Transportation's (DOT) Federal Aviation Administration (FAA). We selected these agencies on the basis of information obtained from a number of sources, including (1) EPA's Federal Facilities Compliance Docket, which lists all potentially contaminated facilities reported by agencies or other sources for possible inclusion on the National Priorities List, EPA's register of the nation's most contaminated sites, (2) reports of congressional hearings on environmental problems faced by civilian federal agencies, and (3) published reports of environmental liabilities resulting from the past and current operations of federal agencies. We sought, in making our selection, to include agencies that varied in size and in the nature of their activities and whose operations could have significant adverse effects on the environment.

We conducted our work between July 1993 and February 1995 in accordance with generally accepted government auditing standards.

Effective Environmental Audit Programs Have Benefits and Distinguishing Characteristics

Organizations that monitor and actively manage environmental compliance do so as much to protect their own interests as to protect the environment. Chief among the benefits they seek from environmental auditing are the detection of compliance problems before these problems pose serious liabilities, cost savings through operating efficiencies, and reduced risks from environmental hazards.

Studies have shown that effective environmental audit programs have a number of characteristics in common. First and foremost, they have the strong support of their organization's management, stemming from top management's explicit commitment to environmental protection and full compliance with environmental requirements. They also receive resources adequate to staff and operate the programs properly, to hire and train audit and other necessary personnel, to perform audits of appropriate scope and frequency, and to promptly fix problems identified through the audit process. Successful audit programs also operate with independence, objectivity, and freedom from internal or external pressure or conflict of interest. Finally, to ensure the accuracy and thoroughness of the audits and the integrity of the audit process, effective audit programs are subject to quality assurance procedures.

Environmental Auditing Has Proven Benefits

EPA-sponsored research and our own discussions with private and public practitioners of environmental auditing show that organizations that adopt environmental auditing typically do so because they believe it makes good business sense—helping to maintain or improve their long-term competitive status and viability. More specifically, the benefits of environmental auditing include improved compliance and a corresponding reduction in exposure to legal actions, fines, penalties, and criminal prosecution; cost savings and operating efficiencies; fewer environmental hazards and reports of incidents/accidents and improvements in workers' health and safety; and a positive perception by regulators, employees, stockholders, and the public.

Environmental Auditing Helps to Ensure Compliance

Noncompliance with environmental laws and regulations can entail heavy costs for regulated entities, including fines, penalties, tort liabilities, and even criminal sanctions for responsible officials. As one corporate environmental officer noted at a March 1994 conference on environmental management, there is substantial precedent indicating that corporate officers can be held liable for the conduct of subordinate employees. Moreover, he noted, a growing number of judicial decisions indicate that

any purposeful failure to investigate criminal activity or deliberate ignorance thereof also constitutes criminal liability. The result, we found, is that most environmental audit programs have been established at the direction of top management to identify and document the compliance status of the company's facilities and to provide management with assurance that the organization's potential exposure to regulatory compliance problems is being effectively limited.

A manager of Allied Signal's environmental audit program told us that the company's program serves to overcome top management's inevitable insulation from day-to-day operating practices at the facility level, including practices related to environmental compliance. He noted that top management gets the "straight story [on a facility's compliance status] from trusted people who have no ax to grind." Information developed by the audits permits managers to judge the adequacy of the environmental management systems and the personnel put in place to ensure compliance and make decisions to influence the behavior of the system. Moreover, he noted, the direct involvement of top management in environmental protection, through the audit program, stimulates lower-level management, particularly facility managers, to get involved also, so that environmental considerations receive attention at all levels of the company.

Studies of corporate environmental audit programs commissioned by EPA in the early 1980s show how corporate management uses environmental audit programs to assess and improve operating facilities' compliance. As one such study reported, at a facility for manufacturing scientific instruments, the company's environmental audit team found that wastewater was being discharged to the storm sewer rather than the sanitary sewer. The team made this discovery while reviewing the plant's sewer diagrams and physically observing discharge points. Following the audit, the manufacturer took steps to obtain approval from the local publicly owned wastewater treatment works to include this waste stream in the plant's sanitary discharge. Within 2 months, the necessary approvals and changes were made. The audit benefited the company by identifying and correcting an instance of noncompliance before it became a costly liability and benefited the environment by causing the wastewater discharge to be rerouted to the sanitary sewer.

Environmental Auditing Can Lower Costs

EPA's research and our own work show that organizations that practice environmental auditing can save money by improving compliance and

enhancing environmental performance. To the extent that improved compliance results in fewer and less serious findings of rule violations, these organizations can expect to spend less for fines, penalties, and lawsuits over time. Also, to the extent that improved compliance and performance reduce pollution, these organizations can lower the long-term costs of environmental cleanup and remediation.

Exact data on these categories of cost savings are often not readily available. Most private sector organizations report that they do not systematically track regulatory fines and penalties to identify patterns or trends, and even those that could provide such information are generally reluctant to do so. With regard to savings on future cleanups, the organizations we contacted also told us that it is virtually impossible to quantify the costs avoided in the future through improvements in environmental compliance and performance today.

To recognize the difficulty of estimating these kinds of savings, however, is not to deny their reality. A senior vice president in charge of one company's environmental compliance program noted, for example, that the costs avoided through environmental auditing "may be 'soft dollars,' but even the most hardline managers are beginning to recognize [auditing's] value when they are presented with the 'hard dollars' cost of remediation, permitting, and enforcement actions." Similarly, a manager of DOE's environmental audit program, while acknowledging the difficulty of quantifying many of the savings resulting from environmental auditing, confidently predicted that auditing would help the agency avoid in the future the multibillion dollar cleanup costs that its past operations have imposed on it to date.

Some officials, nonetheless, did provide us with at least an indication of the cost savings potential of environmental auditing. For example, officials in charge of the Environmental Compliance Assessment and Management Program (ECAMP) for the Air Force's Air Combat Command told us that they have seen a substantial reduction in fines and penalties, attributable, in their view, to the effectiveness of their audit program in discovering and correcting compliance deficiencies before they are discovered by others. They said that Air Force engineers estimated, conservatively, that environmental audits save the Command about $4.3 million yearly in fines and penalties. Air Force lawyers, they added, believe that the amount in avoided fines and penalties might be much higher, perhaps as much as $100 million annually.

The following examples illustrate cost savings achieved through environmental audit programs:

- Through an audit of drinking water systems at its Savannah River nuclear facility, DOE found that the facility's plant for treating surface water to produce potable water failed to comply with state drinking water regulations. This finding initially pointed to the need to upgrade the facility's numerous groundwater-based systems at an estimated cost of $156 million. Further engineering studies spurred by this high cost estimate subsequently resulted in a decision to consolidate 14 separate systems, reducing the estimated cost to $32 million—a savings of over $120 million.
- During an audit of a facility that polishes and grinds glass lenses, a company's environmental audit team determined that the plant was disposing of all of its glass sludge as hazardous waste because the sludge contained residue from leaded glass. Further investigation through the audit revealed that less than 30 percent of the residue came from leaded glass waste streams; the balance did not qualify as hazardous waste. As a result, the plant began segregating the residue into separate waste streams, testing to verify that lead existed only in those waste streams originating from the leaded glass grinding operations, and disposing of the nonhazardous waste, at a much lower cost, in a sanitary landfill. According to the company's environmental audit manager, these changes in procedure led to substantial yearly cost savings.

Furthermore, environmental auditing is only one component of a comprehensive system for managing environmental performance, and it is not the only component that can produce savings. We found that organizations with highly developed environmental performance management programs typically have other programs that also generate savings. These may include pollution prevention, waste minimization, recycling, and energy and materials conservation programs. The environmental audit program is often the catalyst for establishing these programs and can be adapted to evaluate their operational effectiveness—just as it evaluates compliance, environmental management systems, and regulated and unregulated risks. Illustrating the economic benefits of a proactive approach to managing environmental performance, the manager of DuPont's environmental effectiveness program stated that his company's analysis shows that, on average, voluntary waste reduction measures cost one-third as much as measures required by regulatory agencies—for the same environmental benefit. In

fact, he added, there is a high probability that the cost of voluntary efforts can be as little as one-tenth that of regulatory-driven measures.

Environmental Auditing Can Reduce Environmental Hazards

While our work showed that environmental audits typically focus on compliance with regulatory requirements and on the functioning of environmental management systems established to ensure compliance, it also showed that a number of organizations use audits to identify and assess the potential environmental risks posed by the practices, procedures, and materials routinely employed in a facility's operations. Such practices, procedures, and materials may already be subject to some regulation, or they may currently be unregulated. In either case, they may pose inherent environmental, health, and safety hazards that the organization may wish to reduce or eliminate. This goal might be accomplished by introducing changes in processes and procedures or by substituting less environmentally hazardous materials for those currently used in operations and maintenance. For organizations that have never previously assessed the risks posed by their operations in a systematic way, the potential for reducing risks through auditing may be great.

In a case reported by EPA, a member of a company's environmental audit team was assigned to cover a plant's program for controlling PCBs (polychlorinated biphenyls—chemicals commonly used as insulating material in electrical equipment). Following the audit protocol, the auditor reviewed documentation on controlling PCBs and physically inspected each of the site's transformers containing PCBs. During the inspection, he noticed that one large transformer was located in an area where forklifts and other vehicles frequently passed. Although the transformer appeared to meet all regulatory requirements, he realized that its location constituted an inherent hazard because a vehicle could collide with it. The facility manager agreed with this assessment and took steps to move the transformer to a more secure area. Through this action, the company not only eliminated a hazard to health, safety, and the environment but also avoided a potential liability.

Xerox environmental officials told us that their company has emphasized the identification and elimination of potential hazards as part of its total quality environmental management program. In 1985, the company began environmental assessments at all company locations. The worst potential outcome of any hazard was assumed. Unacceptable risks were eliminated, the storage of chemicals was minimized, and hazardous chemicals were eliminated from processes wherever possible. At one Xerox facility, a large

store of arsenic and selenium was discovered near warehouses that contained food and pharmaceuticals. The storage site was moved to another area and the volume of chemicals judged acceptable at any one location was greatly reduced. At another Xerox facility situated near a nursing home, the number of stored tanks of chlorine was first reduced; then the tanks were removed; and finally chlorine was eliminated altogether from the manufacturing process.

Environmental Auditing Can Have Other Benefits

In addition to the primary benefits of environmental auditing discussed above, a number of other benefits were cited by the authorities we consulted.

- Environmental auditing can increase environmental awareness and capability among employees. As EPA and corporate leaders in environmental auditing have reported, an important benefit of auditing is that it raises the general level of environmental awareness within an organization and helps employees at all levels better understand their responsibilities in protecting the environment. According to company officials we interviewed and pertinent literature we reviewed, the act of establishing an environmental audit program signals to the organization that top management attaches importance to meeting environmental requirements and conducting the organization's operations in an environmentally responsible way.
- Environmental auditing can result in relaxed regulatory scrutiny. Many corporate environmental and legal officers told us that having a credible environmental audit program can positively influence regulators' confidence in the intention and ability of a company to conduct its business in an environmentally responsible manner. One consequence, they note, is that regulators tend to direct limited inspection resources to other companies perceived as posing greater risks to the environment.
- Environmental auditing establishes a record of a company's environmental performance. Increasingly, organizations are under pressure to disclose information to the public about their environmental performance and about the environmental, health, and safety hazards posed by their operations. Practitioners and advocates of environmental auditing note that it provides a basis for organizations to responsibly report to their stakeholders (employees, investors, regulators, neighbors in the community, and the general public) on their environmental compliance and liabilities and on the measures they are taking to improve their environmental performance.

- Environmental auditing facilitates planning and budgeting for environmental projects. A comprehensive environmental audit provides valuable information about the nature and extent of an organization's environmental problems, allowing managers to set priorities and to plan and budget for necessary corrective actions. Officials in the Air Force's environmental program told us that the audit program's ability to help identify the service's environmental liabilities and build a data base of environmental requirements was a big selling point for the program and a benefit borne out by experience. DOE officials concurred with this assessment, telling us that environmental auditing helped the agency to incorporate environmental needs into the long-range budget process.

Effective Environmental Audit Programs Have Common Characteristics

In its 1986 policy statement on environmental auditing, EPA included a list of what it saw as the basic elements of an effective environmental audit program. The list included such factors as top management's explicit support and commitment to follow up on an audit's findings; adequate resources for the audit program, including appropriate staffing and training; the audit program's independence from the functions and facilities audited; and quality assurance measures to ensure the integrity of the audit process and the accuracy and thoroughness of the audits. The list also included elements more intrinsic to audits themselves, such as a clear definition of the audit's objectives and scope; a process through which enough information is collected, analyzed, interpreted and documented to achieve the audit's objectives; and a process through which reports of the audit's findings are promptly prepared. Lists very similar to EPA's can be found in basic texts on environmental auditing and in literature prepared by such organizations as the International Chamber of Commerce, the Environmental Auditing Roundtable, and environmental management consulting firms such as Arthur D. Little, Inc.

Top Management's Commitment Is a Prerequisite

The prime determinant of an effective environmental audit program is a strong commitment by management to comply with environmental requirements. Without such a commitment, we were told, adequate resources will not be provided to support and sustain an effective audit program, to hire and train competent auditors and audit managers, to conduct audits of sufficient scope and frequency, and, most importantly, to ensure that audit recommendations are promptly followed up with appropriate corrective actions. We also heard repeatedly that without clear indications of top management's commitment and support, managers at lower levels will not perceive environmental compliance and protection

as organizational priorities and will not view them as integral to their job responsibilities or essential to evaluations of their performance.

The manager of Allied Signal's audit program echoed the opinion of many others in saying that the support of top management is key to the success of any program because the rest of the organization takes its cues from management and supports the things that it perceives management cares about. He added that an absence of commitment and support from top management would constitute a virtually insurmountable obstacle to building an effective environmental audit program.

Our review showed that top management's support for the goal of environmental protection, and for environmental auditing as one of the tools for achieving that goal, can be communicated and demonstrated in a number of ways. A formal environmental policy statement is one of the means most frequently employed by top managers to put employees and other stakeholders on notice that they view environmental protection as integral to the organization's mission. Explicit support of environmental policy in annual reports, shareholder meetings, and management meetings is another. Other methods include (1) visibly placing environmental functions, including the environmental audit function, in the organizational structure and (2) considering environmental performance in compensation decisions for key personnel, such as facility managers.

DuPont has adopted a policy on safety, health, and the environment that specifically commits the corporation, among other things, to (1) comply with all laws and regulations applicable to safety, health, and environmental quality in its manufacturing, product development, marketing, and distribution activities and (2) routinely review its operations for the purpose of making safety, health, and environmental quality improvements beyond those legally required when such changes will provide significant benefits at reasonable cost. Managers in DuPont's environmental audit program told us that top management's commitment to environmental goals is further underscored by the fact that the company's Chairman/Chief Executive Officer also serves as its Chief Environmental Officer. This individual has articulated as a goal for DuPont that "every employee be able to recognize an unsound environmental practice and correct it or call it to the attention of those who will."

Union Carbide—which has, since the Bhopal disaster of December 1984, committed itself to having a compliance assurance and risk management system "second to none"—has tried to create a corporate culture that

accepts nothing less than full compliance with environmental laws and regulations and with corporate environmental standards that are often more stringent. On the theory that "what gets measured gets done," Union Carbide has built environmental performance into its employee review system. Environmental audits, which are viewed as setting a tone of compliance in the company, are the primary means for measuring this performance. Company officials told us that if the environmental performance of a Union Carbide facility is rated as poor, the compensation of the facility's manager can be reduced. If the performance is very bad, the manager can lose his or her job. The surest way for a plant manager to be fired, we were told, is to fail to follow up on an audit's findings by implementing appropriate corrective actions.

Resources Are Adequate to Support Environmental Compliance

While it is important for top management to communicate its commitment to environmental goals as a way of fostering a climate of compliance within an organization, managers of leading environmental audit programs told us that tangible support is also needed—resources sufficient for the program to operate effectively, for appropriate corrective actions to be implemented, and for the organization to be convinced of the seriousness of management's declared intent.

The Air Force has strategically invested resources to ensure the success of its Environmental Compliance Assessment and Management Program (ECAMP). Established in the mid-1980s, ECAMP reviews were initially voluntary. However, because the major service commands and installations were slow to adopt environmental auditing, Air Force headquarters officials decided in mid-1988 to make the reviews mandatory.

To implement the decision, Air Force headquarters provided $1.2 million to fund environmental audits during 1988 and 1989 and to initiate an environmental training program for service personnel. The training was highly effective, we were told, in increasing employees' environmental awareness and understanding of the need for ensuring compliance. By investing resources in 1988 and 1989, headquarters allowed the environmental audit program to get under way quickly. Since 1990, the major Air Force commands have absorbed the cost of doing environmental audits of their installations. Officers of the Air Combat Command's (ACC) environmental staff told us that ECAMP was integrally involved in their resource allocation process. Their ECAMP staff assists in annually validating line items for the headquarters ACC environmental compliance programs' budget. Furthermore, they plan to have their A-106

program managers participate as members of the ECAMP team in fiscal year 1995 to provide on-site assistance/validation.

The Director of Compliance Audits in Union Carbide's Health, Safety and Environment organization told us that top management has always demonstrated support by amply funding environmental activities, including auditing and corrective actions aimed at ensuring compliance. He listed the company's spending priorities as 1) achieving compliance, 2) gaining competitive advantage and maintaining and increasing market share, and 3) reducing environmental, health, and safety risks. Projects that are needed to keep the company in compliance with regulatory requirements will always be funded, he said, and most projects that reduce waste will also be funded because they generally save costs over time. He reported that the company spends about $1 million a year on the audit program alone and that this cost is borne by headquarters rather than by the operating business units.

An Adequate Number of Qualified Staff Is Available

An effective environmental audit program requires a sufficient number of qualified auditors and supervisory audit personnel. According to the experts we contacted, qualified personnel are trained and experienced in the techniques of auditing and collectively have knowledge of all applicable environmental laws and regulations, understand the role and functioning of environmental management systems, and recognize organizational processes and practices that can adversely affect the environment. Moreover, these experts agreed, because environmental auditing is but one part of a comprehensive environmental performance management system, an effective audit program presupposes the existence of complementary environmental activities, including programs for training employees in environmental requirements and in their responsibility for complying with these requirements.

Environmental consultants we interviewed as well as published materials we examined noted that organizations that begin environmental auditing typically do not have the trained and experienced personnel needed for this activity. Nor have they typically established training programs to develop qualified audit personnel and to train employees in environmental protection issues and responsibilities. To overcome these obstacles, these organizations may (1) engage expert consultants to conduct audits on their behalf and provide the desired environmental training and/or (2) hire qualified individuals from the outside to put together in-house environmental audit and training programs. Some organizations may use

contractors/consultants as an interim measure, allowing them to build their audit programs gradually and provide training in step with the evolution of their overall environmental program. Others, particularly smaller organizations, may opt to rely exclusively on outside contractors.

Allied Signal followed the path that many organizations have taken to develop an effective audit program. Allied relied heavily on an outside contractor's assistance in establishing its program but gradually moved towards making the audit function an internal activity. After hiring an environmental consulting firm to perform a baseline assessment of its environmental compliance in the late 1970s, Allied contracted with the same firm to help design and implement an internal audit program and provide assistance in conducting early audits. At about the same time, Allied hired an experienced environmental professional to head up and direct its in-house audit program.

Today, Allied's program has evolved to the point that company personnel, rather than outside consultants, perform the bulk of the audit work. The program is permanently staffed at the corporate level with four environmental professionals who serve as audit team leaders. Audit team members, from throughout the company, are drawn from a specially selected and trained cadre of "environmental auditors" who participate in from two to six audits each year, in addition to carrying out their normal health, safety, or environmental functions in a plant or major business unit. Contractor personnel supplement the audit team's membership on a minority of audits, particularly on overseas audits or on audits for which special knowledge is required.

The Audit Activity Is Independent of the Facilities and Functions Audited

According to the corporate audit program managers we contacted, environmental auditors must be objective and independent of the facility or activity they are auditing if they are to provide management with an impartial assessment of a facility's compliance status. The program managers explained that facility managers and others responsible for environmental performance are more likely to perceive the audit to be fair and to accept and act on its findings if the criteria against which the facility is measured are clear to them and the auditors are careful to evaluate the facility's performance against these criteria. Senior management throughout the organization, we were told, must also recognize and respect the independence of the audit function, ensuring that there is no impediment to free inquiry or judgment and no fear of retribution.

Union Carbide ensures the independence and objectivity of its audit program by operating it as a centralized corporate function. The audit program is, in fact, the only functional program at the corporate level. The program is funded by corporate headquarters rather than by major business units, and it reports directly to the company's board of directors. It employs a core group of full-time environmental auditors, most of whom are retired former Union Carbide employees, who conduct the audits on a contractual basis. Most of the auditors have been with the program since its inception, have a good knowledge and understanding of the company's operations, and have been trained in environmental auditing techniques by Union Carbide's environmental consultants.

DuPont ensures the independence and objectivity of its audit program by prescribing the selection criteria for both audit team members and team leaders and requiring its major corporate business units to follow these criteria in staffing audits. A major requirement is that team members and team leaders not be drawn from the site being audited. Audit team members are typically managers of facilities' environmental programs, rather than production personnel, and are selected on the basis of their expertise in the environmental media under review in the audit.

Quality Assurance Procedures Ensure the Accuracy and Thoroughness of Audits

Another characteristic of effective environmental audit programs is that they are subject to some type of review mechanism designed to maintain the quality of the audit system and ensure the validity of each audit's results. Quality assurance, according to the authorities we consulted, may be accomplished through continuous supervision, internal reviews, external reviews, or a combination of these and other techniques.

Union Carbide and Allied Signal rely primarily on outside consultants to ensure the continuing quality of their audit programs. In the case of Union Carbide, environmental consultants participate as team members in approximately 20 percent of the company's environmental audits. The contractor determines which outside auditors to assign on the basis of the expertise needed in each case. After the audits in which they have participated have been completed, the outside auditors prepare separate reports. These reports discuss such matters as how the company's auditors performed, how audit meetings and interviews were conducted, and how well the audit work was documented in workpapers. Representatives of the consulting firm use these reports as a basis for providing feedback to Union Carbide's management on the operation of the audit program and for recommending actions to improve it. In Allied

Signal's environmental audit program, outside contractors play a similar role, participating in about one-third of the company's audits and reporting directly to the board of directors twice yearly on the operation of the audit program.

Eastman Kodak employs a variety of mechanisms to ensure the quality and integrity of its environmental audits. In addition to relying on corporate team leaders and on outside consultants participating as audit team members, Kodak employs a separate outside consulting firm to conduct an independent audit of its health, safety, and environmental assessment program every 2 years and report back to top corporate management with findings and recommendations. Kodak also solicits feedback on audits from its facilities, requiring site managers to complete and return to corporate headquarters a questionnaire evaluating the audit team's performance at the audit site.

Environmental Audits Have Essential Elements

The preceding discussion focused primarily on elements that are widely viewed as essential characteristics of successful and effective environmental audit programs. We found that there is also substantial consensus on the essential elements of environmental audits themselves. In large part, this agreement reflects the fact that environmental auditing has been modeled after financial auditing, an area in which consensus on standards has existed for some time.

A comparison of EPA's 1986 policy statement on environmental auditing, the Environmental Auditing Roundtable's standards for the performance of environmental, health, and safety (EH&S) audits, Arthur D. Little's principles for conducting EH&S audits, and the International Chamber of Commerce's position paper on environmental auditing reveals basic agreement on the following characteristics of environmental audits:

- Audit work is defined in advance. The coverage and objectives of an audit are clearly established before the audit takes place, so that the needs and expectations are completely defined and understood by the client and the auditee.
- An audit is systematic. Audits are based on plans and systematic procedures that ensure comprehensive and efficient coverage of all relevant matters and provide guidance in preparing for an audit, conducting fieldwork, and documenting and reporting findings.
- An audit occurs periodically. Since an audit represents only a "snapshot" in time, audits are conducted with some specified frequency to provide

assurance of continuing compliance with requirements and evidence of the continued effectiveness of the management systems in place to ensure compliance.

- Results are documented. The audit culminates in a written report that clearly communicates the audit's findings in a timely manner to the intended recipients, with sufficient clarity and detail to facilitate corrective action.

Few Federal Agencies Have Effective Environmental Audit Programs

While a few federal agencies have developed environmental audit programs that they report as achieving substantial benefits, most federal agencies (particularly civilian agencies) have made little progress in establishing such programs. A few agencies, such as BLM and FAA, have some elements of an environmental audit program but are missing key components. Other agencies have no environmental audit program at all, even though the experience of civilian agencies has demonstrated that if an agency's mission is not carried out in an environmentally responsible way, costly environmental liabilities can result.

DOE and the Air Force Have Comprehensive Environmental Audit Programs

DOE and the Air Force have implemented comprehensive environmental audit programs largely to correct major environmental problems and to stem adverse publicity arising from some of their past operations. They embraced environmental auditing as a way to avoid creating new environmental problems and to ensure compliance with environmental requirements. To guarantee the success of the audit programs, managers in each agency provided the necessary financial resources and staffing and took steps to gain the support of the agency's employees. As their audit programs matured, these agencies expanded the scope of their audits beyond environmental compliance to include examinations of management systems and environmental risks, and they made other improvements as well. Today, DOE's and the Air Force's programs are widely regarded as among the best in the public sector.

DOE

DOE established its environmental audit program in 1990. The magnitude of DOE's environmental problems was identified in environmental surveys conducted at 35 major facilities from 1985 to 1989 at the Secretary of Energy's request. The agency also published a study in December 1988 that estimated the costs of cleaning up all of DOE's environmental pollution through the year 2010 at $75 billion to $115 billion.[2] While the environmental surveys of the 1980s were one-time reviews, top managers recognized the need for periodic assessments of environmental problems at all DOE facilities.

Accordingly, senior officials created the Office of Environmental Audit (OEA) to "provide comprehensive, independent, management-level oversight" of line management's environmental performance in order to achieve full compliance and excellence in the environmental area. The

[2]Environment, Safety, and Health Needs of the U.S. Department of Energy. More recent estimates put the cost of the cleanup at $300 billion to as much as $1 trillion over a 30-year period.

Secretary communicated to DOE employees the importance of the environmental audit program by issuing departmental notices that emphasized "the need for and value of assessments . . . to ensure DOE activities are undertaken in an environmentally sound manner . . . [and] to assure compliance with applicable laws related to environmental protection."

DOE's environmental audit protocol specifies that all major facilities nationwide are to be audited once every 3 years. The scope of the audits includes all environmental media and assesses compliance with federal, state, and local environmental regulations; DOE policies and procedures; and best industry practices. DOE's audits also assess a facility's environmental management systems and look for ways to manage both regulated and unregulated environmental hazards. According to DOE officials, the audit teams consist of both the agency's full-time environmental auditors and contractor personnel who have specialized environmental knowledge. By using both contractors and full-time internal auditors, DOE ensures that the audits are independent and objective.

DOE's audit program guidance requires that auditors prepare a report at the conclusion of an audit that details the problems found. The audited facilities must formulate a plan of corrective actions and must submit quarterly updates to OEA on the actions taken to correct identified problems. According to DOE documents, DOE budgeted $2.9 million for environmental audits in fiscal year 1994.

As DOE's audit program has matured, OEA has expanded the scope of its audits from checking only for compliance with environmental regulations and DOE policies to assessing environmental management systems. These assessments seek to identify the factors contributing to the occurrence of observed deficiencies in compliance. In addition, DOE requires facilities to perform environmental self-assessments using facility-specific audit manuals. DOE has also developed quality assurance procedures to ensure that the techniques and results of all audits are consistent, technically valid, and of high quality. These procedures ensure that auditors have the guidance required to effectively perform audits, that this guidance is updated as needed, and that auditors have received appropriate training. OEA also visits facilities during an audit to observe firsthand the implementation of audit guidance and ensure consistency among audit teams in methods of auditing. While DOE continues to face billions of dollars in costs to clean up contamination from past environmental practices, DOE environmental officials stated that changes to current

practices, introduced in response to environmental audit findings, will avoid future cleanup costs for the agency. On December 18, 1994, DOE's environmental audit program, which had until then been under the jurisdiction of the Deputy Assistant Secretary for Environment, became the programmatic responsibility of the Deputy Assistant Secretary for Independent Oversight and Appraisals.

Air Force

The Air Force established its environmental audit program (ECAMP) in 1986 in response to the unfavorable publicity and regulatory attention that the service's poor environmental performance had attracted. The improper use, storage, and disposal of hazardous materials and petroleum products pose the greatest problem for the Air Force and for the Department of Defense (DOD) in general. A 1991 study prepared for DOD estimated the cost to clean up all DOD facilities at $24.5 billion. The Air Force alone will spend $509 million in 1994 on cleanup.

Once the audit program was established, the Air Force Chief of Staff communicated to employees the high importance attached to the program by the service's top management, which had set a goal of zero enforcement actions against any base and determined that this goal would be the "measure of merit" for the service. Environmental auditing was deemed to be the primary tool to measure and ensure progress towards this goal. To reinforce this point, a brochure sent to all base commanders stated that "ECAMP helps facilitate environmental compliance which, in turn, reduces the risk of legal actions and places the Air Force in a positive position as a steward of the environment." The brochure further stated that the base commander was both responsible and personally liable for any activities at the base that damaged the environment and that he/she therefore could not afford not to conduct audits.

The Air Force's audit protocol specifies that all facilities are to be audited once every 3 years. The audits assess compliance with federal, state, and local regulations and with the service's policies for all environmental media. According to Air Force officials, audit teams consist of both contractor personnel with specialized environmental knowledge and Air Force personnel, from both the base being audited and from other installations, who are trained in various environmental media. By using contractors and personnel from other installations, the Air Force ensures the independence of its auditors.

At the conclusion of an audit, Air Force auditors prepare a report that outlines the problems found. The audited facilities must then plan corrective actions and ensure that these actions are taken. Documents show that the Air Force budgeted $5 million in fiscal year 1994 for ECAMP reviews.

As ECAMP matured, the Air Force made several major improvements to the program. While auditors initially checked only for compliance, the Air Force expanded the scope of the audits to examine deficiencies in management systems so as to address the root causes of noncompliance. The agency also trained its personnel in environmental auditing so that it could decrease its reliance on contractors.

In addition, Air Force facilities are now required to do self-audits in the years between ECAMP reviews. Facilities use the ECAMP protocol to conduct these audits. Findings from the self-audits must be written up, entered into a computer data base, and tracked to ensure that deficiencies are corrected. Since the self-audits are conducted by base environmental officers who are not necessarily trained in all environmental media, the facilities have contractor support available. Auditors for the subsequent ECAMP review then follow up on the self-assessment's findings to ensure that identified deficiencies have been corrected. Air Force environmental officials stated that the environmental audit program has led to the timely correction of problems found during audits and has helped to prevent future problems.

Few Civilian Federal Agencies Have Effective Environmental Audit Programs

While environmental auditing is widely recognized in the private sector and in the defense and energy agencies as a means of reducing environmental compliance problems and their associated costs, most civilian federal agencies currently do little or no environmental auditing. At least 16 such agencies currently face cleanup costs in the millions of dollars and risk significant fines and other penalties because of past environmental mismanagement and ongoing violations of existing regulations. Both BLM and FAA have developed pilot environmental audit programs to address the potential environmental liabilities at facilities they control; however, both agencies will need to extend and institutionalize these programs to deal with the magnitude of their environmental challenges. Information from EPA indicates that most other civilian federal agencies are either just beginning to develop environmental audit programs or have no programs at all.

Bureau of Land Management

BLM has begun to put in place some of the key elements of an environmental audit program. Specifically, it has acquired an auditing capability by contracting with the U.S. Army Corps of Engineers (the Corps), thereby ensuring the availability of qualified and independent audit staff. In addition, BLM has designed a protocol to systematically audit BLM facilities for compliance with environmental laws and for sound environmental management practices. BLM is currently conducting environmental audits on a pilot basis. Improvements are still needed, however, to more fully address the agency's environmental liabilities.

BLM's mission is to plan for and manage the long-term use of public lands in federal ownership to achieve the objectives of multiple use and sustained yield. BLM manages 272 million acres of public lands, the largest area managed by any federal agency. However, BLM's stewardship of the public lands has frequently been criticized. Congressional committees in both the House of Representatives and the Senate have held hearings on BLM's environmental performance. The committees focused in particular on the agency's handling of hazardous materials and solid wastes and on the need for BLM to take measures, such as environmental auditing, to avoid further contamination. The National Research Council also criticized the agency's environmental performance in a 1992 report entitled Hazardous Materials on the Public Lands and recommended that BLM adopt an aggressive and proactive strategy for managing hazardous materials and solid wastes. BLM has about 300 sites on EPA's Federal Facilities Compliance Docket requiring cleanup at a cost estimated in the hundreds of millions of dollars. Moreover, BLM has thousands of other sites that may be contaminated but have not yet been inspected.

Most of BLM's environmental problems have been created by the private users of public lands, such as miners. However, BLM's own activities also pose potential threats to the environment. For example, BLM operations involve the use, storage, and disposal of solvents, pesticides, and hazardous materials, many of which are flammable. BLM has numerous underground fuel storage tanks, and several BLM programs generate infectious wastes. One of the biggest challenges for BLM is ensuring the safety of the many drinking water systems it operates to service public campgrounds and visitor centers on lands managed by BLM.

BLM began developing its environmental audit program in 1993 when employees at its Denver Service Center—which serves as a technical assistance and support group to the agency but has no line authority—were prompted by criticism of BLM's environmental

performance to look for a way to better ensure compliance with environmental laws. In 1993, the Center hired an environmental engineer to design and implement an audit program for the agency. Since then, pilot audits have been conducted in several BLM state offices that have volunteered to participate in the program.

BLM's environmental audit program has clear objectives and some key program elements. The stated objectives are to (1) assist managers in identifying compliance problems and the resources necessary to correct them, (2) increase environmental awareness, and (3) minimize potential liabilities. The agency has contracted with the Corps for assistance in developing the audit program. BLM developed an audit protocol that establishes systematic audit procedures and provides uniform guidance in order to promote consistency and uniformity in preparing for an audit, conducting fieldwork, and reporting findings.

Audits are conducted by Corps auditors under the oversight of the BLM audit coordinator. One or two staff from the audited facility also participate as members of the audit team, primarily for the educational value. By relying primarily on Corps auditors, BLM ensures that the audits are independent and objective.

BLM has made progress in establishing an environmental audit program. Improvements are still needed, however, to develop a program that can significantly minimize the agency's environmental liabilities. Specific improvements include the following:

- While a few state offices have provided financial support for pilot audits, BLM headquarters has not provided any funding for 1995. BLM headquarters needs to make funding available for state offices to continue to conduct pilot audits and for the agency to develop a permanent program of regular and periodic audits.
- BLM's top management needs to submit requests for funds to the Office of Management and Budget (OMB) to correct identified deficiencies requiring capital expenditures. OMB directs federal agencies to submit requests to it for environmental projects costing over $10,000 that are needed to maintain compliance with environmental laws. BLM found, in conducting its initial audits in the fall of 1993, that several drinking water systems were not in compliance and would cost an estimated $30,000 per site to fix; however, BLM headquarters officials have not submitted any funding requests to OMB. According to several field environmental officials, BLM headquarters has not yet made following up on audit findings a priority.

- BLM needs to develop a quality assurance system to ensure the integrity of the audit process and the consistency and reliability of the audit results. BLM's audit coordinator explained that he did not want to establish a quality assurance system unless the agency's top management made a commitment to continue the environmental audit program beyond the pilot phase.
- BLM needs to encourage the extension of environmental auditing beyond the agency's own facilities to the operations of private users of the public lands—the area of greatest liability for the agency. As discussed more fully in chapter 4, both EPA officials and BLM environmental officials believe that BLM has a responsibility under the Federal Land Policy and Management Act (FLPMA) to encourage proactive environmental practices, such as environmental auditing.

The need for improvement in BLM's program is to be expected, given the early stages of the program's development. Nevertheless, as discussed in chapter 4, significant obstacles and disincentives need to be removed if the Bureau's program is to become effective.

Federal Aviation Administration

FAA, like BLM, has begun to develop the essential elements of an environmental audit program. Like BLM, FAA has obtained the necessary expertise to conduct audits by contracting with the Corps, thereby ensuring the qualification and independence of the audit staff. FAA has also designed a protocol to systematically audit facilities for compliance with environmental laws. Like BLM, FAA is conducting environmental audits on a pilot basis and still needs to develop the program further to more fully address the agency's potential environmental liabilities.

FAA's mission is to provide a safe, secure, and efficient global aviation system that contributes to national security and promotes U.S. aviation. The agency has 8,500 facilities that carry out this mission. Potential threats to the environment from FAA's operations at these facilities stem from such activities as the disposal of waste oils and solvents, the handling of PCBs in radar equipment, the servicing of machinery, and the use and storage of hazardous materials. FAA is currently most concerned about the potential hazards posed by leaks from its approximately 3,000 underground fuel storage tanks. The agency estimates that bringing all of these tanks into compliance with environmental requirements will cost $200 million. Of this amount, $78.8 million had been spent through fiscal year 1994.

Because of contamination caused by past operations, one FAA facility was named to the National Priorities List (NPL) for Superfund sites, and 59 facilities have been put on EPA's Federal Facilities Compliance Docket for further evaluation and possible cleanup. FAA currently spends $13 million to $20 million a year to clean up environmental damage from past improper handling of hazardous materials. FAA's Technical Center, which was named to the NPL in 1985 for leaks and spills of hazardous materials, will require an estimated $25 million to $30 million to clean up. To address the environmental damage caused by its operations, the Center developed its own environmental audit program in 1988. The Center's environmental audits began as examinations of the facility's practices for managing hazardous materials and were expanded to include other environmental media and to check for compliance with federal, state, and local environmental laws.

FAA headquarters recognized the need for environmental audits as early as 1990, when a cooperative effort was initiated with the Office of the Secretary of Transportation. After an interagency agreement was developed between FAA's Southern Region and the Corps, FAA began to develop the current audit program in 1991, using the Corps' expertise. The agency allocated $3.6 million over 3 years to develop and test the pilot program in the Southern Region, for subsequent use nationwide. The pilot phase of field implementation started in 1992 and ended in July 1994, when implementation of the national program began. The program has been extended to three additional regions (Southwest, Central and Alaskan) and the Aeronautical Center. Expansion to all regions is scheduled in 1995.

According to FAA's strategic plan for the environmental audit program, the audits will help the agency (1) understand its environmental problems, (2) prioritize these problems, and (3) estimate the costs of correcting the problems. The Corps has adapted the Army's environmental audit protocol to reflect the issues of most concern to FAA and its facilities. Corps auditors conduct the audits, while one person from the audited FAA facility participates as an audit team member.

FAA has made progress in establishing an environmental audit program. FAA environmental officials, however, acknowledge that the program needs to be implemented more widely and refined if it is to significantly reduce the agency's environmental liabilities. For example, the program is not yet fully developed in the following areas:

- The audits conducted by the Corps do not examine environmental management systems, whose weaknesses are often the root cause of compliance problems. Audits of environmental management systems have been conducted separately at the FAA Technical Center but have not yet been implemented in the regions.
- FAA has contracted with the Corps to audit all of its facilities through 1998. While the agency reports that it intends to continue environmental auditing after that date, it has not yet finalized the program's structure. As data from the initial audits are evaluated, officials told us, the format of the program will be adjusted to optimize effectiveness. The agency will also reassess the role of the Corps in the continuing program, as it determines whether in-house resources or contractor resources will better meet its long-term audit needs.
- The agency is planning to conduct quality assurance evaluations of the compliance audits conducted by the Corps but has not yet completed these evaluations. The oversight evaluation process began in November 1994. The first of two sets of field visits was conducted in January 1995, and the second set is planned for March 1995. Agency officials told us that the evaluations are meant to provide a quality check for the audit process and to foster the continuous improvement of environmental compliance management systems and procedures.

Because environmental auditing is still in the early stages of development in FAA, some of the gaps in the agency's program are to be expected. However, for environmental auditing to become an effective tool for minimizing the agency's potential environmental liabilities, the gaps in the program and other obstacles and disincentives, discussed in chapter 4, need to be addressed.

Other Civilian Federal Agencies

Civilian federal agencies other than BLM and FAA have compliance problems and environmental liabilities that could be addressed through environmental auditing, but information from EPA indicates that environmental auditing is limited among civilian federal agencies.

Under Executive Order 12088, all federal agencies are required to comply with federal, state, and local environmental laws in carrying out their missions. Furthermore, as the experience of defense agencies has shown, failing to comply with environmental laws in conducting routine activities can result in severe consequences. For example, DOD employees have been prosecuted for failing to comply with environmental laws in disposing of substances such as paint and radiator fluid. EPA and state regulators have

imposed stiff fines on several military facilities for violations such as failing to properly contain and label hazardous waste or to determine whether stored waste was hazardous. Civilian agencies' routine operations involve the same kinds of materials and activities as were involved in these enforcement cases.

In addition, civilian agencies have demonstrated that if they do not carry out their missions in an environmentally responsible way, costly cleanup problems can result. Sixteen civilian federal agencies have facilities on EPA's Federal Facilities Compliance Docket, making up about half of all the sites on the docket. As we reported in April 1994, many civilian agencies have been slow to assess the true costs of cleaning up their facilities, but estimated costs are in the billions of dollars.[3]

Many civilian environmental officials are concerned that their agencies do not have programs adequate to handle the environmental liabilities arising from their agencies' operations. In response to these concerns, EPA has formed the Civilian Federal Agency Task Force, a group of environmental officials representing 21 civilian departments and agencies. The task force's mission is to identify needed improvements in civilian agencies' environmental programs and to make recommendations for addressing these needs.

To assist the task force, EPA administered a survey of civilian federal agencies and subagencies in 1993 to assess the status of their environmental programs. (See app. II for a listing of the agencies participating in the Civilian Federal Agency Task Force and a listing of the agencies responding to EPA's survey.) According to the survey respondents, civilian federal agencies have a widespread need to improve compliance with environmental laws, to enhance employees' environmental awareness, and to establish or strengthen environmental compliance programs. Of 19 agencies responding to the survey question on environmental auditing, 8 (or 42 percent) indicated that their agencies did not have an "environmental auditing, assessment, or other system" in place to oversee and monitor their compliance activities. Moreover, according to the EPA official chiefly responsible for working with the task force's members, the civilian agencies that were conducting environmental audits had yet to develop strong programs.

[3]Federal Facilities: Agencies Slow to Define the Scope and Cost of Hazardous Waste Site Cleanups (GAO/RCED-94-73, Apr. 15, 1994).

Wider Use of Environmental Auditing Could Improve Agencies' Compliance and Save Money

As the private sector's experience has shown, environmental auditing can help improve environmental compliance by enabling organizations to detect and correct problems before they become significant liabilities, strengthen internal systems designed to ensure compliance, and increase employees' environmental awareness and capability. In addition, environmental auditing can help agencies avoid the costs of expensive environmental cleanups, avoid fines and penalties, and identify ways of operating more efficiently.

Noncompliance Could Be Identified and Addressed Through Environmental Auditing

Environmental auditing can be instrumental in bringing civilian federal agencies into compliance with environmental laws. While auditing is only one component of a comprehensive environmental management system, it is recognized as an indispensable tool for achieving compliance. Indeed, pilot environmental audits conducted at BLM and FAA demonstrate that environmental auditing helps agencies to proactively bring facilities into compliance with environmental laws.

Through pilot environmental audits at BLM, numerous serious deficiencies were identified and corrected—deficiencies very similar to those for which defense agencies have incurred stiff enforcement penalties. The BLM pilot audits found, for example, that BLM facilities were storing flammable materials with ammunition, disposing of hazardous waste as nonhazardous waste, conducting fire training without the required air emission or water discharge permits, improperly disposing of infectious wastes, and maintaining substandard drinking water systems on public campgrounds. According to BLM officials, about 90 percent of these identified deficiencies were correctable with minimal effort and expense. According to BLM personnel, upgrading the public drinking water systems and containing hazardous wastes are the only corrective actions requiring expenditures of more than $10,000.

FAA's Technical Center in Atlantic City, New Jersey, has also found environmental auditing to be instrumental in bringing the facility into compliance with environmental laws. Because of its history as one of the nation's worst hazardous waste sites, the Technical Center is among the few civilian federal facilities to have been subjected to a fairly high level of regulatory attention. Starting in 1978, the Center received notices of violation, consent decrees, warning letters, and fines from both federal and state regulators. However, no enforcement actions have been taken against the Center since 1991. The Center's environmental manager attributes this dramatic change to the effectiveness of the Center's

environmental compliance program—which includes environmental auditing as an integral part—in bringing the facility into compliance. Like BLM officials, Center officials have found that the deficiencies they discover through environmental auditing can, for the most part, be corrected at minimal cost.

Environmental Auditing Could Help Civilian Federal Agencies Strengthen Compliance Systems

Beyond identifying immediate compliance problems, environmental auditing could help civilian federal agencies strengthen the environmental management systems that are necessary to achieve continuing compliance. These systems deal with how an organization is equipped to achieve compliance—its staffing and training, policies and procedures, and record-keeping and emergency response planning. As a DOE environmental auditor told us, "it is impossible to remain in compliance without environmental management systems and an environmental audit program to verify that they are working properly."

Civilian federal agencies acknowledge that in many cases their systems to achieve compliance are either weak or nonexistent. According to EPA's 1993 survey of civilian federal agencies, only one agency had an adequate agencywide environmental data base to ensure the maintenance of proper environmental records (e.g. waste records, discharge permits, etc.). Half of the survey respondents stated that guidance on environmental laws is provided to employees only on an informal and ad hoc basis or not at all. Similarly, the Civilian Federal Agency Task Force issued a report that characterized the status of environmental management systems in civilian agencies as follows:

> "[M]any agencies have reported being understaffed with even minimally trained personnel. Those that are available are often not provided with adequate guidance when performing job functions and mission duties that are affected by environmental laws . . . Many agencies are not equipped with automated environmental databases to ensure proper [environmental] records are maintained . . . ."

In their limited experience with environmental auditing thus far, environmental officials at both FAA and BLM have found it to be an invaluable means of identifying needed improvements in environmental management systems. The environmental manager at FAA's Technical Center told us that environmental audits frequently reveal patterns of deficiencies that are corrected Center-wide through changes to procedures or policies. For example, in response to environmental audit findings, the Center has improved its recycling procedures and developed

plans for its laboratories to manage hazardous materials. Similarly, BLM's pilot environmental audits have produced agencywide improvements in environmental policies and staffing. One pilot audit resulted in a policy requiring BLM staff before purchasing hazardous materials to consult with environmental personnel to determine whether a less hazardous alternative could be substituted. Another pilot audit recommended changes in staffing to ensure that public water supplies at BLM facilities are sampled properly.

Environmental Auditing Could Increase Employees' Environmental Awareness

Organizations with experience in environmental auditing have found it to be a very effective means of teaching their employees how to do their jobs in compliance with environmental laws. According to environmental officials in civilian federal agencies, federal personnel urgently need to be trained in their environmental responsibilities. For example, the Civilian Federal Agency Task Force recently concluded that "a significant number of Federal agency personnel from executive management to staff level lack an awareness of legal responsibilities or appropriate management controls that support compliance and reduce liabilities."

Our discussions with FAA and BLM personnel confirm the need for heightened environmental awareness in these agencies. For example, an official in DOT's Office of the Inspector General told us that FAA employees often do not understand the environmental hazards involved in routine operations, such as changing equipment parts. An FAA headquarters environmental official told us that many longtime FAA employees act in environmentally irresponsible ways because they have the attitude that "I've always gotten away without complying, so why should I change now?"

Although only a limited number of environmental audits have been conducted at FAA, an increase in employees' environmental awareness has been noted as a benefit. The audit manager at FAA's Technical Center stated that through the audit process, staff "up and down" the chain of command have learned a great deal about their environmental responsibilities. In a similar vein, the coordinator of the pilot audits conducted in FAA's Southern Region observed that one of the primary benefits of the audits is that they help employees to understand environmental issues and how their facility's activities need to be conducted to ensure compliance.

BLM's pilot audits have also discovered and addressed gaps in employees' knowledge of environmental responsibilities. For example, an audit team found that BLM personnel were allowing hazardous materials to accumulate instead of disposing of them, thereby violating regulations for storing hazardous materials. The root cause of this problem, according to the audit team leader, was simply that the employees did not know how to dispose of the materials in compliance with the law. In another instance, the audit team found that BLM employees were using pesticides for weed control when the weeds could easily have been controlled—with less risk to employees and to the environment—through mechanical means.

Wider Use of Environmental Auditing Could Reduce Agencies' Costs

In addition to improving federal agencies' compliance with environmental laws, environmental auditing can save costs by (1) avoiding the costs of cleaning up contamination, (2) avoiding the costs of fines, penalties, and other regulatory actions, and (3) identifying ways of operating more efficiently.

Federal Agencies Could Avoid the Costs of Cleaning Up Contamination

Evidence is mounting that federal agencies face staggering costs to clean up the environmental damage resulting from poor environmental practices. In April 1994, we reported that "the effort to clean up federal hazardous waste sites is likely to be among the costliest public works projects ever attempted by the government."[4] While many agencies have been slow to quantify their cleanup liabilities, estimates of the federal government's cleanup costs range in the hundreds of billions of dollars. A large portion of this liability has been created by federal defense and energy agencies. However, civilian federal agencies have also incurred cleanup liabilities. For example, FAA has preliminarily estimated that it faces $183 million in cleanup costs for the period from 1995 to 2002. BLM has yet to estimate its cleanup costs, but sources such as the National Academy of Sciences estimate BLM's cleanup liability to be several hundred million dollars.

As discussed in chapter 2, private sector organizations and DOE and DOD agencies have found that environmental auditing is a means to avoid incurring future cleanup costs. The environmental audits already conducted at civilian agencies, while limited in coverage, demonstrate how environmental auditing can also help these agencies save money by correcting deficiencies before they result in costly liabilities. For example, an audit at FAA's Technical Center revealed that oil left outdoors in open

[4]Federal Facilities: Agencies Slow to Define the Scope and Cost of Hazardous Waste Site Cleanups (GAO/RCED-94-73, Apr. 15, 1994).

containers for fire extinguisher training was overflowing and contaminating the ground when it rained. Speaking from his experience with previous cleanups at the Technical Center, the audit manager stated that if the oil spillage had not been discovered during the audit, the Center could have been required to spend additional dollars investigating the contamination before the actual cleanup could even begin. He added that if an environmental audit program had been implemented at the Center in the 1960s, the current cleanup costs (estimated at $25 million to $30 million) could have been avoided. These cleanup costs, he explained, resulted from deficiencies that environmental audits routinely identify and resolve.

A pilot audit in FAA's Southern Region also found and led to the correction of a compliance problem, avoiding a possibly costly cleanup. The audit discovered that hazardous materials were being stored improperly in a facility bordering a wetland. The audit manager estimated that if the stored chemicals had contaminated the wetland—a very real risk—the cleanup would have cost up to $5 million. Once the hazard was discovered, staff at the facility were able to correct it at minimal cost.

As the National Academy of Sciences reported in 1992, in accommodating users of the public lands (in particular, hardrock mining and oil and gas drilling operations), "BLM has overlooked or tolerated increasing contamination of its lands with a variety of hazardous materials, for which it is now a reluctant custodian." We found that some companies operating on BLM lands voluntarily conduct environmental audits, which, they report, not only benefit the company but also protect the public lands from contamination and its associated costs. However, many other companies operating on BLM lands do not conduct environmental audits, and BLM officials are reluctant to encourage them to do so. Line management officials in BLM stated that whether or not companies operating on BLM lands conduct environmental audits is outside the scope of their responsibility.

Federal Agencies Could Avoid the Costs of Fines and Penalties

Although EPA and state regulators have thus far devoted little enforcement attention to many civilian federal agencies, these agencies may find, as DOE and DOD agencies already have done, that after inspections occur, noncompliance can be costly. For example, EPA fined the Naval Air Facility, El Centro, California, $257,000 for failing to determine whether stored waste was hazardous and for storing incompatible wastes together. The state of California seeks fines totaling about $760,000 from six military bases for failing to properly contain and label hazardous waste and

inadequately training hazardous waste workers. These fines are particularly relevant to civilian federal agencies because they were issued for violations very similar to those existing at many civilian agencies' facilities.

The Air Force Air Combat Command, headquartered at Langley Air Force Base, Virginia, reveals the extent to which environmental auditing can help a federal facility avoid the costs of fines and penalties. In 1994, Command environmental officials estimated that the audit program saved the Command more than $4 million annually in avoided fines and penalties.

Federal Agencies Could Identify Savings Through More Efficient Operations

In addition to helping federal agencies avoid the costs of cleanups and regulatory fines, environmental auditing can help the agencies identify ways to operate more efficiently. The results of the pilot audits at BLM demonstrate these kinds of savings. Through one audit, BLM personnel learned that using a different type of battery would reduce the amount of plastic that the facility was discarding and would cut the cost of replacing a battery from $60 to $40. Another audit corrected a misapprehension that led BLM personnel to dispose of alkaline batteries, which are nonhazardous, as if they were hazardous waste. The audit team estimated that the audited facility had spent $30,000 more than was necessary to dispose of alkaline batteries.

The pilot audit teams also found that BLM overpurchases hazardous materials. The audit teams found that BLM personnel were purchasing hazardous materials in bulk to obtain discount prices, but most of the materials were never used, presenting a hazardous material storage and disposal problem and wasting BLM funds. The auditors suggested that before purchasing a hazardous material, BLM personnel first check with other local BLM facilities for any surplus of the material and then limit any purchase, if required, to the quantity actually needed.

Conclusions

Some federal agencies, such as DOE and the Air Force, have joined the private sector in establishing environmental audit programs from which the agencies have derived significant benefits. The pilot audits at BLM and FAA demonstrate that civilian federal agencies can also derive benefits from environmental auditing. These benefits may include (1) improving compliance with environmental laws, (2) strengthening the management systems necessary to achieve compliance, (3) heightening employees' environmental awareness, and (4) achieving cost savings by reducing cleanup costs, avoiding fines and penalties, and identifying more

cost-effective ways to operate. Information from EPA indicates that the need for these kinds of benefits is widespread among civilian agencies.

While it is encouraging that some agencies have initiated environmental auditing, much more remains to be done if civilian agencies are to build audit programs that can provide benefits such as DOE, DOD, and a number of private organizations have realized. Some agencies, such as BLM and FAA, will need to expand their current programs and ensure that they become permanent programs. Other agencies will need to introduce environmental auditing into their organizations and determine how to implement it. The continued development of environmental auditing in the civilian federal sector will depend, however, on overcoming certain obstacles and disincentives, as discussed in chapter 4.

Agency Comments

DOT commented that the Department's and FAA's management fully support FAA's environmental audit program and have made a commitment to fully implement the program to ensure the agency's compliance with all environmental requirements. Similarly, DOD commented that it is committed to full and sustained environmental compliance. DOD agreed that strong environmental audit programs are essential to achieving and maintaining compliance, and it concurred generally with GAO's recommendations. DOE noted its satisfaction that GAO had found that the Department had made significant progress toward developing an effective environmental audit program that is used to improve environmental performance and reduce costs. DOE also concurred with GAO's recommendations. While neither DOI nor BLM provided written comments, DOI's Assistant Secretary for Land and Minerals Management commented informally that DOI and BLM would carefully consider GAO's findings and recommendations as they proceeded to develop and implement BLM's environmental audit program.

Obstacles Inhibit the Development of Environmental Audit Programs in Civilian Federal Agencies

Although some civilian agencies, such as BLM and FAA, have launched pilot environmental audit programs, the further development of environmental auditing in the civilian sector will require overcoming several obstacles. In particular, senior managers in civilian agencies will need to be persuaded to make the same strong and explicit commitment to environmental auditing as the managers of organizations with effective programs have made. However, senior civilian agency managers may see little reason to support environmental auditing as a means of achieving compliance because, under the current EPA and state inspection strategy, many agencies have little risk of being inspected. The further development of environmental auditing in civilian agencies is also hampered by (1) lack of the necessary environmental expertise within some agencies and (2) EPA policies and practices that provide managers with only vague assurance that taking the initiative to audit for compliance and to correct violations will in any measure reduce the penalties for violations.

Strengthening Environmental Audit Programs Will Require More Support From Civilian Agency Managers

While officials experienced in environmental auditing reported that clear and tangible management support is essential to the success of audit programs, such support has yet to be evidenced at some civilian agencies. As stated in chapter 2, according to experts in environmental auditing whom we interviewed, building strong environmental audit programs requires senior managers to take steps such as issuing statements notifying personnel of management's support for the program, providing adequate and reliable funding for the program, personally reviewing audit reports, and ensuring that environmental audit findings are promptly addressed. Senior managers at some civilian agencies have yet to take such steps.

At FAA, we found that senior management is not yet formally involved in reviewing environmental audit reports and following up on audit results—actions that demonstrate concretely and convincingly the importance management attaches to environmental compliance and performance. However, we were informed by FAA headquarters environmental officials that in February 1995 top management issued a policy statement (1) informing agency personnel of management's commitment to full compliance with safety and environmental requirements and (2) setting an expectation for employees to support and participate in achieving a high level of environmental performance. We were also informed that management has issued a series of directives to all Regional Airway Facilities Division managers stating the importance of the environmental audit program and delineating the process to be followed.

At BLM, we found that the pilot environmental audit program was undertaken largely at the initiative of field environmental officials. BLM management has yet to issue a statement endorsing the program or urging personnel to support it. BLM senior managers also do not review environmental audit reports nor do they play a role in ensuring that audit findings are corrected. Furthermore, funding for the pilot program has been sporadic; funding for fiscal year 1994 was provided only at the end of the year, and headquarters has provided no funding as yet in fiscal year 1995.

Gaining strong management support for environmental auditing at BLM may be especially important to expanding the program to address the agency's major environmental liabilities—those created by private operations, such as oil and gas drilling and mining, on BLM lands. Field environmental officials at BLM suggest that, with stronger senior management support, the agency could do more to encourage environmental auditing among the users of BLM lands. BLM environmental officials suggest that the BLM order governing the use of public land for oil drilling and the BLM permits authorizing mining on public lands could be amended to encourage environmental auditing. As the agency builds its expertise in environmental auditing, BLM's field environmental officials believe the agency could conduct outreach through professional organizations representing oil and gas or mining companies to encourage environmental auditing for operations conducted on BLM lands.

Officials from EPA's Office of Enforcement and Compliance Assurance (OECA) told us that, in view of BLM's responsibility for the environmental practices of public land users under the Federal Land Policy and Management Act (FLPMA), they strongly believe that BLM should do more to encourage these land users to implement sound environmental practices, such as environmental auditing. Their position is consistent with our finding in 1991 that FLPMA made BLM primarily responsible for protecting the environment on its lands, even on those lands used by private companies.[5]

According to EPA's 1993 survey of civilian federal agencies, senior managers in other agencies will need to demonstrate their support if environmental auditing is to develop further in the civilian sector. While managers in 10 civilian federal agencies were reported to have shown support for environmental compliance programs, managers in 8 other

[5]Mineral Resources: Increased Attention Being Given to Cyanide Operations (GAO/RCED-91-145, June 20, 1991).

agencies were reported not to have done so. At meetings of the Civilian Federal Agency Task Force, members commented that top management's commitment to environmental programs is not well-established and, as a result, the development of environmental programs is limited. Members of the task force also reported that the resources provided for environmental compliance programs are insufficient.

Understandably, the fiscal constraints facing federal agencies present a challenge to managers seeking to adequately fund environmental programs. Furthermore, the progress in implementing environmental programs in DOE and DOD is largely attributable to the level of resources the Congress has provided to respond to the huge environmental problems associated with these agencies' activities. Nonetheless, many organizations have found that a judicious investment of resources in environmental auditing can yield substantial benefits in terms of enhancing environmental compliance, reducing the costs of cleanups, and avoiding the costs of noncompliance.

Civilian Federal Managers May Have Little Incentive to Support Environmental Auditing

While senior management's support is essential to building a strong environmental audit program, civilian managers may have little incentive to support environmental auditing because, under the current EPA and state inspection strategy, many civilian agencies have little risk of being inspected. Moreover, federal managers may not give environmental auditing the priority that private sector managers do because federal agencies are subject to limited enforcement authorities under most state and federal environmental laws.

Few Civilian Agencies Have Been Targeted for Inspections

According to agency environmental officials we interviewed, one factor explaining management's historically weak support for environmental auditing is that federal and state regulators have, at least until recently, devoted relatively little attention to the compliance status of most civilian federal agencies. FAA and BLM environmental personnel we spoke with told us that, to the best of their knowledge, agency facilities with which they are familiar have never been inspected by EPA or state regulators. Consequently, they said, many top agency managers have seen little reason to use scarce resources to perform environmental audits aimed at gauging and ensuring compliance. These officials added that if EPA is serious about fostering environmental auditing among civilian federal agencies, it must ensure that these agencies' facilities receive some measure of attention from federal and state regulatory inspectors.

While EPA's 1986 policy on environmental auditing states that "a credible enforcement program provides a strong incentive for regulated entities to audit," the agency's inspection data suggest that EPA and the states have historically devoted little enforcement attention to many civilian agencies. Understandably, in view of the extensive environmental liabilities resulting from DOE's and DOD's operations, EPA and the states have historically devoted most of their resources for inspecting federal agencies to these two agencies' facilities. However, the inspections conducted at civilian federal agencies have been concentrated on a few agencies' facilities while other civilian federal agencies with significant liabilities have received few, if any, inspections.

Recent inspection data suggest that federal and state regulators may be starting to pay more attention to the compliance status of civilian federal agencies. In fiscal year 1994, according to data supplied by EPA, a total of 280 inspections were conducted at civilian federal agencies' facilities. According to the data, FAA's facilities received 15 inspections—3 by EPA and 12 by state regulators under the RCRA, National Pollutant Discharge Elimination System (NPDES), and Toxic Substances Control Act of 1976 (TSCA) programs. While the data do not indicate how many, if any, inspections were made at BLM's facilities, 49 inspections—16 by EPA and 33 by state authorities—were made at DOI's facilities under the RCRA, NPDES, and TSCA programs. After DOI, the Department of Veterans Affairs and the Department of Justice (Bureaus of Customs and Prisons) received the largest number of inspections: 43 and 29, respectively.

Officials from EPA headquarters' Office of Enforcement and Compliance Assurance (OECA) told us that they have been concerned for years about the scant enforcement attention paid to many civilian agencies. The Director of Planning, Prevention and Compliance in OECA's Federal Facilities Enforcement Office acknowledged that although EPA has inspected some of the more "visible" civilian facilities, it has not attempted to methodically inspect the civilian sector to ensure that each agency receives at least a measure of regulatory attention. According to the Director, the regions' autonomy and the agency's heavy delegation of authority to state programs make it difficult to implement such a strategy.

State and Federal Enforcement Authorities Are Limited

Historically, limitations on the enforcement authorities available for state and federal regulators to use against federal agencies that violate environmental laws have discouraged the allocation of scarce inspection resources to these facilities. These same limitations may also have

discouraged federal managers from employing tools, such as environmental auditing, to ensure compliance.

Limitations on the ability of EPA and state regulators to enforce environmental statutes against federal agencies stem from two primary sources. The first is the legal doctrine of sovereign immunity, under which the United States is immune from suit by states or private parties unless the Congress has waived this immunity in clear and unambiguous terms. The second is the Department of Justice's (DOJ) position in prior administrations that legal disputes between executive branch agencies, whose heads serve at the pleasure of the President, are properly resolved by the President rather than by the courts.

Because of court decisions upholding the sovereign immunity of federal agencies under RCRA and DOJ's past opposition to EPA's exercise of unilateral order authority against federal agencies violating environmental laws, the range of enforcement options available against these agencies has been significantly circumscribed. Hence, regulators have had to rely primarily on cumbersome, time-consuming, and often ineffective negotiation procedures aimed at achieving mutually acceptable memorandums of understanding and compliance agreements to be policed within the executive branch.

Dissatisfaction with this state of affairs and the disparity that it engendered in compliance between the public and the private sectors led the Congress in September 1992 to enact the Federal Facility Compliance Act (FFCA). This act explicitly waived the sovereign immunity of federal agencies with respect to violations of RCRA and allowed state and federal agencies to use the full range of enforcement remedies, including civil fines and penalties for past violations, against noncomplying federal agencies. FFCA reflected the Congress's deep frustration with agencies' slow progress in dealing with hazardous waste violations at DOE and DOD facilities. The act was designed to eliminate what was perceived as a double standard in the enforcement of environmental laws under which the private sector and state and local governments were forced to comply but federal facilities were not. One of the key congressional backers of the legislation noted that "[w]ithout state enforcement under a waiver of sovereign immunity, there is no one to assure compliance. The result is that the federal government can and does act as if it is above the law."

FFCA, however, applies only to violations of RCRA, not of other federal environmental statutes. Thus, the same impediments that constrained EPA

and the states in enforcing RCRA may inhibit regulators from enforcing other environmental laws against federal agencies.

The current administration is on record as supporting changes to the Clean Water Act and the Safe Drinking Water Act similar to those made to RCRA in 1992 by FFCA. A 1993 administration position paper cites a 1988 GAO report's[6] findings as justification for waiving the sovereign immunity of federal agencies under these acts and granting EPA the same administrative enforcement authority at federal facilities for these laws as it now has for RCRA. The position paper notes our 1988 report's findings that federal facilities consistently demonstrated higher rates of significant noncompliance with the Clean Water Act's requirements than private industrial facilities and that taking enforcement action against noncompliant federal facilities increased the priority being given to environmental compliance and corrective actions. However, as we reported, such enforcement action was relatively rare. EPA regional officials said that they did not take enforcement action in authorized states where the state did not act because the limited enforcement tools available to EPA at federal facilities impeded the timely and effective resolution of enforcement actions. Our report also noted that EPA regional officials were reluctant to use negotiated compliance agreements at federal facilities.

Testifying before the Congress in July 1993 on the Clean Water Act's reauthorization, EPA's Assistant Administrator for Enforcement stated that the agency agreed with the principle that the act should be amended to prospectively waive the United States' sovereign immunity from penalties for all violations of the act and also that federal facilities should be subject to the same administrative compliance orders and penalties as nonfederal parties. The Congress, however, did not reauthorize the statutes and, hence, took no action on the administration's proposals.

Agencies Lack the Expertise to Conduct Environmental Audits

Besides having weak incentives to undertake environmental auditing, many civilian federal agencies lack the technical expertise necessary to develop and implement environmental audit programs. According to EPA's survey of the Civilian Federal Agency Task Force, environmental training and experience are limited in many civilian agencies. In addition, many civilian environmental officials indicated a strong need for EPA's technical assistance on environmental auditing. Our work confirms the need for

[6]Water Pollution: Stronger Enforcement Needed to Improve Compliance at Federal Facilities (GAO/RCED-89-13, Dec. 27, 1988).

technical assistance at BLM and FAA. Opportunities exist, however, for EPA to deliver the necessary technical assistance at low cost through cooperative efforts with agencies that have already developed environmental audit training programs and have demonstrated a willingness to share them with other agencies.

Agencies Need EPA's Technical Assistance

According to EPA's survey of civilian federal agencies, 80 percent of these agencies have no formal environmental training programs. The survey indicated a strong need for technical assistance from EPA to improve agencies' environmental compliance programs, in general, and to implement environmental auditing, in particular. Of the 21 agencies responding to the survey, 15 indicated that the need for technical assistance from EPA in developing an environmental audit program was critical, very important, or important.

Our findings at BLM and FAA confirm the need for technical assistance at these agencies. At BLM, few staff have an environmental background and environmental training is limited to a course on managing hazardous materials. Similarly, a limited number of FAA staff have environmental expertise. The agency has developed and offered a few environmental courses (e.g. on asbestos, hazardous materials, the National Environmental Policy Act, and due diligence audits) in addition to providing locally arranged and conducted training for staff. However, training needs exceed available training resources. Several FAA regional environmental officials expressed a desire for EPA to help them build the agency's environmental compliance programs. The environmental manager of the FAA Technical Center told us that if EPA wants to foster environmental auditing in federal agencies, it must address the need to build environmental expertise. A BLM field environmental official echoed this view, stating that EPA should do more to explain to top agency officials why their agencies need to do environmental auditing, help agencies set up audit programs, and train agency employees to conduct audits.

EPA Can Leverage Its Technical Assistance by Enlisting the Help of Experienced Agencies

In its 1986 policy statement encouraging federal agencies to develop environmental audit programs, EPA stated that "to the extent feasible, [it would] provide technical assistance to help Federal agencies design and initiate audit programs." In the late 1980s, EPA took steps toward meeting this commitment. For example, in 1988 EPA sponsored a nationwide Environmental Auditing Conference for federal agencies, and in 1989 it issued guidelines to assist federal agencies in establishing environmental

audit programs. Also in 1989, EPA issued a generic environmental audit protocol for use by federal agencies.

Nonetheless, EPA officials acknowledge that, until recently, the agency's technical assistance efforts were not very effective for agencies that, like many civilian federal agencies, have limited environmental expertise. In late 1994, EPA proposed a strategy aimed specifically at improving environmental compliance programs at civilian federal agencies. EPA's strategy includes (1) commissioning the design of an environmental audit protocol and program guidelines tailored to the needs of civilian agencies and (2) arranging a conference and training session for early 1995 focusing on the environmental auditing needs of these agencies.

EPA's recent technical assistance initiatives are encouraging. However, our review indicates that civilian federal agencies will require more sustained and regular training and outreach to acquire the enhanced environmental expertise that they need. In providing this assistance, EPA could draw upon the expertise of agencies that have mature environmental audit programs and have demonstrated a willingness to share their expertise with others. For example, in 1993, DOE offered training to civilian officials on the role of environmental auditing in maintaining effective environmental management systems. This example suggests the potential for EPA to arrange cooperative efforts that could extend the environmental expertise existing in some parts of the federal sector to the civilian federal agencies.

Another concern about EPA's technical assistance is that it does little to convince senior civilian managers of the value of environmental auditing. In particular, it does not show them how environmental auditing can help them ensure compliance with environmental laws and avoid costly cleanups. EPA's efforts to foster environmental auditing through building the audit expertise of midlevel environmental officials will not be particularly effective until senior managers are convinced of the benefits of environmental auditing. To address this need, EPA will need to reach out directly to the senior managers of civilian agencies.

Training senior managers is another area where EPA could draw on the expertise of agencies that have experience with environmental auditing. For example, the Air Force has developed a course for senior officers on their environmental responsibilities and on the benefits of the Air Force's environmental audit program (ECAMP). The gist of the course and of the accompanying Commander's Guide is captured in the following statement:

"The effectiveness of any program is determined largely by the level of support it receives from those in authority. As Commander, you are responsible for most of what happens on your installation—including anything that damages our environment. ECAMPs facilitate environmental compliance, which in turn, reduces the risk of legal actions."

Air Force environmental officials told us that the course has been instrumental in gaining Air Force managers' support for ECAMP. In view of recent demonstrations by the Air Force that it is willing to share its environmental expertise, a cooperative effort between EPA and the Air Force might well be arranged to make similar training available to senior managers in civilian agencies.

EPA Policies and Practices Discourage Environmental Auditing

EPA policies and practices on using audit reports for enforcement purposes create additional disincentives to environmental auditing. Both private and public officials agreed that environmental auditing is encouraged by inspections and discouraged by requests from regulators for audit reports, especially when the penalties for violations discovered through audits are not reduced.

EPA Is Inconsistent in Implementing Its Policy on Requesting Audit Reports

Because environmental audit reports are designed to identify compliance problems, regulators may be motivated to request audit results in the course of their enforcement work. EPA acknowledged in its 1986 policy statement on environmental auditing, however, that regulators' requests for audit reports could discourage the practice of auditing. Consequently, EPA stated that it would not "routinely request" audit reports but would do so only on a case-by-case basis when the audit information was deemed necessary to accomplish a "statutory mission" or the information was material to a criminal investigation. EPA stated that it expected such requests to be "limited." For federal facilities, EPA stated that its policy on requests for audit reports would be the same as for other regulated entities. EPA informed federal agencies, however, that Freedom of Information Act (FOIA) provisions would apply to environmental audit reports prepared by them, implying that the agencies might have difficulty preserving the confidentiality of their audit reports.

The private sector has been concerned about EPA's policy on access to environmental audits for many years. In July 1994, EPA offered an opportunity for private sector organizations to present their views on the policy and related matters. At a well-attended public meeting, numerous company environmental officials testified that the current EPA policy

constitutes a strong disincentive to auditing. The officials stated that because EPA's policy fails to adequately protect audit reports from access by regulators, the policy has produced a "chilling effect" that has impeded the audit efforts of many companies and has discouraged other companies from undertaking environmental auditing at all.

While private organizations suggest that EPA should provide stronger assurance that it will not request audit reports, such assurance may not be feasible in the federal government where audit reports are subject to public disclosure under FOIA. However, federal environmental officials still believe a major disincentive to auditing is presented if EPA does not adhere to its stated policy of requesting audit reports only in limited and specifically defined situations.

Our past and current work demonstrates that concern about EPA's requesting audit reports has discouraged federal agencies from conducting environmental audits. A May 1986 GAO report on the slow progress of civilian federal agencies in complying with regulatory requirements for managing hazardous wastes discussed environmental auditing as a means of improving federal agencies' compliance.[7] The report noted that environmental auditing was in limited use among federal agencies and indicated that a key barrier to the establishment of effective environmental audit programs was that federal agencies were concerned about EPA's requesting audit reports.

More recently, Air Force officials told us that EPA has created disincentives to environmental auditing by not adhering to its policy of making only "limited" requests for audit reports. In 1993, an EPA region sent a letter to all Air Force installations in the region requesting "access to copies of recent (within the last two years) environmental . . . assessments conducted by your higher headquarters or by your own staff." While the Air Force was ultimately able to deny EPA access to the reports, command officials told us that if EPA wants to encourage environmental auditing, it must closely adhere to a policy of asking for audit reports only under exceptional circumstances. According to these officials, staff will not be candid about environmental compliance if they suspect that audit reports may end up in the hands of regulators. Headquarters Air Force officials agreed that the most important thing EPA can do to encourage environmental auditing is to refrain from requesting audit reports.

[7]Hazardous Waste: Federal Civil Agencies Slow to Comply With Regulatory Requirements (GAO/RCED-86-76, May 6, 1986).

EPA's Policy Gives Limited Assurance of Reward for Finding and Reporting Violations

Although its 1986 policy statement offers some assurance that it will refrain from routinely requesting audit reports, EPA offers little assurance that penalties for violations discovered through environmental audits will be reduced. To the contrary, EPA's audit policy states that entities are obligated to disclose violations discovered through audits if the violations are otherwise reportable under environmental statutes. The policy also encourages regulated entities to report other violations, even if they are not legally required to do so.

In return for being forthcoming about any violations discovered through environmental audits, EPA's audit policy promises regulated entities, both private and federal, only that, in determining its enforcement response to violations, the agency "may exercise its discretion" to "take into account" a facility's audit efforts. The policy notes that such consideration will be provided only "when regulated entities take reasonable precautions to avoid noncompliance, expeditiously correct underlying environmental problems discovered through audits or other means, and implement measures to prevent their recurrence." The policy adds that when federal agencies report violations, "even when not specifically required to do so," EPA will review the audit findings and could be expected to impose consent agreements.

Speakers at EPA's July 1994 public meeting made it clear that private sector environmental officials are very concerned about EPA's policy on responding to self-disclosed audit findings. Corporate officials described instances in which companies had themselves detected and reported violations, only to receive stiff fines from EPA and state regulators. An officer of the Environmental Auditing Roundtable, the largest professional environmental auditors' organization, stated that EPA's current policy offers little assurance that a proactive company that audits itself and reports a violation will be penalized with any less severity than a company that ignores or hides its violations until they are uncovered by regulatory inspectors. Several officials recommended that EPA revise its policy to reward the self-detection and disclosure of violations with explicit assurance that penalties will be mitigated or waived.

Federal environmental officials, similarly, believe that EPA's statements on the treatment of voluntarily discovered and reported audit findings lack assurance of mitigation and present a disincentive to environmental auditing. Our May 1986 report stated that a key factor impeding the initiation of environmental audit programs in federal agencies was concern about how EPA might use the audit results. Our recent work

confirms that federal environmental officials continue to believe that EPA's policy on the treatment of audit results discourages environmental auditing. Air Force headquarters and Command officials told us that if EPA wishes to encourage environmental auditing, it must provide clear assurance that violations identified through environmental auditing will receive some measure of regulatory relief—as long as the regulated entity is actively correcting the problems.

DOE officials also told us that EPA's enforcement response to audit reports serves as a disincentive to environmental auditing. According to DOE headquarters officials, both EPA regions and state regulators have used information generated by environmental audits to initiate enforcement actions against DOE. While the DOE headquarters officials stated that such use of audit reports does not help to encourage environmental auditing, they said that they have come to regard such actions simply as the price of being a public organization. The environmental audit manager at a major DOE facility we visited was less philosophical, however, stating that "EPA is too quick to fine organizations for noncompliance, even when they report violations themselves and are taking steps to correct the problems."

Agencies that are just initiating an environmental audit program or are considering doing so may experience the strongest "chilling effect" from the prospect of having audit results used against them. For example, in commenting on the proposed pilot environmental audits at BLM, a headquarters environmental official warned that "the pilot audit . . . report can be used for enforcement purposes by federal or state environmental agencies." The BLM environmental audit coordinator told us that concern about what EPA might do with audit results has in fact discouraged BLM management from supporting environmental auditing.

Since mid-1994, EPA has been formally gathering information to serve as a basis for evaluating the possible need for changes in its policy on environmental auditing. EPA officials involved in this effort told us that they recognize there may be a need to integrate the 1986 audit policy more clearly and fully into the agency's overall regulatory scheme, including—possibly—the need to forge a more explicit link between the agency's audit policy and program penalty policies. Consequently, these officials told us, they are considering a wide range of policy options, including the option of providing clearer assurance that the penalties for self-discovered and self-reported violations will be reduced when certain criteria are met.

Although EPA officials caution that they are not yet committed to any specific policy changes, the agency's decision to reevaluate its auditing and related policies is encouraging. As the private and public sector audit communities have noted, EPA policies that call for the voluntary disclosure of self-detected violations yet provide only vague assurances of regulatory flexibility in return serve to discourage rather than encourage environmental auditing. EPA has acknowledged that environmental auditing contributes to its goal of getting regulated entities to comply with environmental laws. It has further acknowledged that its own resources for enforcing compliance are quite limited. This combination of factors may serve to convince the agency that reducing disincentives to environmental auditing would be an effective and efficient means of advancing its compliance objectives.

Conclusions

Our review identified a number of obstacles and disincentives to the further development of environmental auditing in the civilian federal sector. While the environmental audit community reports that strong and explicit management support is essential to the success of environmental auditing, senior managers in some civilian agencies still need to be convinced that environmental auditing deserves their support. However, civilian agency managers may see little need to use environmental auditing to ensure compliance because, historically, many agencies have had scant risk of having their facilities inspected. Further development of environmental auditing in the civilian sector is also impeded by a widespread lack of the necessary environmental expertise. These obstacles are compounded by EPA policies that encourage entities to disclose audit findings—and potential violations—but offer little assurance that self-disclosure will be rewarded by reductions in penalties.

We believe that changes to EPA and state regulatory programs and policies could go a long way toward removing these obstacles and disincentives. In particular, EPA and state inspection strategies need to be refocused so that civilian federal agencies having substantial environmental liabilities receive at least a minimal level of inspection attention—enough to encourage appropriate emphasis on achieving environmental compliance. Furthermore, EPA will need to sponsor regular opportunities for sharing the energy and defense agencies' expertise in environmental auditing with the civilian agencies and for training senior agency managers in the benefits of environmental auditing. Environmental auditing would also be encouraged by the more consistent application of EPA's policy on limiting requests for audit reports and by the explicit linking of the agency's

policies on environmental auditing and on penalties to provide clearer assurance of reward for the use of proactive environmental practices such as auditing.

Recommendations

To encourage the practice of environmental auditing in civilian federal agencies, we recommend that the Administrator, EPA, take the following actions:

- Augment EPA's efforts to refocus federal and state inspection strategies to ensure that civilian federal agencies receive a measure of enforcement attention commensurate with the environmental risks posed by their operations.
- Provide regular and sustained technical assistance on environmental auditing to civilian federal agencies (possibly through cooperative arrangements with other federal agencies), with particular emphasis on improving senior managers' awareness and understanding of the benefits to be gained from environmental auditing.
- Require EPA regional offices to adhere to the agency's stated policy that the agency will not "routinely request" environmental audit reports but will confine such requests to the exceptional situations outlined in its 1986 policy statement on environmental auditing.
- Revise EPA's environmental audit and related policies to encourage regulated entities to self-discover, report, and correct noncompliance by providing for the reduction of penalties for violations identified through environmental auditing. This consideration should be given only if the reporting entity meets EPA's criteria of "taking reasonable precautions to avoid noncompliance, expeditiously correcting underlying environmental problems discovered through audits or other means, and implementing measures to prevent their recurrence."

Agency Comments

EPA agreed generally with GAO's recommendations on inspecting civilian federal agencies and on providing technical assistance to these agencies to promote the use of environmental auditing. However, EPA questioned whether GAO had (1) persuasively shown that EPA had departed significantly from its stated policy of not requesting copies of audit reports except under limited circumstances and (2) adequately demonstrated the need for EPA to revise its 1986 policy on environmental auditing to provide more explicit assurance that penalties would be mitigated for self-discovered and self-reported violations that were promptly corrected. While our work did not identify many instances when EPA had departed

from its stated policy on requesting audit reports or had used audit findings to penalize those who had voluntarily discovered, reported, and corrected cases of noncompliance, we were told by many parties—as was EPA during its July 27-28, 1994, public meeting on environmental auditing—that the agency's current policies and practices are widely perceived as discouraging the wider adoption of environmental auditing by the regulated community and as threatening to those who already use auditing as a tool to achieve and maintain compliance. For these reasons, we continue to believe that the recommended actions are needed.

Organizations Whose Environmental Audit Programs Were Examined and/or That Provided Information About Environmental Auditing

Corporations

Allied-Signal, Inc.
Amoco Corp.
AT&T
Browning-Ferris Industries
CH2M Hill
Duke Power Co.
Eastman Kodak Co.
E. I. DuPont de Nemours Co.
Florida Power & Light Co.
S. C. Johnson Wax
Lockheed Missiles & Space Co.
Meridian Oil Co.
Millipore Corp.
Olin Corp.
Pennsylvania Power & Light Co.
Polaroid Corp.
Procter & Gamble Co.
The Southern Company
Union Carbide
WMX Technologies Inc.
Xerox Corp.

Audit Organizations, Consultants, and Public Interest Groups

Arthur D. Little, Inc.
American National Standards Institute
American Society for Testing and Materials
Environmental Auditing Forum
Environmental Auditing Roundtable
Environmental Law Institute
Executive Enterprises
International Institute of Auditors
International Standards Organization
Institute for Environmental Auditing
Institute of Internal Auditors
NSF International
Mineral Policy Center

Trade Associations

Chemical Manufacturers Association
Global Environmental Management Initiative
International Chamber of Commerce

U.S. Government Agencies and Related Organizations

U.S. Air Force
Bureau of Land Management (BLM)
Department of Defense (DOD)
Department of Energy (DOE)
Department of the Interior (DOI)
Department of Transportation (DOT)
Environmental Protection Agency (EPA)
Federal Aviation Administration (FAA)
U.S. Sentencing Commission
White House, Office on Environmental Policy

Agencies Participating in the Civilian Federal Agency Task Force

Department of Agriculture*
Bureau of Prisons
Central Intelligence Agency*
United States Coast Guard*
Department of Commerce*
Economic Development Administration
Environmental Protection Agency*
Federal Aviation Administration*
Food and Drug Administration
General Services Administration*
Indian Health Services
Department of the Interior*
Department of Justice*
National Aeronautics and Space Administration*
National Oceanic and Atmospheric Administration*
National Security Agency*
United States Postal Service*
Tennessee Valley Authority
Department of Transportation*
Department of Treasury*
Department of Veterans Affairs

*Responded to EPA's survey entitled Civilian Federal Agency Environmental Program Needs. The following agencies within the Department of Agriculture also responded to the survey: Agricultural Marketing Service, Agricultural Research Service, Animal and Plant Health Inspection Service, Federal Grain Inspection Service, Forest Service, and Soil Conservation Service.

Comments From the Environmental Protection Agency

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

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

OFFICE OF
ADMINISTRATION
AND RESOURCES
MANAGEMENT

Mr. Peter Guerrero
Director
Environmental Protection Issues
Resources, Community, and Economic
Development Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Guerrero:

The Environmental Protection Agency (EPA) appreciates the opportunity to comment on the General Accounting Office (GAO) draft report on the use of environmental audits by Federal agencies. The report is entitled Environmental Auditing: A Useful Tool That Can Improve Environmental Performance and Reduce Costs (GAO/RCED-95-37).

Enclosed are two documents that provide EPA comments for your consideration pursuant to P.L. 96-226. In Enclosure 1, EPA provides general comments with reference to the report's recommendations and in Enclosure 2, we offer EPA's position on specific issues.

Thank you for this opportunity to comment on the report. I hope that these comments are helpful and I look forward to receiving the final report.

Sincerely,

Jonathan Z. Cannon
Assistant Administrator and
Chief Financial Officer

Enclosures

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Enclosure 1

EPA Comments on GAO's Draft Report,
Environmental Auditing: A Useful Tool That Can Improve Environmental Performance and Reduce Costs (GAO/RCED-95-37)

GAO Recommendations and EPA Responses

GAO Recommendation

To encourage the practice of environmental auditing in civilian Federal agencies (CFAs), GAO recommends that the Administrator, EPA, refocus EPA's inspection strategies to ensure that CFAs receive a measure of enforcement commensurate with the environmental risks posed by their operations.

EPA Response

See comment 1.

EPA supports this recommendation and concurs with the related finding. However, we do have some differences with the numbers of inspections used in the draft report, i.e., the statement that EPA and States conducted only 84 inspections of civilian facilities in FY 1994. An EPA analysis of enforcement data derived from the Federal Facilities Enforcement Office's (FFEO's) new Federal Facility Tracking System (FFTS) shows that in FY 1994, EPA and States performed a total of 278 inspections (59 EPA; 219 States) at CFA facilities and took 78 enforcement actions (11 EPA; 67 States) at 16 different agencies. This information is considerably different from the draft report (page 55). I have attached the latest FFTS data to provide a more accurate assessment for FY 1995. The report also stated that no inspections were conducted at Federal Aviation Administration (FAA) facilities, while in fact our FFTS data shows that 15 inspections took place at FAA facilities covering the Resource Conservation and Recovery Act (RCRA), the Clean Water Act (CWA), and the Toxic Substances and Control Act (TSCA).

Now on p. 52.

Written EPA guidance also has directed the Regions to specifically target CFA facilities for multi-media inspections as part of the FY 93/94 Federal Facilities Enforcement/Compliance Initiative. Of 72 multi-media inspections conducted under this initiative, 12 (16%) were at CFA facilities covering 6 different agencies. While EPA can probably do more targeting of CFA's in its compliance and enforcement programs, we think it is important for GAO to accurately and completely represent what has been done to date.

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GAO Recommendation

To encourage the practice of environmental auditing in CFAs, GAO recommends that the Administrator, EPA, provide regular and sustained technical assistance on environmental auditing to CFAs (possibly through cooperative arrangements with other Federal agencies), with particular emphasis on improving senior managers' awareness and understanding of the benefits to be gained from environmental auditing.

See comment 2.

EPA Response

EPA generally agrees with the recommendation and concurs with the report's finding. However, we would like to supplement the finding with more information on FFEO's latest technical assistance to promote environmental auditing.

- In March 1995, EPA is co-sponsoring (with the Department of Energy) a comprehensive 4-day environmental audit training conference for Federal agencies.

- Over the past six months, EPA has chaired an interagency workgroup responsible for revising and updating a complete set of multi-media environmental audit protocols for Federal facilities. In addition, EPA is updating the "Environmental Audit Program Design Guidelines for Federal Agencies" originally issued by EPA in 1989.

GAO Recommendation

To encourage the practice of environmental auditing in CFAs, GAO recommends that the Administrator, EPA, require EPA Regional offices to adhere to the Agency's stated policy that it will not "routinely request" environmental audit reports, but will confine such requests to the exceptional situations outlined in its 1986 environmental audit policy statement.

See comment 3.

EPA Response

With respect to GAO's recommendation that EPA "require" Regions to adhere to existing policy on requests for audit reports, we believe that there is value in reiterating this policy on a periodic basis to Regional enforcement personnel. However, the report's discussion on this issue (pages 61-64) seems to imply that EPA's requests for audit information are rather widespread. There is no evidence that we have been able

Now on pp. 57-58.

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to discover to support such a claim. We question the accuracy of GAO's statements regarding EPA requests for audit reports. We also have been unable to substantiate the reference the report makes to an EPA request for Air Force audit reports in 1993.

This issue is among those being examined by EPA in the workgroup that is reassessing existing audit policy as discussed below.

GAO Recommendation

To encourage the practice of environmental auditing in CFAs, GAO recommends that the Administrator, EPA, revise EPA's environmental audit and enforcement policies to encourage regulated entities to self-discover, report, and correct noncompliance by providing for reduction of penalties for violations identified through environmental auditing. This consideration should be given only if the reporting entity meets EPA's criteria of "taking reasonable precautions to avoid noncompliance, expeditiously correcting underlying environmental problems discovered through audits or other means, and implementing measures to prevent their recurrence".

See comment 4.

Now on pp. 51-61.

EPA Response

Over the past six months, the Office of Enforcement and Compliance Assurance (OECA) has been reassessing existing EPA environmental auditing policy to see if new incentives are needed to encourage environmental auditing, voluntary disclosure and prompt correction of violations uncovered in environmental audits. As mentioned in the report, EPA sponsored an open meeting on auditing in July, and an Agency auditing workgroup has been formed and has met numerous times.

EPA will continue to work with key stakeholders in smaller sessions. We have involved: industry; trade groups; the States (including those with audit privilege and penalty protection laws); State attorneys general, district attorneys general and district attorneys; other Federal agencies; and environmental groups. A full range of policy options is under consideration, including the types of incentives identified in the draft GAO report. EPA expects to complete its reassessment of the auditing policy by spring 1995.

See comment 5.

In recommending that EPA revise its policies to encourage self-disclosure of violation uncovered during audits, GAO implies that none of EPA's current enforcement policies encourage voluntary and prompt self-disclosure of violations through reduction of penalties. This is inaccurate. In fact, most of EPA's enforcement policies (approximately 35 penalty policies, enforcement response policies, and other policies dealing with penalty calculation) provide mitigation of the gravity component

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of a penalty for voluntary and prompt self-disclosure of an environmental violation. Under some policies, the mitigation can be substantial. For example, under the RCRA Penalty Policy, regulated entities may receive up to 40% gravity mitigation for good faith efforts to comply such a prompt self-disclosure or prompt correction. Under TSCA Section 5 Enforcement Response Policy, gravity mitigation may be up to 65% where the entity makes immediate voluntary disclosure (within 30 days of the discovery) and takes all steps reasonably expected or requested by EPA to mitigate the violation. Since economic benefit is not part of a TSCA penalty calculation, the penalty adjustment could be quite significant. In addition, under the PCB Spill Response Policy, there is a presumption of no enforcement for those entities which comply with provisions in that policy.

Now on pp. 59-61.

Now on p. 59.

In similar fashion, pages 64-67 contain inaccurate statements regarding EPA's enforcement and penalty policies. For example, on page 64, the report states that "none of EPA's penalty policies afford regulated entities any measure of penalty reduction in return for self-discovering and self-reporting violations." As explained above, this and other statements are in error.

See comment 6.

In addition, the GAO draft report does not recognize the prominent role that other Federal policies, other than EPA's 1986 Environmental Auditing Statement, play in providing incentives for environmental self-evaluation. Such policies include the Department of Justice 1991 guidance entitled "Factors in Decisions on Criminal Prosecutions for Environmental Violations in the Context of Significant Voluntary Compliance of Disclosure Efforts by the Violator," EPA's 1994 guidance entitled "The Exercise of [Criminal] Investigative Discretion," and the U.S. Sentencing Commission's "Final Draft Environmental Sentencing Guidelines."

Now on p. 59.
See comment 7.

On pages 62-67, the report refers to statements made by industry at the public meeting on auditing held on July 27-28, 1994, in Washington, D.C. Many of these statements were disputed at the meeting by State officials and other groups. For example, the report states, "Corporate officials described instances in which companies had self-detected and self-reported violations, only to receive stiff fines from EPA and state regulators." Although many such statements were disputed, there was much constructive discussion, and one should refer to the transcript and over 60 comments available in the environmental auditing policy docket.

Enclosure 2

EPA Comments on GAO's Draft Report,
Environmental Auditing: A Useful Tool that Can Improve Environmental Performance and Reduce Costs (GAO/RCED-95-37)

Specific Comments on the Report

See comment 8.

EPA recommends that GAO develop recommendations that include actions to be taken by CFA senior management, concurrent with EPA actions. In the draft report, all recommendations are directed to EPA. The report indicates that EPA is mainly responsible for the obstacles and disincentives involved with environmental auditing activity. While EPA is responsible as regulator, enforcer and technical advisor for Federal agencies, the President, in Executive Order 12088, designated the head of each agency as responsible for that agency's compliance with applicable environmental laws. Throughout the report, references are made regarding the value of management support and accountability in relation to the organizations' environmental performance, but those observations in the report are not followed by recommendations to the agencies' senior management to address these needs. The following examples exhibit these concerns:

Now on p. 24.

- On page 19 under Management Commitment, the report states: "The prime determinant of an effective environmental audit program is a strong commitment by management to comply with environmental requirements." GAO does not make the link between its study of benchmark participants (who have strong auditing programs) and EPA enforcement actions that drove the development of this management commitment for strong auditing programs; and GAO ignores other drivers. Other drivers include the potential for third party lawsuits or legal complaints resulting from off-site releases, product image and public relations, and responsibility to other stakeholder groups (environmental activist groups, citizen groups).

- The recent development of environmental ethic statements by industry trade groups (e.g., Chemical Manufacturing Association's (CMA) "Responsible Care Program," the Global Environmental Management Institute (GEMI) and environmental standard setting organizations, such as the International Organization of Standards (ISO) and National Sanitation Foundation (NSF)), are based not only on the impact of regulatory enforcement, but also on the concept of developing an organizational environmental ethic to demonstrate

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stewardship for the environment. These other motivations for developing management commitment should not be ignored, and require the organization to admit a responsibility not only to regulatory enforcement agencies, but also to other stakeholder groups as well.

Now on p. 36.

- On page 34, the report states that Congressional committees in both the House of Representatives and the Senate held hearings on the environmental performance of a major bureau of the Department of the Interior (DOI). These committees also focused on conditions reported in a 1992 report, issued by the National Academy of Science, "Hazardous Materials on Public Lands," and on an independent investigation by DOI's Office of Inspector General. The committees (and the other reports mentioned above) focused on the need for DOI to take measures, such as environmental auditing, to avoid further contamination.

See comment 9.

In particular, I suggest that the report recommend that the CFAs develop environmental management standards. These standards should include environmental commitment, organizational structure, environmental program development, program implementation, adequate internal and external communications, program evaluation and reporting. While the report cites such qualities as important ingredients to the development of an audit program, the report also needs to recommend steps to include these standards at CFAs.

Establishing environmental audit programs without first establishing environmental management standards (i.e., environmental commitment, ensuring adequate resources, etc.) relegates audit programs to a reactive mode where the organization is continually reacting to the repercussions of noncompliance and other aspects of liability, and not the root causes. This results in liability avoidance and not liability resolution. This is precisely the value of the point made on page 23 (last paragraph) of the draft report: "experts agreed...auditing is but one part of a comprehensive environmental management system...."

Now on p. 27.

The issue discussed above is extremely important in light of the recent work underway both nationally and internationally in developing voluntary environmental management standards. Led by business groups (e.g., CMA, GEMI) and other organizations (ISO and NSF), the development of these standards is being driven by a sense of urgency in the industry to achieve sustainable development and prevent impairment of the environment. The Federal Facilities Enforcement Office has initiated a similar set

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of standards for Federal agencies by creating the Federal Agency Code of Environmental Management Principles required under Executive Order 12856 (section 405). The absence of these environmental management standards is also a key reason behind the absence of audit programs at CFAs; there are no comprehensive environmental management systems/standards in place at these agencies. In response to Executive Order 12856, EPA is in the process of developing such a set of standards as part of the Federal Government Environmental Challenge Program, mandated by section 4-405 of Executive Order 12856. By subscribing to these standards, called the Federal Code of Environmental Principles, Federal agencies can make strides toward establishing programs needed to achieve and maintain a good environmental record.

I also recommend that GAO develop a recommendation that Federal agencies subscribe to a code of environmental management standards to ensure the success of a sustained and comprehensive environmental audit program. The recommendation should cover 1) having the agencies develop and implement these standards and 2) Congressional oversight, monitoring and reporting on agencies' progress in environmental performance (including environmental auditing).

See comment 10.

On another point, the draft report does not cite the importance of pollution prevention (P2) audits. In its discussion, the report should note that P2 initiatives avoid compliance problems by eliminating the regulated chemicals or substituting them for less hazardous ones.

My final comments for your consideration refer to specific pages of the draft report.

Now on p. 2.

See comment 11.

Page i, first paragraph under Background

A discussion is needed to enhance the fact that compliance auditing is not a cookbook process and that it requires professional judgment and evaluation of site specific conditions. This will enhance readers' understanding of the complexity of environmental auditing. In the same spirit, a similar discussion in the introduction section needs to express the point that an effective compliance auditing program (as opposed to audits at facilities) takes time, sometimes years, to develop. The point is alluded to under the section on the Federal Aviation Administration (FAA) and in the conclusion section.

Now on pp. 3-4.

See comment 12.

Page iii, Lines 84-87

This is a misleading sentence for the reasons discussed earlier.

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Now on pp. 5-6.

See comment 13.

Page vi of the Executive Summary and Page 55

The report should use recent Federal Facility Tracking System data to support the points made regarding EPA inspection frequencies at CFA installations. The recent data has more accurate totals than the data sent to the General Services Administration (GSA) during the initiation of the investigation. The same conclusion, that few CFA facilities are inspected by EPA regions, is still valid when using the most recent set of data. (See attached.)

Now on p. 14.

See comment 14.

Pages 6 and 7

These pages should include a discussion of the two guidance documents developed in 1988 -- Protocols for Conducting Environmental Audits at Federal Facilities and Environmental Audit Program Design Guidelines -- by EPA's Office of Federal Activities as specific guidance to Federal agencies in implementing audit programs.

See comment 15.

Page 11, first paragraph; page 29, last sentence; page 34, first sentence

The use of quotes from "various officials" and other sources without supporting fact is of questionable value in the report. How are these findings or statements verified?

Now on p. 38.

See comment 16.

Page 37, second paragraph

This paragraph states that the Bureau of Land Management (BLM) does not encourage environmental auditing among the private users of BLM lands. The report also states that this is the greatest area of liability for BLM. EPA suggests that the report include a recommendation that BLM take steps to encourage more environmental auditing among its tenants.

Now on pp. 50-52.
See comment 17.

Pages 53-55

Please be aware that OFFE is now FFEO.

Now on p. 52.

See comment 18.

Page 56, first sentence

Enforcement and inspections are not only an EPA responsibility, but are also the responsibility of States who have delegated enforcement programs. Therefore, the report should also recommend that the States similarly increase enforcement attention to CFAs. In support of this comment, the sentence quoting Mr. James Edward of EPA should be corrected to read, "According to the Director, the Regions' autonomy and heavily delegated State programs make it difficult to implement such a strategy."

5

Now on p. 54.

See comment 19.

Page 58, second paragraph, last sentence

I suggest revising this sentence to read: "The Congress, however, did not reauthorize the statutes." This change will provide for a more accurate statement.

Now on pp. 51-61.

See comment 20.

Page 59-67

Many statements made therein are inaccurate for the reasons discussed earlier.

Now on p. 57.

See comment 21.

Page 62, first sentence at the top

This sentence states that according to EPA's audit policy, Federal agency audit reports would be accessible under the Freedom of Information Act (FOIA). Clarification of this sentence needs to be provided so that readers will understand that the EPA audit policy only advises Federal agencies that FOIA will govern, without concluding what result the FOIA requires.

Now on p. 61.

See comment 22.

Page 67, last full sentence in full paragraph, Conclusions:

This statement is inaccurate for the reasons discussed earlier.

The following are GAO's comments on the Environmental Protection Agency's (EPA) letter dated February 6, 1995.

GAO's Comments

1. We have revised our report, where appropriate, to reflect the information on fiscal year 1994 civilian federal agency inspections provided by EPA.

2. We have revised our discussion of EPA's technical assistance to include information provided by EPA on its recent and planned initiatives. The two initiatives EPA cites are, we believe, good examples of the kind of technical assistance to executive branch agencies that is called for in Executive Order 12088 and that will be needed to promote the wider adoption of environmental auditing and other proactive environmental management practices in the federal sector. Such assistance, we believe, can complement and reinforce other EPA actions we have recommended to increase agency managers' attention to environmental compliance and good environmental performance.

3. EPA is correct in stating that our draft report did not document a widespread pattern of requests for audit reports in either the public or the private sectors. Nevertheless, we were informed of several examples, including the example of the Air Force audit reports mentioned in the EPA comment. Moreover, we were told—as was EPA in the course of its July 1994 public meeting on environmental audit policy—that the agency is commonly perceived as not consistently adhering to its stated policy on requests for audit reports. This perception is reported to have diminished the willingness of both private companies and many civilian federal agencies that have not yet adopted environmental auditing to do so—out of concern that audit reports could constitute the "smoking gun" that regulators would seize on to penalize them for noncompliance. To the extent that EPA is able to dispel such concerns by reaffirming its 1986 policy on requests for audit reports, we believe such an action would encourage the use of environmental auditing by regulated entities. We have provided EPA officials with information that should enable the agency to verify the requests by an EPA regional office for the Air Force audit reports discussed in our report.

4. We are aware of the agency's policies that provide for mitigating the gravity component of a penalty in exchange for the voluntary and prompt self-disclosure of an environmental violation. Indeed, we and others have cited the often inconsistent interpretation and application of these policies

and penalty practices, which either lower their deterrent value or allow repeated violations to go unpenalized (see, for example, Penalties May Not Recover Economic Benefits (GAO/RCED-91-166, June 17, 1991). However, the issue that our report addresses is whether EPA needs to link its 1986 environmental audit policy more explicitly with its program penalty policies. Our contacts during this review consistently pointed to the need for EPA to modify its 1986 policy to remove an often cited disincentive to the adoption of environmental auditing—the concern on the part of many regulated entities that they will be penalized for "doing the right thing" (i.e. that voluntarily conducting audits and voluntarily reporting audit findings will expose them to regulatory penalties with no explicit assurance of a reward for good behavior.)

EPA officials involved in the ongoing reassessment of the agency's 1986 policy statement on environmental auditing acknowledged to us that the policy has never been sufficiently integrated with EPA's numerous enforcement and penalty policies. Rather, they noted that the policy has, in a sense, stood in isolation, lacking explicit linkage to the rest of the agency's regulatory scheme. It is just such a linkage that we believe the agency needs to establish in order to encourage the broader use of environmental auditing as a tool for improving compliance and enhancing environmental performance.

5. We have revised the wording of our report to avoid giving the impression that EPA has no policies permitting the mitigation of penalties in return for the voluntary disclosure and prompt correction of violations. As noted above, our point is that the agency's environmental audit policy, as currently stated, provides little assurance that such actions will be met with a measure of regulatory relief.

6. We chose not to discuss these policies for several reasons. First, these policies concern criminal violations rather than the more common violations for which civil penalties would typically be imposed. Second, these policies do not provide explicit assurance that penalties will be reduced or waived in return for certain actions on the part of regulated entities. Specifically, they offer no reliable basis for a regulated entity to conclude that it would benefit from taking reasonable precautions to avoid noncompliance, expeditiously correcting underlying environmental problems discovered through audits, and implementing measures to prevent their recurrence. Instead, the Department of Justice's 1991 guidance and EPA's 1994 guidance provide for prosecutorial and investigative discretion. The U.S. Sentencing Commission's Environmental

Sentencing Guidelines, as noted in EPA's comments, are still in draft form. Important and useful as these policies may be for other purposes, our contacts with corporate and public agency officials indicate that none provides the kind of explicit assurance of regulatory relief needed to encourage the wider adoption of environmental auditing by the regulated community.

7. EPA's comments on statements made by industry representatives at the July 27-28, 1994, public meeting on environmental auditing note that statements on audit privilege and/or penalty issues were disputed by many state officials and by groups that testified. EPA suggests that we review a transcript of the hearing to obtain a more balanced picture of the views expressed. However, we found from attending the 2-day public meeting and reviewing the transcript of the meeting that most speakers clearly favored a change in the agency's audit policy. Specifically, 47 out of 52 commenters on the issue called for modifying the policy to provide greater assurance that penalties would be reduced or waived in return for voluntarily auditing, disclosing and promptly correcting violations.

8. It is not our contention that EPA is solely or even primarily responsible for the obstacles and disincentives to environmental auditing discussed in our draft report. Rather, we believe that EPA is in the best position to devise solutions to the problems we discuss and to provide the leadership needed to improve environmental compliance and performance in the federal sector. EPA could provide outreach and assistance to federal agencies to increase their understanding of the benefits of proactive environmental management practices, such as environmental auditing, and it could provide incentives—as it has in the case of the benchmark agencies we examined—for senior agency managers to be concerned about their organizations' environmental compliance status and overall environmental performance.

EPA is correct in noting that Executive Order 12088, dated October 13, 1978, designated the head of each agency as responsible for that agency's compliance with applicable environmental laws. However, the executive order did not mandate environmental auditing as the mechanism for achieving compliance. In fact, the executive order provided no guidance at all on how federal agencies are to achieve and ensure compliance. Instead, it called upon the Administrator, EPA, to provide technical advice and assistance to executive branch agencies "to ensure their cost-effective and timely compliance with applicable pollution control standards." Although EPA—as our report acknowledges—has helped to promote the

understanding and use of environmental auditing by the regulated community, the agency can, in our view, do more to promote the acceptance and use of this tool in the federal sector.

9. We concur with EPA's position that environmental management standards would provide a sound, uniform foundation on which federal agencies might construct comprehensive, proactive environmental programs tailored to their needs—programs that would include environmental auditing as an important component. Hence, we support EPA's efforts to develop such standards as part of its Federal Government Environmental Challenge Program and find these efforts consistent with the leadership role that we believe EPA should play in promoting improved environmental performance on the part of federal agencies. At the same time, pending the development of a "Federal Code of Environmental Principles," we believe that agencies can take a number of immediate steps to improve their environmental performance. As our report discusses, many private sector organizations and a few federal agencies, including DOE and DOD, have already realized substantial benefits—among them improved compliance with environmental laws and reductions in exposure to liability—as a result of environmental audit programs implemented in the absence of consensus standards.

It has taken many years' experience with environmental regulation and environmental auditing for national and international organizations in the private sector to begin forging a consensus on voluntary environmental management standards. While the federal sector can no doubt benefit from this pioneering experience, the task of developing such standards for federal agencies will not be accomplished overnight. We believe EPA's leadership in this effort, as described in the agency's response, will be critical to the rate of progress and the end result. Meanwhile, we believe EPA needs to encourage agencies to develop and implement basic environmental audit programs and other activities designed to improve their environmental performance.

10. To some extent, our report does address the use of audits to identify and reduce environmental and safety risks. For example, under the heading "Environmental Auditing Can Reduce Environmental Hazards" we discuss how audits can be used to identify avoidable risks posed by facilities' current practices and procedures and reduce the potential for environmental harm through the substitution or elimination of materials currently used in facilities' operations and maintenance. However, our report does not specifically discuss pollution prevention audits because

we found that there is less widespread understanding and agreement regarding this more innovative type of audit than there is regarding compliance audits and audits of environmental management systems. Furthermore, our review found that most civilian federal agencies are only in the earliest stages of developing compliance assurance and environmental performance management systems. These agencies, we believe, will need to enhance employees' awareness of environmental requirements, develop appropriate environmental management systems, assess basic compliance with environmental requirements, and generally enhance their environmental expertise and competence before they adopt more advanced tools, such as pollution prevention audits.

11. We have revised the report's language, as suggested by EPA, to emphasize that environmental auditing is not a simple, mechanical exercise, but one that requires trained, qualified personnel who must be able to exercise professional judgment and evaluate the environmental implications of site-specific conditions, including facilities' processes and practices. In chapter 1 of the report, under the heading "A Tool for Ensuring Compliance," we recognize that an effective and comprehensive environmental management program, as distinguished from audits at individual facilities, cannot be achieved overnight but must be developed gradually and systematically over time.

12. See comments 3 and 4.

13. See comment 1.

14. We have revised the discussion in chapter 1, under the heading "Early Efforts to Promote Environmental Auditing," to mention the two documents cited by EPA as examples of the technical assistance it provides to promote federal agencies' use of environmental auditing.

15. In our view, listing individual agency officials or corporate environmental officers would seldom serve a useful purpose. Frequently, the comments quoted or the views expressed in the draft report were merely representative of similar comments and views expressed by a number of different sources. Finally, whether obtained from publications or from interviews conducted by evaluators during our reviews, quotations and attributed statements are always carefully checked and verified as part of our internal report review process.

16. The scope of this assignment did not include recommending actions to particular executive branch agencies on how to ensure compliance and improve environmental performance. Neither did it include evaluating the Bureau of Land Management's (BLM) legal authorities and responsibilities under the Federal Land Policy and Management Act (FLPMA) and other statutes to require the adoption of environmental auditing and other proactive environmental measures by users of BLM-managed lands. We note that EPA and BLM officials disagree over BLM's authority and responsibility to require such measures on the part of its tenants and believe that this disagreement should be resolved through consultations between the two agencies and other interested parties.

17. We have revised our report to reflect the organizational change EPA noted in its comment.

18. We recognize that enforcement and inspection are responsibilities shared by EPA and state environmental regulatory agencies, and our report acknowledges the need for state regulators, as well as EPA, to ensure that civilian federal agencies receive an appropriate measure of inspection attention. We have revised the wording of our recommendation to highlight more clearly the role we believe EPA should play in providing guidance and leadership in this area. We believe, as EPA's November 1988 Federal Facilities Compliance Strategy makes clear, that even when programs have been delegated, the agency retains important authority and responsibilities in the areas of inspection and enforcement. As noted in the compliance strategy, EPA is in a position, through annual meetings with states on federal facilities' compliance and through other means, to coordinate strategies on the inspection of federal facilities and to influence the amount of enforcement attention that state authorities devote to such facilities. As discussed in chapter VII of the compliance strategy, state/EPA enforcement agreements—negotiated multiyear agreements that are reviewed annually on a state-by-state basis for each environmental program—are a particularly apt formal mechanism for this purpose.

19. The wording of our report has been revised along the lines suggested by EPA.

20. See comments 1, 2, 3, 4 and 5.

21. We have revised the wording of our report to clarify that EPA's 1986 audit policy merely advised federal agencies that Freedom of Information

Act (FOIA) provisions would apply to environmental audit reports prepared by them.

22. We have revised the wording of our report to make it clear that we are recommending that EPA integrate its environmental audit policy with its various enforcement and penalty policies to provide clearer and more reliable assurance to the regulated community that penalties for violations discovered, reported, and corrected as a result of environmental auditing will be reduced or waived.

Comments From the Department of Energy

Department of Energy
Washington, DC 20585

February 14, 1995

Mr. Peter Guerrero
Director, Environmental Protection
Issues
Resources, Community and
Economic Development Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Guerrero:

The Department of Energy (DOE) appreciates the opportunity to review and comment on the General Accounting Office (GAO) draft report entitled "Environmental Auditing: A Useful Tool That Can Improve Environmental Performance and Reduce Costs."

The Department is pleased that GAO found DOE has made significant progress toward developing effective environmental auditing programs that are used to improve environmental performance and reduce costs. The Department concurs with the recommendations contained in the draft report. These recommendations do not require DOE to modify its policies, programs, or activities in the areas of environmental auditing which became the programmatic responsibility of the Deputy Assistant Secretary for Independent Oversight and Appraisals on December 18, 1994.

Sincerely,

Joseph F. Vivona
Chief Financial Officer

Comments From the Department of Defense

ACQUISITION AND TECHNOLOGY

THE UNDER SECRETARY OF DEFENSE

3010 DEFENSE PENTAGON
WASHINGTON, DC 20301-3010

13 FEB 1995

Mr. Peter Guerrero
Director, Environmental Protection Issues
Resources, Community, and Economic
Development Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Guerrero:

This is the Department of Defense (DoD) response to the General Accounting Office (GAO) draft report, "ENVIRONMENTAL AUDITING: A Useful Tool That Can Improve Environmental Performance and Reduce Costs," dated December 20, 1994 (GAO Code 160212), OSD Case 9835. The Department generally concurs with the draft report.

The DoD is committed to full and sustained environmental compliance and agrees that strong auditing programs are essential to ensuring compliance. As reported by the GAO, each of the DoD components that manage installations have comprehensive compliance assessment and management programs. The Department recognizes that some Federal agencies face obstacles in developing environmental audit programs. The DoD is ready to provide technical support to other agencies, on a reimbursable basis, to assist in their establishment of auditing programs.

The DoD also generally concurs with the GAO recommended actions by the Environmental Protection Agency. Regulator requests for audit reports could be self-defeating, since such action may inhibit the candid and thorough self-assessments that are needed to identify and address compliance deficiencies. The DoD recognizes, however, that it is fully accountable to the public. It is DoD policy, therefore, to make final self-assessment reports available to regulators and the public upon request.

The detailed DoD comments on the report findings and recommendation are enclosed. The Department appreciates the opportunity to comment on the draft report.

Sincerely,

Sherri W. Goodman
Deputy Under Secretary of Defense
(Environmental Security)

Enclosure

Environmental Security ***Defending Our Future***

GAO DRAFT REPORT--DATED DECEMBER 20, 1994
(GAO CODE 160212) OSD CASE 9835

"ENVIRONMENTAL AUDITING: A USEFUL TOOL THAT CAN IMPROVE ENVIRONMENTAL PERFORMANCE AND REDUCE COSTS"

DEPARTMENT OF DEFENSE COMMENTS

* * * * *

FINDINGS

FINDING A: Environmental Auditing. The GAO explained that during a typical environmental audit, a team of trained inspectors--either employees of the organization being audited or contractor personnel-- conducts a comprehensive examination of the plant or facility to determine whether it is complying with environmental laws and regulations. The GAO noted that no laws currently require environmental auditing. The GAO stated that companies and public agencies that have adopted the practice have done so for sound business reasons. The GAO pointed out that the Environmental Protection Agency (EPA) 1986 policy on environmental auditing encouraged Federal agencies subject to environmental laws to adopt environmental auditing to achieve and maintain compliance.

The GAO found that effective environmental audit programs have a number of characteristics in common. The GAO reported that effective environmental audit programs have the strong support of their organization's management, adequate resources to hire and train audit personnel to perform audits of appropriate scope and frequency, and to promptly fix problems identified through the audit process. The GAO also noted that the programs operate with freedom from internal and external pressure, and employ quality assurance procedures to ensure the accuracy and thoroughness of the audits. The GAO pointed out that private and public sector organizations with effective environmental auditing have realized several benefits, to include (1) improved compliance, (2) reduced exposure to civil and criminal liability, (3) cost savings from operating efficiencies and avoided cleanups, and (4) reduced environmental hazards, among other benefits.

The GAO found that despite the fact environmental liabilities are widespread throughout the Federal sector, most agencies--aside from the Department of Energy (DoE) and the Military Services-- do little or no environmental auditing. The GAO stated that obstacles and disincentives impede the further development of environmental auditing in civilian agencies. The GAO indicated that senior civilian agency managers have yet to make the same strong and explicit commitment to environmental auditing as have the organizations with effective programs. The GAO noted that civilian agencies may have little incentive to support environmental auditing as a means of achieving compliance because the EPA and State environmental regulators have performed few, if any, inspections at many civilian agencies. (pp. i-iii, pp. 18-28, pp. 51-67/GAO Draft Report)

Enclosure

1

DOD RESPONSE: Concur. The Department of Defense (DoD) is strongly committed to full and sustained compliance with all legal environmental requirements. Periodic and comprehensive audits are necessary to help ensure compliance. Department policy and guidance requires the DoD Components to have programs to monitor, achieve, and maintain compliance with applicable requirements and to conduct self-assessments at their installations on a periodic basis. All of the DoD Components that manage installations (primarily the Army, Navy, Marine Corps, Air Force, and Defense Logistics Agency) have comprehensive environmental compliance assessment and management programs. They follow written protocols and checklists that help organize and record audits and support appropriate follow-up action. Findings of non-compliance have steadily decreased as self-assessments have increased.

FINDING B: Environmental Auditing Is Credited with Significant Benefits. The GAO reported that companies attribute fewer fines, cleanup costs, and legal problems to environmental auditing. The GAO stated that the Air Force and the DoE were similarly supportive, citing a number of examples of significant cost savings and other benefits. According to the GAO, Air Force engineers estimated, conservatively, that environmental audits save one Air Force command over $4.3 million yearly in fines and penalties. The GAO also noted that Air Force lawyers believe the savings to be much higher--approximately $100 million. The GAO stated that systematic and comprehensive data on the savings realized through environmental audits are not available.

The GAO reported that representatives of organizations using environmental auditing emphasized the importance of top management commitment to a successful program. The GAO noted that a formal environmental policy statement is often used by top managers to put employees, shareholders, and others on notice that environmental protection is integral to the organization's mission. (pp. iii-iv, pp. 10-18, pp. 29-33/GAO Draft Report)

DOD RESPONSE: Concur.

FINDING C: Environmental Auditing Among Federal Agencies Is Limited. The GAO reported that while the DoE and the Military Services generally have made significant progress toward developing effective environmental audit programs, the progress of many other Federal agencies, some with potentially large environmental liabilities, has been more limited. The GAO indicated that information from the EPA indicates that most Federal Agencies have only fledgling audit programs or no programs at all. (pp. iv-v, pp. 33-50/ GAO Draft Report)

DOD RESPONSE: Concur to the extent the finding pertains to the Military Services, the Defense Logistics Agency, and other DoD Components that manage installations.

2

FINDING D: Agencies Face Obstacles in Developing Environmental Audit Programs. The GAO found that while some civilian agencies have launched pilot environmental audit programs, obstacles such as the lack of technical expertise impede the further development of environmental auditing in the civilian sector. The GAO reported that building strong environmental audit programs requires that senior managers take actions such as issuing statements, notifying personnel of management's support for the program, providing adequate and reliable funding for the program, personally reviewing audit reports, and assuring that environmental audit findings are promptly addressed. The GAO noted that senior managers at most civilian agencies have yet to take such steps. The GAO observed that civilian agency managers may have little incentive to support environmental auditing because, under the current EPA and state inspection strategy, many civilian agencies have little risk of being inspected. The GAO noted that opportunities exist for the EPA to deliver the needed technical assistance at low cost, through cooperative efforts with agencies such as the DoE and the Air Force that have already developed environmental audit training programs and have demonstrated a willingness to share them with other agencies. (pp. 51-67/GAO Draft Report)

DOD RESPONSE: Concur. The Defense Department is ready to provide technical support to the and other Federal agencies, generally on a reimbursable basis, for establishing auditing programs.

* * * * *

RECOMMENDATION

RECOMMENDATION: The GAO recommended that the Administrator of the Environmental Protection Agency take the following actions:

- ensure that civilian Federal agencies receive a measure of enforcement attention commensurate with the environmental risks posed by their operations;

- use technical assistance and outreach to civilian Federal agencies to improve agency managers' awareness and understanding of the benefits to be gained from environmental auditing;

- require the EPA regional offices to adhere to the agency's stated policy that it will not "routinely request" environmental audit reports, but will confine such requests to the exceptional situations outlined in its 1986 environmental audit policy statement; and

- revise agency policies to encourage regulated entities to self-discover, report, and correct noncompliance by providing for reduction of penalties for violations identified through environmental auditing. (p. vii, pp. 68-69/GAO Draft Report)

3

DOD RESPONSE: Concur. Regulator requests for audit reports may be self-defeating. The requests may inhibit candid and thorough self-assessments which agencies need to identify and address compliance deficiencies. The Department of Defense prefers that regulators inspect DoD installations fairly and thoroughly and report compliance successes, as well as violations, without pre-conceived ideas from audit reports. However, as a Federal Department, the DoD is fully accountable to the public. It is Department policy to be open and to improve DoD relationships with the public. That includes being candid about compliance status and sharing information. Consequently, the Military Services always have made--and will continue to make--final assessment reports available to regulators and the public upon request. The Department sees self-assessments as an essential tool to ensure compliance with all Federal, state, and local environmental standards, while maintaining defense readiness.

4

Comments From the Department of Transportation

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

U.S. Department of Transportation
Office of the Secretary of Transportation

400 Seventh St., S.W.
Washington, D.C. 20590

February 1, 1995

Mr. Peter Guerrero
Director, Environmental Protection Issues
U.S. General Accounting Office
441 G Street, N.W.
Washington, D.C. 20548

Dear Mr. Guerrero:

Enclosed are two copies of the Department of Transportation's comments concerning the U.S. General Accounting Office draft report titled, "Environmental Auditing: A Useful Tool That Can Improve Environmental Performance and Reduce Costs," RCED-95-37.

Thank you for the opportunity to review this report. If you have any questions concerning our reply, please contact Martin Gertel on 366-5145.

Sincerely,

Melissa J. Allen
Deputy Assistant Secretary
for Administration

Enclosures

**DEPARTMENT OF TRANSPORTATION COMMENTS
ON
THE GENERAL ACCOUNTING OFFICE (GAO) DRAFT REPORT**

**"ENVIRONMENTAL AUDITING:
A Useful Tool that Can Improve
Environmental Performance and Reduce Costs"
RCED-95-37**

DEPARTMENT OF TRANSPORTATION POSITION

The GAO draft report contains a substantial amount of useful information regarding environmental auditing and its associated benefits and costs. Environmental auditing as implemented to date in the Department at the Federal Aviation Administration (FAA) has proven useful and its implementation has been expanded. We offer the following information to clarify and update the information contained in the draft report regarding FAA's efforts. Documentation of the information has been provided to GAO.

See comment 1.

FAA Management Supports Environmental Auditing

FAA's management fully supports the environmental audit program and has made a commitment to implement a systematic environmental auditing program to ensure environmental compliance. This commitment is based on an understanding of the agency's responsibilities under applicable environmental laws and the intention of fulfilling these responsibilities in an efficient and cost effective manner. Senior FAA management has issued a series of directive memoranda to all Regional Airway Facilities Division Managers which state the importance of the environmental auditing program and delineate the process to be followed.

Efforts to develop an environmental auditing program were initiated by FAA headquarters in 1990. Subsequently in 1991, an interagency agreement was established between FAA and the U.S. Army Corps of Engineers (Corps) to develop the current national program using Corps expertise. FAA contracted with the Corps to audit all of its facilities through 1998 and will reassess the Corps' continued role in the program at the conclusion of the contract. As data from the initial audits are evaluated, the format of the program will be adjusted to optimize program effectiveness.

The agency allocated $3.6 million over 3 years to develop and test the pilot program in the Southern Region for subsequent use nationwide. The pilot phase of field implementation started in 1992 and ended in July 1994, when National program implementation began with its expansion to three additional regions (Southwest, Central and Alaskan) and the Aeronautical Center. Full implementation of the National program is scheduled to begin in 1995.

Environmental management system auditing was initiated as a separate program in 1994. A facility specific environmental management system audit was conducted at the Technical Center in August 1994, and is scheduled for the Aeronautical Center in 1995. This program also includes nationwide and regionwide environmental management system evaluations. Results from these analyses are being used to improve the guidance provided to the field and cover all necessary environmental compliance issues.

See comment 2.

We emphasize that several statements characterizing agency managers' perceptions of the need for environmental compliance and the utility of environmental auditing do not accurately reflect the Department's views or those of most managers. While these anecdotal statements cited on pages v, vi, 45, 54, and 55 may reflect an individual's perceptions, they do not characterize the agency's position or orientation.

See comment 3.

FAA's Environmental Audits Cover Federal, State, and Local Environmental Requirements

The scope of FAA's environmental audits is intended to ensure that facilities comply with all applicable Federal, state, and local environmental laws. State and local protocols are obtained from the Corps' Construction Engineering Research Laboratory (CERL). Twenty-two state and local protocols were requested from CERL, covering all audits scheduled through FY-95. In those cases where state and local protocols are not available from CERL, the Corps is developing the necessary protocols prior to performing the audits. FAA guidance to the Corps requires separate reports describing compliance with Federal and state laws for each facility.

See comment 4.

Audit Finding Followup

Facilities that are audited are required to formulate plans for implementing corrective actions based on the recommendations and cost estimates included in the audit reports. The FAA will track the follow-up via the computer database already developed and being utilized by the Corps contractors agencywide. Instruction in the use of the database was covered at an implementation and training meeting held October 11-13, 1994.

See comment 5.

Quality Control

FAA is conducting quality assurance evaluations of the compliance audits conducted by the Corps. The oversight evaluation process began in November 1994, with interviews of program managers and implementing personnel in headquarters, regions, and the Corps. The first in a series of two sets of field visits was conducted January 9-13, 1995, with the second set of field visits planned for March 1995. The evaluations will provide a quality check for the audit process and encourage continuous improvement of environmental compliance management systems and procedures.

The following are GAO's comments on the Department of Transportation's (DOT) letter dated February 1, 1995.

GAO's Comments

1. We have revised our report, where appropriate, to clarify and update our discussion of FAA's environmental audit program and of management's support for and involvement in the program, on the basis of information provided by DOT/FAA after reviewing our draft report.

2. We recognize that statements made to us by particular individuals about environmental compliance do not necessarily characterize the views of the majority of FAA employees and managers and do not necessarily reflect official policy on compliance. We included statements in our discussion primarily to show that employees' sensitivity to environmental considerations and awareness of environmental compliance responsibilities often need to be increased.

3. See comment 1.

4. See comment 1.

5. See comment 1.

Major Contributors to This Report

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