



# **Office of Inspector General**

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## **Audit Report**

### **Follow-up Audit**

#### **Environmental, Safety, and Health Issues at EPA Laboratories**

**E1DMD8-11-0002-8100185**

**July 23, 1998**

**Inspector General Division(s)  
Conducting the Audit**

**Region(s) covered**

**Program Office(s) Involved**

**Headquarters Audit Division  
Washington, DC**

**Headquarters**

**Office of Administration and Resources  
Management: Safety, Health and  
Environmental Management Division**

**Office of Research and Development:  
Office of Resources Management and  
Administration**

**Office of Enforcement and Compliance  
Assurance: Federal Facilities Enforcement  
Office**

MEMORANDUM

SUBJECT: Follow-up Audit of Environmental, Safety, and Health Issues  
at EPA Laboratories  
Audit Report No. E1DMD8-11-0002-8100185

FROM: Michael Simmons  
Deputy Assistant Inspector General for Internal Audits

TO: Alvin M. Pesachowitz  
Acting Assistant Administrator  
for Administration and Resources Management

Attached is our final report on "Follow-up Audit of Environmental, Safety, and Health Issues at EPA Laboratories." A draft of this report was issued to you on May 19, 1998, and comments were received from your office on July 10, 1998. The comments provided describe the specific actions along with the milestone dates for completion in accordance with EPA Order 2750. Therefore, we are closing the report in our Prime Audit Tracking System upon issuance.

This report describes findings and corrective actions the Office of Inspector General (OIG) recommends to improve and strengthen EPA's environmental, safety and health (ESH) program. We found that the Agency had implemented many recommendations from our 1995 report. However, we identified areas of concern that required additional improvements. The report provides recommendations to address these concerns. It represents the opinion of the OIG. Final determinations on matters in the report will be made by EPA managers in accordance with established EPA audit resolution procedures. Accordingly, the findings described in this report do not necessarily represent the final EPA position and are not binding upon EPA in any enforcement proceedings brought by EPA or Department of Justice.

We appreciate your response to our draft report and its recommendations. Actions that the Safety, Health, and Environmental Management Division have already initiated will further enhance EPA's ESH program. Should you or your staff have any questions, please contact Norman E. Roth, Divisional Inspector General for Audit, Headquarters Audit Division on (202)260-5113.

Attachment



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# EXECUTIVE SUMMARY

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## INTRODUCTION

On September 27, 1995, the Office of the Inspector General (OIG) issued a report, "Environmental, Safety, and Health Issues at EPA Laboratories." A follow-up audit was initiated to determine if the Agency had implemented the recommendations provided in that report. Since most of the recommendations were directed at Agency Headquarters, we limited our audit to Headquarters offices and did not revisit any laboratories. We focused on available documentation, to the extent possible, to evaluate progress. We interviewed personnel in the Office of Administration and Resources Management (OARM) and Office of Research and Development (ORD). This follow-up audit was conducted from December 1997 through March 1998.

Environmental Protection Agency (EPA) personnel perform operations in laboratories and during field inspections which subject the Agency to the very environmental regulations that it is responsible for promulgating and enforcing. Safety and health programs are also applicable. The 1995 OIG report included recommendations for improvements to EPA's ESH program and audit process. Agency management agreed to implement the recommendations or take other actions to address the issues.

After the release of the OIG report, the Agency issued the Code of Environmental Management Principles for Federal Agencies (CEMP) in 1996. This code, which emphasizes pollution prevention and sustainable development, is applicable to the Agency's ESH operations. It focuses federal agencies on the necessity of state-of-the-art environmental management for reaching the highest levels of environmental performance. CEMP relates closely to our 1995 report recommendation that EPA establish a model environmental program which could also address safety and health issues.

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## **OBJECTIVES**

The objectives of the follow-up audit were:

- to determine if Agency management has implemented corrective actions indicated in their response to the 1995 OIG report and,
- to assess the Agency's status in implementing CEMP as established for federal agencies.

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## **RESULTS IN BRIEF**

The Agency implemented most of the corrective actions addressed in our 1995 OIG report. However, improvements could be made in the evaluation of EPA's ESH personnel and in the Agency's ESH audit process and reporting requirements. Also, we recommended in our prior report that EPA develop a model program to serve as a standard for environmental management. EPA has not fully implemented CEMP requirements, which would generally meet the intent of our recommendation. In its role as a leader both nationally and internationally in environmental programs, EPA should establish a standard for excellence in implementing responsible environmental management at its own laboratory and facility operations.

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## **RECOMMENDATIONS**

We recommend that the Acting Assistant Administrator for Administration and Resources Management:

- Strengthen ESH audit protocol to address training and qualifications of ESH personnel to best complement the individual laboratories' ESH needs.
- Further enhance the ESH audit process for risk assessment and access to audit corrective action tracking systems.
- Fully implement CEMP, challenging the Agency to move forward to a higher level of environmental management and provide leadership not only for federal, but also national, ESH programs.

## **Agency Response & OIG Evaluation**

The Office of Administration and Resources Management generally agreed with each of the recommendations in the draft report and provided planned corrective actions as well as milestone dates for completion. The specific corrective actions planned are included after each chapters' recommendations and the response is included in its entirety as Appendix II.

We believe the corrective actions underway and planned by the Agency address the report's recommendations, therefore, we are closing this report upon issuance. No further response by the Agency is necessary.





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# ABBREVIATIONS

CEMP	<u>Code of Environmental Management Principles for Federal Agencies</u>
EPA	Environmental Protection Agency
EMR	Environmental Management Review
ERL	Gulf Breeze- Environmental Research Laboratory Gulf Breeze, Florida
ESH	Environmental, Safety and Health
OARM	Office of Administration and Resources Management
OIG	Office of Inspector General
ORD	Office of Research and Development
RCRA	Resource Conservation and Recovery Act
RTP	Research Triangle Park
SHEMD	Safety, Health, and Environmental Management Division
SHEMP	Safety, Health, and Environmental Management Program
SHEMPMGRs	Safety, Health, and Environmental Management Program Managers

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# CHAPTER 1

## Introduction

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### Purpose

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On September 27, 1995, the Office of the Inspector General (OIG) issued a report, "Environmental, Safety, and Health Issues at EPA Laboratories." The report included recommendations for improvements in the Agency's environmental, safety, and health (ESH) program and audit protocol. Agency management agreed to implement the recommendations or take other actions to address the issues. The objectives of the follow-up audit were to:

- determine if Agency management has implemented corrective actions indicated in their response to the report and,
- assess the Agency's status in implementing the Code of Environmental Principles (CEMP) established for federal agencies.

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### Background

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Environmental Protection Agency (EPA) personnel perform many of the same functions that are subject to the very environmental regulations that the Agency is responsible for promulgating and enforcing. These regulations include liability for sanctions covered under the Federal Facilities Compliance Act. The Agency is responsible for maintaining internal safety and health programs under Part 19 of the Occupational Safety and Health Act of 1970 and Executive Order 12196, Occupational Safety and Health Programs for Federal Employees, dated February 26, 1980. In addition, Executive Order 12856, Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements, required the Agency to establish a voluntary "Federal Government Environmental Challenge Program" including a code of environmental management principles.

Since the completion of the 1995 OIG report, the Agency issued the Code of Environmental Management Principles for Federal Agencies (CEMP) on October 16, 1996. This code is closely related to the OIG report recommendation that EPA establish a model environmental program (which could also address safety and health issues). This model program would assist management by providing an overview of the ESH program and supplement the Agency's ESH audit protocol.

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### **Scope and Methodology**

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The follow-up audit was performed in accordance with the Generally Accepted Government Auditing Standards (Government Auditing Standards, 1994 Revision). Audit work was conducted from December 1997 through March 1998. We focused on available documentation, to the extent possible, to evaluate progress. In addition, we interviewed personnel in the Office of Administration (OARM), including SHEMD, and in the Office of Research and Development (ORD). We talked to Federal Facilities Enforcement Office personnel in the Office of Enforcement and Compliance Assurance for information related to the CEMP. We reviewed SHEMD policy and procedure documents and audit reports. Since most of the recommendations from the previous review were directed at Headquarters, we limited our review to Headquarters offices and did not revisit field activities. This audit was a short-term study of EPA activities, performed to determine progress in correcting previously identified issues.

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### **Prior Audit Coverage**

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Recommendations from the September 27, 1995 OIG audit report, "Environmental, Safety, and Health Issues at EPA Laboratories," are provided in Appendix I.

No additional OIG reports have been issued directly related to EPA's Environmental, Safety, and Health program.

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## CHAPTER 2

### EPA'S IMPLEMENTATION OF CORRECTIVE ACTIONS TO IMPROVE ITS ESH PROGRAM

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In our 1995 audit, we found that, although EPA's ESH Program for laboratories was improving, it was inadequate overall. We evaluated the ESH programs at five laboratories, reviewing the performance of ten critical ESH program elements such as environmental program support, management support, and building and fire safety. These elements were rated as model, adequate, or inadequate. All facilities were rated inadequate in at least two of the ten critical elements. One laboratory (Gulf Breeze) was rated inadequate in nine of ten elements. We believed that an inadequate rating in even one element left the facility vulnerable. We also found that OARM needed to improve the ESH audit process and its visibility to management. Concerns included: use of contractors to perform the audits; less than timely release of draft and final reports; and inadequate consideration of laboratory responses to issues addressed in the draft reports. Our recommendations in the 1995 report and the actions the Agency has taken are addressed in the following sections.

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#### **Declare EPA's ESH Programs an Agency-Level Weakness During the 1995 Integrity Act Process.**

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ORD identified its ESH program as a material weakness in its Integrity Act reports since 1992. However, our 1995 audit confirmed that program inadequacies were not confined to only ORD laboratories. We observed no major differences in the implementation of the ESH program in either ORD or Regional laboratories. Furthermore, SHEMD's audits were performed in the same manner at Regional and program office laboratories, and the types and number of findings were similar.

Based on our recommendation, EPA declared "Safety, Health, and Environmental Management Issues at EPA Laboratories" as an Agency-level weakness in the 1995 Integrity Act report. The corrective actions, which were to be completed in fiscals 1996 and 1997, included

directing senior managers to take personal management responsibility for their ESH programs, committing adequate resources to manage their programs, correcting all outstanding weaknesses, and conducting self evaluations.

OARM, specifically SHEMD, was accountable for monitoring the progress of laboratories in enhancing their respective programs. SHEMD also was responsible for enhancing its audit protocol for selecting facilities to audit; upgrading its automated follow-up process to better track corrective actions; and providing senior managers periodic assessments of individual facility ESH programs and reminders of all open findings. Result indicators included improvements in laboratory managers' periodic self-assessments, corroborated by fewer Headquarters' ESH audit deficiencies and quicker resolution of outstanding findings. At the end of fiscal year 1997, the Agency reported that all corrective actions had been completed and the Agency-level weakness was resolved.

We believe that the Agency has taken adequate action to address the OIG requirements for this recommendation. No further action is required.

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**Require OARM To Develop a Model Environmental Program Which Also Addresses Occupational Safety and Health Requirements.**

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For several years, many EPA managers have identified weaknesses in the Agency's ESH program and recognized that the Agency needs to do more to strengthen it. Laboratory managers and ESH personnel generally supported the concept that the Agency should have more than just an adequate ESH program. Given that EPA has created the environmental regulations and enforces compliance at federal and private laboratories, EPA should set the standard for excellence at its own laboratories. In fact, Executive Order 12856 states that, ". . . the Federal Government should become a leader in the field of pollution prevention through management of its facilities, its acquisition practices, and in supporting the development of innovative pollution prevention programs and technologies." Although EPA has made progress in ESH program improvements, some laboratory personnel, who were not directly responsible for ESH programs, resisted being held responsible for any requirements beyond

regulatory requirements. The 1995 OIG report recommended that the Agency clarify its ESH program goals in order to formally define a model ESH program based on the inadequacies identified at five EPA laboratories.

Subsequent to our report, EPA's Office of Enforcement and Compliance Assurance issued CEMP, which closely relates to our recommendation for a model program. Therefore, we assessed the Agency's progress in meeting CEMP. The assessment is discussed in Chapter 3 of this report.

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**Instruct ORD and OARM to Take Immediate Action to Reduce ESH Risks at ERL Gulf Breeze.**

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Of the five facilities we reviewed in the 1995 audit, Environmental Research Laboratory (ERL) Gulf Breeze had the weakest ESH program. The facility experienced two fires and was cited for a Resource Conservation and Recovery Act (RCRA) violation. We also found another RCRA violation during the OIG on-site visit. The conditions at ERL Gulf Breeze jeopardized the health and safety of EPA employees and possibly that of the nearby residential community as well. We recommended that ORD and OARM take immediate action to reduce ESH risks at ERL Gulf Breeze and document completed actions. The Agency agreed to monitor and keep management apprised of progress.

In May 1997, SHEMD completed an audit of National Health and Environmental Effects Research Laboratory, Gulf Ecology Division, Gulf Breeze (formerly ERL Gulf Breeze). The report noted a dramatic decrease in the overall number and severity of environmental, safety and health, and fire findings since the 1994 audit. In addition, we reviewed documentation of corrective actions at Gulf Breeze. This document indicated that SHEMD and ORD assisted Gulf Breeze's program by completing a comprehensive inventory of all hazardous chemicals and constructing an automated chemical management system. Finally, SHEMD's corrective action data base showed that Gulf Breeze had closed out several of the findings from SHEMD's 1997 audit and were addressing the remaining findings. According to the SHEMD in-house auditor, a new

director had been assigned to Gulf Breeze after the 1994 audit and the director was more involved with the ESH audit issues. This auditor noted that the laboratory has turned around and is now in “great shape.”

We believe that ORD and OARM have taken adequate action to reduce ESH risks at ERL Gulf Breeze based on the 1997 SHEMD audit, SHEMD documentation, and interviews with Agency officials. No further action is required.

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**Ensure that ORD Coordinates with OARM so that ORD’s ESH Program Complements, Rather than Duplicates, the Agency’s Program.**

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ORD identified its ESH program as a material weakness in Integrity Act reports since 1992. ORD took action to address its internal control weaknesses by appointing a full-time industrial hygienist to develop and manage an ORD-wide program. Plans for the program included technical assistance and an audit process, modeled after SHEMD's program, to provide more frequent evaluations of ORD laboratories.

According to an official in the ORD’s Office of Resources Management and Administration, the ESH program for ORD has been affected by the laboratory reorganization. ORD reorganized their laboratories after our 1995 audit so that the divisional laboratories are grouped by research category under three National Labs (or “mega-labs”). Each divisional laboratory now has its own ESH manager, as well as an ESH point of contact at each mega-lab. ORD is considering a strategy where ORD-wide and major ESH issues concerning the mega-labs are coordinated through a Headquarters liaison to OARM.

We believe that ORD’s reorganization and regular communication between ORD and OARM has sufficiently addressed our recommendation. No further action is required.



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**Instruct OARM to Identify and Prioritize Specific Laboratories' ESH Needs in Determining ESH Position Requirements.**

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During our 1995 review, we questioned whether adequate consideration was given to appropriate expertise and skills when filling ESH vacancies at two of the facilities. Technical expertise and skills mix are critical components to having a model, or even an adequate, ESH program. We recommended that SHEMD assist laboratories in the identification and selection of needed skill mix and qualified personnel. SHEMD agreed to offer counsel in hiring ESH personnel, but did not want oversight responsibility for personnel decisions of local managers. SHEMD also stated that it believed that it addressed staff requirement issues in their ESH audits. We did not agree that these actions were adequate to completely address ESH personnel qualification issues. Our report further recommended that SHEMD make written recommendations to facility directors on how best to advertise and fill ESH vacancies. Also, SHEMD concurrence on the experience and expertise of an ESH position selectee should be obtained prior to filling the ESH position.

According to the Director of SHEMD, Draft EPA Order 1440.1 included a section that would require SHEMD concurrence before filling an ESH position. This section was not approved during formal Agency management review of the document because Agency program offices and regional laboratories did not agree with the proposal. SHEMD management stated that they have been informally asked to review candidates for certain ESH positions, but do not have final concurrence authority.

Since formal SHEMD involvement in the selection process will not be implemented, OARM could strengthen its audit protocol by identifying and prioritizing specific needs such as training requirements and skill qualifications.

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**Improve Coordination of ESH Activities at Facilities Where Program Offices Are Co-located.**

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Research Triangle Park (RTP) has three program offices with ESH responsibilities: OARM, ORD, and OAR (Office of Air and Radiation). We found that ORD's ESH safety committee did not sufficiently represent the ESH needs of all three program offices. Additionally, RTP officials did not appear to coordinate when selecting the proper skill mix for qualified ESH personnel. We

recommended that OARM, in conjunction with applicable program offices, develop and implement a plan to improve coordination at facilities where program offices are co-located, such as RTP and Cincinnati, so that there is a facility-wide ESH program which covers all operations and addresses facility weaknesses. Our report also recommended that the SHEMD audit protocol include review of the coordination plan and its implementation at applicable locations.

SHEMD addressed this recommendation by incorporating issues related to co-located facilities into their Draft EPA Order 1440.1: Safety, Health & Environmental Management, which is currently awaiting signature. It states:

In Co-located Facilities, where more than one AA or RA share management of the SHEMP (Safety, Health, and Environmental Management Program) program and implementation strategies, the program will be integrated into one location-wide or facility-wide program, by written agreement between the parties, and there will be clearly assigned SHEMP delegations of authority, responsibilities and accountability for program implementation and evaluation (e.g., Las Vegas, Cincinnati, RTP, etc.).

We believe that this action addresses the intent of our recommendation, but urge that OARM follow-up to ensure that this section regarding co-located facilities remains in the final version of EPA Order 1440.1.

**Enhancement of Audit Process Through Increased Involvement of Program and Regional ESH Personnel in Audits.**

Previously, ESH audits were accomplished exclusively by a SHEMD technical expert serving as team leader and a contractor team of two to five experts. We reported that many laboratory managers were critical of SHEMD's overdependence on contractors, whose lack of knowledge of EPA's background, history, and operations adversely affected the audits. SHEMD officials explained that their request for "contractor conversion" to bring more

ESH expertise in-house was not approved. However, laboratory management was willing to provide laboratory ESH personnel to participate in SHEMD audits of other Agency facilities if SHEMD would be willing to support part of the travel expenses incurred. This would allow the audit participant to acquire training and a greater understanding of the audit process, while the audit process and the audited facility would benefit from the experience of the participant.

SHEMD began using program and regional ESH personnel to assist the contract personnel in the ESH audit process. According to the SHEMD in-house auditor, two ORD employees assisted in performing audits last year. This year, regional employees are scheduled to assist on several audits. SHEMD is also negotiating with ORD to fund one or two more people this year. SHEMD management agreed it is helpful when ESH personnel are involved in the audit process because EPA employees may have a better understanding of EPA specific ESH issues. Also, audits involving EPA field personnel are perceived by the facilities more as an “internal review” than a “Headquarters’ audit.” The Agency has begun enhancing the audit process by increasing the use of EPA personnel in the audit process. No further action is required on this issue.

**Elevation of Reports to  
EPA Top Managers when  
Reports Identify  
Significant Risk.**

We were concerned about the lack of visibility of the ESH audit reports to top management. ESH audit reports were issued to management one level above the audited facility. SHEMD did not have a standard protocol for elevating uncorrected deficiencies, potentially dangerous situations, or other serious concerns to the next level. Therefore, top-management may not have been aware of the potential impact of at-risk facilities on the Agency as a whole.

Currently, SHEMD reports for ORD laboratories are sent to the National Lab Directors and to the divisions. Audit reports for regional laboratories are addressed to either the Deputy Regional Administrator or the Assistant Regional Administrator. We found several examples where

ESH issues were elevated to a higher level of management. For example, SHEMD elevated a corrective action report regarding open findings from Gulf Breeze's 1993 audit to both the National Lab Director (ORD) and to the Director of the Office of Administration (OARM).

SHEMD also added an executive summary to their reports to facilitate communication to senior management. We agree that inclusion of an executive summary improves communication; however, the current summary format only counts numbers of violations and compares them with previous years' violations. The summary section would be more helpful if it presented a risk assessment describing the laboratory's progress toward meeting EPA's environmental goals to improve environmental performance. (Discussed in Chapter 3).

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### **Improvement of the OARM ESH Audit Reporting Process.**

#### **Increasing the Timeliness of Audit Reports and Associated Responses**

In the 1995 audit, we identified concerns with the timeliness of the audit reports. If results of the audit are not communicated timely, needed corrective actions may be delayed. We suggested that one way to address this issue was to provide a written draft report for laboratory comment at the SHEMD audit exit conference. We recommended that OARM increase the timeliness of audit reports and associated reports, which would include establishing response time frames for program and Regional offices.

Presently, the audit team debriefs the laboratory personnel and presents written preliminary summary results prior to departure. According to a SHEMD official, providing comments during the exit has reduced the total audit time-line at the completion of the audit. However, the SHEMD in-house auditor is not satisfied with the average overall time it has been taking to complete an audit to final report. She explained that final reports have been held up due to additional response time requested by facilities, and errors (usually typographical) made by the contractor.

We reviewed SHEMD's updated ESH audit reports for three of the five facilities included in our 1995 report. These audits were performed at Gulf Breeze, RTP, and Kansas City facilities between 1996 and 1997. Two of the reports took four or more months after completion of site work before final issuance. Timeliness in reporting is important to avoid potential delays in corrective action and to ensure that upper-management is promptly aware of EPA's ESH vulnerabilities.

SHEMD should focus on further improvement and consistency in the timeliness of audit reports. Delays could be avoided by establishing response time frames for program and Regional offices.

Incorporation of the Facility  
Response to the Draft  
Report Into the Final  
Report

Previously, laboratory management did not believe that they received adequate consideration for their responses for issues addressed in the draft audit report. Although SHEMD had made an effort to respond to draft comments, the feedback process was informal and ineffective in answering facility concerns. We recommended that SHEMD address and evaluate Agency comments to the draft reports in writing in the final report itself to make it clear to the auditees whether their responses to the recommendations in the draft were acceptable and complete. SHEMD management indicated that they would be willing to consider changing their format to accommodate this change.

Draft EPA Order 1440.1 states that SHEMD will incorporate comments of ESH officials from the draft audit report into the final report. The SHEMD in-house auditor stated that facility responses are already being considered in the final report. However, we reviewed several final reports and were unable to clearly distinguish auditee comments within the reports. It appears that the audit reports are still not explicitly demonstrating whether auditees' responses to the draft reports were accepted.

SHEMD should ensure that the auditee comment requirement is included in the final EPA Order 1440.1. Additionally, SHEMD should more clearly identify facility responses to the draft report in the final report.

## Improvement of Corrective Action Tracking

SHEMD's initial automated system maintained corrective action tracking and other audit information. However, neither management nor audited facilities could access the system to review information. Audited facilities, therefore, could not provide automated updates for corrective action tracking. The facility had to provide corrective action status reports to SHEMD in order for the audit contractor to update the system. SHEMD personnel stated they were planning to institute a monthly process to provide reports to field facilities, as both a means to encourage updates and ensure that Headquarters received updates. Eventually, SHEMD wanted to have the tracking system available for review through the Agency's local area network. We recommended that SHEMD increase the visibility of and improve access to the corrective action tracking system.

Improvements to the LAN system now allow some facilities to review the status of their findings on the SHEMD database. Quarterly hardcopy reports on open findings are provided to facilities. Information to update findings can be sent back to SHEMD through e-mail, by disk, or in hardcopy. Findings are reviewed by SHEMD officials and updated in SHEMD's data base on a monthly basis. According to SHEMD officials, they would eventually like to allow facilities to edit and update their own changes online, but only after SHEMD has implemented additional controls to the system. According to a SHEMD official, the timeliness of facility responses has improved since they started sending quarterly reminder reports on the status of findings to the facilities.

SHEMD has improved their corrective action tracking system to ensure that interim actions are tracked during long term corrective actions and are working toward providing additional accessibility for the system to field facilities and top management. SHEMD officials should ensure that appropriate access to the system is established.

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## **Conclusion**

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The Agency has improved its ESH management system and has complied with the majority of our prior recommendations. However, EPA needs to address the adequacy of ESH personnel staffing, and finalize ongoing

audit process and reporting improvements. Because CEMP principles closely related to our previous recommendation, the Agency also needs to consider the model program, which is discussed in Chapter 3 of this report.

## **Recommendations**

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We recommend that Acting Assistant Administrator for Administration and Resources Management:

- 2-1 Assist facilities in identifying and prioritizing laboratories' ESH needs by strengthening audit protocol to address training and qualifications to best complement laboratories' ESH programs.
- 2-2 Ensure that the requirement for coordinated ESH programs at co-located facilities is included in the final version of EPA Order 1440.1.
- 2-3 Further improve the audit process by:
  - a. Enhancing the executive summary to more clearly identify risk to assist the Agency in assessing and improving its ESH performance goals.
  - b. Clearly identifying facility comments/ responses to the draft in the final report.
  - c. Promoting more timely audit responses and reporting, which would include establishing response time frames for program and Regional offices.
  - d. Increasing access to corrective action tracking data base with appropriate controls.

## Agency Response

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### Recommendation 2-1

SHEMD agreed to modify its auditing protocol to strengthen its assessment of training requirements and skill qualifications for safety, health and environmental managers. SHEMD believes that this addition will assist managers with the preparation and implementation of their individual development plans. The expected date for completing this action is October 31, 1998.

### Recommendation 2-2

The Agency addressed coordination of ESH programs at co-located facilities in the final version of EPA Order 1440.1, signed May 11, 1998.

### Recommendation 2-3

- a. SHEMD agreed to add a generic risk assessment discussion to the executive summary of its ESH audit reports beginning in August 1998.
- b. In April 1998, SHEMD began to include a tabular summary of audit findings, auditee comments, and SHEMD comments with the distribution of the final audit report. SHEMD also plans to amend its audit program document to reflect this standard procedure.
- c. SHEMD stated that it does specify response time frames for program and Regional office reviews of draft and final audit reports. In addition, SHEMD will attempt to improve the timeliness of responses by assuring that draft reports are sent to senior managers and that appropriate follow-up actions are taken. A SHEMD official will also track the status of corrective actions for audits and an automated tickler system will be implemented to assist in reminding managers of audit response dates by August 1998.
- d. SHEMD will make its corrective action tracking system accessible to SHEMP managers when



internal control issues are resolved (expected within the next fiscal year). In the interim, SHEMD will 1) download the information from the tracking system into a word processing file, 2) send it through e-mail to the appropriate SHEMA managers and senior management officials for an update on the status of open findings, and 3) request that they forward the updated file, electronically, to SHEMD to be uploaded into the corrective action tracking database. This approach eliminates the need to train individuals on the occasional use of the database and stimulate communication between field managers and SHEMD officials

**OIG Evaluation of Agency  
Response**

**The proposed corrective actions will address the  
recommendations and no further action is required.**

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# CHAPTER 3

## EPA'S IMPLEMENTATION OF CEMP

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Although SHEMD has made improvements to EPA's ESH management program, it can take additional steps to be a leader in environmental management. Executive Order 12856, Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements, states that, ". . . the Federal Government should become a leader in the field of pollution prevention through management of its facilities, its acquisition practices, and in supporting the development of innovative pollution prevention programs and technologies." The order directs federal agencies to agree to sign onto a code of environmental principles emphasizing pollution prevention, sustainable development, and beyond compliance environmental management programs.

The Code of Environmental Management Principles (CEMP) is a collection of five principles that provide a basis for federal agencies to move toward responsible environmental management and reach the highest levels of environmental performance. It focuses federal agencies on the necessity to develop state-of-the-art environmental management that ensures a best-in-class environmental program.

The goal of CEMP is to move Agencies beyond compliance and the traditional short-term focus on regulatory requirements to a broader, more inclusive view of the interrelated nature of their environmental activities. Implementing guidance for CEMP notes that short-term success is no indicator of the long-term stability of the environmental management system, and may even lead to complacency. Agencies that fully integrate their system will be in a better position to identify weak points and predict future risks, managing their resources for prevention, not just response. Ultimately, agencies that invest in the

implementation of CEMP principles are likely to realize a high return on that investment through an improved risk profile at their facilities, resulting in a lowering of costs associated with regulatory compliance, safety and health, incident response, and cleanup of contaminated sites.

The five principles of CEMP are as follows:

- Management commitment demonstrated through written policies to support pollution prevention and compliance.
- Pro-active compliance assurance and pollution prevention programs to aggressively identify and address deficiencies and improve environmental performance.
- Enabling systems to allow personnel to perform functions in an environmentally responsible manner.
- Performance and accountability measures to ensure that expectations for environmentally responsible job accomplishments are clear.
- Measurement and improvement procedures to assess progress and use results to reach the highest levels of environmental performance.

The CEMP principles relate closely to the recommendation in our 1995 report that EPA establish a model environmental program which also addresses safety and health issues. Laboratory managers and ESH personnel generally supported the concept that the Agency should have more than just an adequate ESH program. During recent fieldwork, officials in OARM agreed that EPA should work toward developing a model environmental management program in line with CEMP. Given the fact that EPA created the environmental regulations and enforces compliance at federal and private laboratories, it is important that EPA aspire to fully implement CEMP as a leader in environmental management, not only in the federal sector, but in the nation. We evaluated EPA's implementation of CEMP, and found three of the five principles to be particularly relevant to the OIG model program recommendation.

One of these principles advocates management commitment toward improved environmental performance by establishing a written top-management policy which emphasizes pollution prevention and the need to ensure compliance with environmental requirements. Private companies have demonstrated their dedication to improving safety and environmental performance through written statements. For instance, DuPont's CEO prepared a written report publicizing the company's safety, health and environmental accomplishments, including energy savings and decreases in toxic and ozone depleting emissions. General Motors adopted a policy statement, GM Environmental Principles, affirming the company's commitment to a safe and healthy environment. EPA's top management could issue a similar policy statement committing EPA to improved environmental performance. We also found that environmental management for EPA facilities is not prominently addressed as a priority in EPA's 1997 strategic plan. In our opinion, such a policy document from EPA, as well as clear strategic plan support, could enhance the Agency's environmental commitment and performance.

Another CEMP principle involves performance and accountability, recommending agencies develop measures to address employees' environmental performance and ensure full accountability of environmental functions. Commitment to responsible environmental management should be integrated into Agency policy by including requirements in employee performance standards and awards criteria. In our previous audit, we found that employees' responsibilities for the ESH programs did not appear to be addressed in performance ratings. We also examined an Environmental Management Review (EMR) of an EPA laboratory completed this past year by EPA regional pollution prevention staff. The EMR found that the laboratory staffs' environmental roles and responsibilities were not clearly defined and that the environmental impacts of laboratory operations were not fully understood by all laboratory personnel. It is important that employee environmental performance is addressed in their performance standards and that Agency personnel

understand and are held accountable for their environmental responsibilities.

Measurement and improvement of the Agency's environmental performance and goals is the third relevant principle. SHEMD stated that risk assessments are completed by comparing individual laboratory ESH audit results from year to year. However, we do not believe that this information clearly identifies environmental risk Agency-wide. An Agency-wide assessment would allow EPA to classify its risk in different areas (e.g., training, building and fire safety, management support). Then, EPA can determine the most significant areas of weakness and respond accordingly toward environmental, safety, and health performance organization-wide. This assessment would also allow the Agency to evaluate its progress toward meeting overall environmental goals.

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## **Conclusion**

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The Agency has improved its environmental, safety, and health program, and is now ready to meet the next challenge. CEMP encourages federal agencies to emphasize responsible environmental management. In its role as a leader both nationally and internationally in environmental programs, the Agency should also be a leader in setting a standard for excellence in implementing responsible environmental management at its laboratory and facility operations.

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## **Recommendations**

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We recommend that Acting Assistant Administrator for Administration and Resources Management:

- 3-1 Move EPA toward meeting the highest levels of environmental performance in line with CEMP. Steps include:
- a. Demonstrate management commitment through a written top-management policy.
  - b. Develop measures to address employee environmental performance and ensure full accountability of environmental functions.

- c. Strengthen the risk assessment of the Agency as a whole so that EPA can determine areas of weakness and respond toward improving environmental performance.

**Agency Response**

**Recommendation 3-1(a)**

SHEMD is currently reviewing corporate policies and management commitment statements by Corporate Executive Officers and other Federal Agency Heads. SHEMD plans to have a similar statement available for signature by the Agency's senior management by November 1, 1998.

**Recommendation 3-1(b)**

SHEMD stated that the accountability requirement for environmental performance by senior management is contained in the EPA Order 1440.1. SHEMD reviews the performance standards of managers as part of its management systems review during audits. Incorporating environmental systems and establishing a corporate culture of laboratory workers will be presented at SHEMD's national workshop for EPA safety, health and environmental managers in July 1998. SHEMD will upgrade its auditing protocol by December 1998 and will assist auditors in evaluating the extent to which environmental management principles have been instilled in the work ethic of managers and employees.

**Recommendation 3-1(c)**

SHEMD agreed to add an interpretation section to their annual summary addressing Agency risk attributable to observations made during audits for fiscal year 1998. This report is typically completed by November 15<sup>th</sup> of each year.

**OIG Evaluation of Agency Response**

We agree with the Agency's actions for this recommendation. No further action is necessary.





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# APPENDIX I

## RESULTS OF 1995 AUDIT

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### ESH PROGRAM

In our 1995 audit, we found that, although EPA's ESH Program for laboratories was improving, it was inadequate overall. The ESH programs at five laboratories were evaluated and the performance of critical ESH program elements rated as model, adequate, or inadequate. Elements included industrial hygiene support, building and fire safety support, environmental management support, facility ESH self-inspection, building and facilities support, ESH committee, management support and involvement, ESH professional and best management practices, contractor monitoring and interface, and training.

All facilities were rated inadequate in at least two of the ten elements. One laboratory (Gulf Breeze) was rated inadequate in nine of ten elements. We believe that an inadequate rating in even one element leaves the facility vulnerable. Given EPA's position in the regulated community, EPA should become the leader in developing a model environmental program. This model program would provide a management tool to assist in assessing and improving the ESH program at Agency laboratories.

To improve EPA's program, we recommended that the Deputy Administrator:

- Declare EPA's Environmental, Safety and Health (ESH) programs, at a minimum, an Agency-level weakness during the 1995 Integrity Act process, unless immediate actions result in major program improvements.
- Require OARM, in conjunction with the program offices, to develop a model environmental program which also adequately addresses occupational safety and health requirements to provide a management overview as a supplement to present ESH audit protocol. Establish clear expectations and ensure that the program is implemented at all Agency laboratories.
  - a. As needed, OARM should make improvements to the program element matrix contained in this report and use it as the basis for an ESH report card to be completed by SHEMD officials at the time of their facility audit or annually if ESH conditions warrant.

- b. OARM should work with program and Regional offices to develop corrective action plans to address report card weaknesses and improve the ESH program.
  - c. Regional Administrators should be instructed to reassign the ESH allocated resources (.7 FTE per Region) to the regional laboratories unless compelling written justification is provided by the Regional Administrator, concurred in by SHEMD, and approved by the Assistant Administrator, OARM.
- Instruct ORD and OARM to take immediate action to reduce ESH risks at Environmental Research Laboratory (ERL) Gulf Breeze and document completed actions.
  - Ensure that ORD coordinates with OARM so that ORD's ESH program complements, rather than duplicates, the Agency's program.
  - Instruct OARM to identify and prioritize specific laboratories' ESH needs in determining ESH position requirements to best complement laboratories' ESH programs.
    - a. Require SHEMD to make a written recommendation to the facility director on how best to advertise and fill full-time ESH vacancies. The recommendation should indicate what skill mix will most improve the report card ratings.
    - b. SHEMD concurrence on the experience and expertise of an ESH position selectee must be obtained prior to filling the ESH position.
  - Instruct OARM, in conjunction with applicable program offices, to develop and implement a plan to improve coordination at facilities where program offices are co-located, such as RTP and Cincinnati, so that there is a facility-wide ESH program which covers all operations and addresses facility weaknesses. Incorporate review of the plan and its implementation into SHEMD audit protocol.

### ESH AUDIT PROCESS

At the time our 1995 OIG review was completed, we found that OARM needed to improve the ESH audit process and its visibility to management. Several factors contributed to criticism of the ESH audit process by EPA laboratory managers. Among the concerns addressed were: use of contractors to perform the audits; treating professional practice findings and recommendations in the same manner as regulatory findings and recommendations; a less than timely release of draft and final reports; and inadequate consideration of laboratory responses to issues addressed in the draft reports.

We recommended that the Deputy Administrator:

- Instruct OARM to enhance the ESH audit process by involving program and Regional ESH personnel in audits.
- Establish a process in OARM to elevate reports to EPA top managers when reports identify significant risk or continuing problems found during ESH audits.
- Improve the OARM ESH audit reporting process by:
  - a. Increasing the timeliness of audit reports and associated responses, which would include establishing response time frames for program and Regional offices;
  - b. Incorporating the facility's response to the draft report into the final report, which would include an evaluation of facility comments and a clear identification of where SHEMD and the facility are not in agreement;
  - c. Improving corrective action tracking (for example, ensuring that interim actions are tracked during long term corrective actions, and providing additional accessibility of the tracking system to field facilities and top management).

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# **APPENDIX II**

## **AGENCY RESPONSE**

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July 10, 1998

### **MEMORANDUM**

**SUBJECT:** Follow-up Audit of Environmental, Safety, and Health Issues at EPA Laboratories, Draft Audit Report No: E1DMD8-11-0002

**FROM:** Alvin M. Pesachowitz /s/ by John Sandy  
Acting Assistant Administrator  
for Administration and Resources Management (3101)

**TO:** Michael Simmons  
Deputy Assistant Inspector General for Internal Audits (2421)

We appreciate your follow-up review of “Environmental Safety and Health Issues at EPA Laboratories.” Independent program reviews help to assure that we are managing our activities properly and that we are addressing the needs of our customers.

I am pleased that you found a much improved environmental, safety, and health program during this follow-up review. We generally concur with the new recommendations in your draft report and believe that they will help to further enhance our nationwide program. As input to your final report, we are providing comments, accomplishments, and our proposed corrective actions to your recommendations.

Should you or your staff have any questions regarding this response, please feel free to contact Julius Jimeno at 260-1640.

Attachment

cc: Deputy Administrator (1102)  
Assistant Administrator for Research and Development (8101R)  
Assistant Administrator for Enforcement and Compliance Assurance (2201A)  
Director, Office of Administration, OARM (3201)  
Director, Office of Resources Management and Administration, ORD (8120R)  
Director, Safety, Health, and Environmental Management Division (3207)  
Director, Federal Facilities Enforcement Office, OECA (2261A)  
OARM Audit Liaison (3102)

**Environmental, Safety, and Health (ESH) Issues at EPA Laboratories  
Draft Audit Report No. E1DMD8-11-0002  
Comments, Accomplishments, and Proposed Corrective Actions**

**Chapter 2**

**2-1 Assist facilities in identifying and prioritizing laboratories' ESH needs by strengthening audit protocol to address training and qualifications to best complement laboratories' ESH programs.**

The Safety, Health, and Environmental Management Division (SHEMD) agrees with this recommendation and will modify its audit protocol to strengthen our assessment of the training requirements and qualifications of the Agency's safety, health, and environmental management program managers (SHEMPMGRs). This will assist our SHEMPMGRs and their supervisors with the preparation and implementation of their career and individual development plans. We will discuss this matter at our technical training conference this month, and expect to enhance our audit protocol by October 31, 1998. We will also be discussing these matters with the certification boards for the technical professions associated with our program.

**2-2 Ensure that the requirement for coordinated ESH programs at co-located facilities is included in the final version of EPA Order 1440.1.**

EPA Order 1440.1 was signed on May 11, 1998, and provides direction for programmatic issues at the Agency's co-located facilities. A copy of the signed order was provided to Carolyn Blair of the IG Audit staff.

**2-3 Further improve the audit process by:**

**a. Enhancing the executive summary to more clearly identify risk to assist the Agency in assessing and improving its ESH performance goals.**

SHEMD will include a generic discussion of risk assessment in the executive summary section of audit reports, beginning in August 1998.

**b. Articulating facility comments/responses to the draft in the final report.**

Although there is no specific requirement that auditee comments be addressed in writing in the final report in EPA Order 1440.1, this has always been a standard practice. In April 1998, SHEMD improved the process by including a tabular summary of audit findings, auditee comments, and SHEMD's comments with its final audit report. We trust that this action meets

the intent of your recommendation. We will amend our audit program documentation to clarify this standard practice. A copy of the summary of comments and responses for the Las Vegas audit was also forwarded to Carolyn Blair.

**c. Promoting more timely audit responses and reporting.**

Currently, SHEMD **does** specify response times for Program and Regional Office reviews of its draft and final audit reports. Typically, responses are requested within 21-28 days. We will be sending draft reports to senior managers and follow-up with them to improve the timeliness of responses. We have assigned a SHEMD employee to specifically track the status of responses to SHEMD audit reports and periodic submittal of corrective action plans, using an automated tickler system. These system improvements will be implemented by August 31, 1998.

**d. Increasing access to the corrective action tracking data base.**

As soon as all internal control issues can be resolved (which is expected to be completed within the next fiscal year), SHEMD will make its corrective action tracking system accessible to SHEMPMGRs. In the interim, our strategy is to: (1) download the information from the tracking system into a word processing file; (2) send it through e-mail to the appropriate SHEMPMGRs and senior management officials for an update on the status of open findings; and (3) request that they forward the updated file, electronically, to SHEMD so that it can be uploaded into the corrective action tracking database. This technology-based interim approach would eliminate training and retraining individuals on the occasional use of the database (quarterly) and stimulate our field managers to provide regular responses to, and communications with, SHEMD's tracking system coordinator.

**Chapter 3**

**3-1 Move EPA toward meeting the highest levels of environmental performance in line with the Code of Environmental Management Principles (CEMP) by:**

**a. Demonstrate management commitment through a written top-management policy.**

SHEMD has been reviewing corporate policies and management commitment statements signed by Corporate Executive Officers and other federal Agency heads. We expect to have a similar statement ready for the Administrator by November 1, 1998.



**b. Develop measures to address employee environmental performance and ensure full accountability of environmental functions.**

The accountability requirement for environmental performance by senior management is contained in EPA Order 1440.1, *Safety, Health, and Environmental Management Program*; and SHEMD does review performance standards of managers as part of its management systems review during its audits. Incorporating environmental management systems and establishing a corporate culture of laboratory workers will be presented at its national workshop for EPA safety, health, and environmental managers from July 20-24, 1998. SHEMD will upgrade its auditing protocol in this area by December 1, 1998, and it will help its auditors evaluate the extent to which environmental management principles have been instilled in the work ethic of managers and employees.

**c. Strengthen the risk assessment of the Agency as a whole so that EPA can determine areas of weakness and respond toward improving environmental performance.**

SHEMD prepares an annual report usually by November 15 which summarizes the findings and results of its auditing program. The report is a “numerical” summary of the information collected from audits performed during that fiscal year. Beginning with this fiscal year 1998 report, SHEMD will add an interpretation section to its annual summary addressing Agency risk attributable to the observations made during the audits.

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# **APPENDIX III**

## **DISTRIBUTION OF REPORT**

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Inspector General  
Deputy Inspector General for Audit  
Divisional Inspectors General  
Deputy Administrator  
Assistant Administrator for Research and Development  
Assistant Administrator for Enforcement and Compliance Assurance  
Director, Office of Administration, OARM  
Director, Office of Resources Management and Administration, ORD  
Director, Safety, Health, and Environmental Management Division  
Director, Federal Facilities Enforcement Office, OECA  
OARM Audit Liaison