

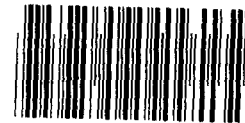
GAO

Fact Sheet for the Chairman, Committee
on Governmental Affairs, United States
Senate

March 1987

NUCLEAR HEALTH AND SAFETY

DOE's Progress in Implementing Its 1985 Initiatives



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

Resources, Community, and
Economic Development Division

B-222195

March 3, 1987

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

Dear Mr. Chairman:

On September 18, 1985, the Secretary of Energy announced several initiatives to strengthen environmental, safety, and health (ES&H) programs within the Department of Energy (DOE). Because these initiatives could make important changes in the way DOE headquarters and field offices conduct their ES&H activities, your office, on October 24, 1985, asked us to monitor the implementation of the initiatives and brief your staff periodically on their status. Accordingly, we briefed your office on February 10, 1986, and provided you with a fact sheet entitled Environment, Safety, and Health: Status of the Department of Energy's Implementation of 1985 Initiatives (GAO/RCED-86-68FS, Mar. 4, 1986).

At your staff's request, we continued our monitoring efforts and briefed your office again on November 3, 1986. At that meeting, we agreed to provide you with this fact sheet highlighting, as of December 1986, (1) the status of the September 1985 ES&H initiatives and (2) DOE's planned actions to complete the initiatives.

The Secretary of Energy's initiatives are (1) reorganizing the ES&H activities at DOE headquarters, (2) revising ES&H orders, (3) conducting a major environmental survey of conditions at DOE sites, (4) carrying out major technical safety appraisals of conditions at DOE's nuclear facilities, (5) revising ES&H information reporting and tracking systems, (6) increasing environmental guidance, and (7) enhancing the professional development of ES&H staff. DOE's ES&H staff believe these initiatives can provide increased authority and additional information to enable them to more effectively oversee ES&H activities. Status information on each of the seven initiatives is provided in sections 1 through 7 of this fact sheet.

Overall, we found that DOE has made progress in implementing all but one of the initiatives. Specifically,

- The reorganization of ES&H activities is essentially complete.
- DOE has revised six ES&H orders governing the conduct of DOE operations.
- Field work for DOE's environmental surveys has been completed at eight facilities with interim reports scheduled to be available early in 1987.
- Safety technical appraisals have been completed for 10 DOE facilities.
- An ES&H information reporting and tracking system is operational.
- DOE has issued a number of specific environmental memorandums to field offices governing various environmental aspects of DOE operations.

In regard to the remaining initiative--enhancing ES&H professional development--DOE has not yet developed a plan setting forth specific ES&H training needs. A DOE official told us higher priority work has limited his implementation of this initiative.

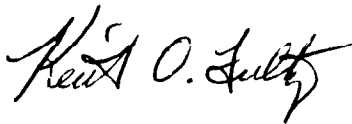
We believe it is too early to evaluate the impact these initiatives can have on strengthening DOE ES&H activities. Many of the initiatives have only recently been implemented and/or are still being implemented. We plan to undertake a detailed evaluation of DOE's progress in mid-1987 when we expect the initiatives to be sufficiently implemented to measure their success in improving DOE's ES&H programs.

To determine DOE'S purpose, status, and plans for each of these initiatives, we interviewed headquarters ES&H officials. To develop more specific information on DOE's comprehensive environmental survey and technical safety appraisals, we reviewed DOE memorandums and plans discussing their scope, methodology, and schedules. To develop an overall perspective on the need for and potential implications of the initiatives, we relied on our continuing work in the ES&H area and our previous reports concerning

DOE's ES&H program, as well as DOE studies discussing the need for ES&H organizational changes within DOE.

We discussed the material presented in this fact sheet with DOE officials and have incorporated their views where appropriate. We are sending copies to the Chairman, House Science and Technology Committee; the Chairman, Subcommittee on Natural Resources, Agriculture Research, and Environment, House Science and Technology Committee; DOE; and other interested parties. If you have any questions about this fact sheet, please call me at 202-275-1441.

Sincerely yours,

A handwritten signature in cursive script that reads "Keith O. Fultz".

Keith O. Fultz
Associate Director

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ABBREVIATIONS

CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
DOE	Department of Energy
ES&H	environment, safety, and health
GAO	General Accounting Office
RCRA	Resources Conservation and Recovery Act of 1976

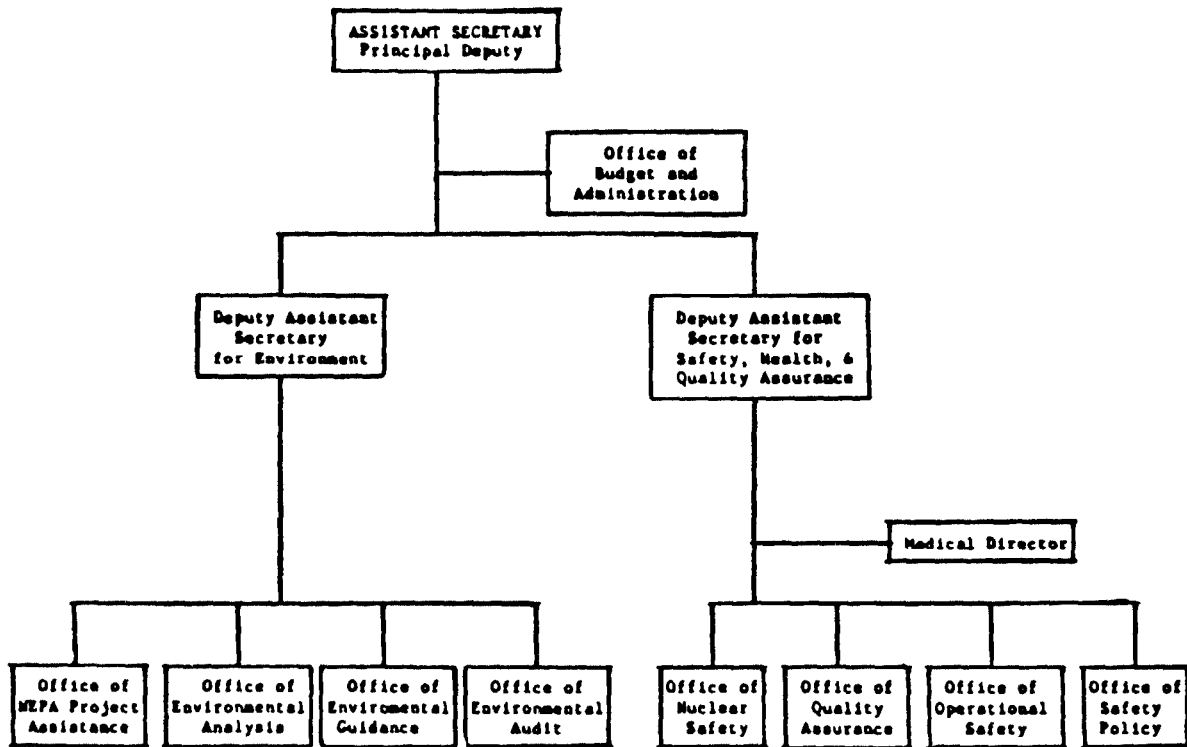
SECTION 1

REORGANIZE ENVIRONMENTAL, SAFETY,
AND HEALTH ACTIVITIES

PURPOSE: To consolidate and upgrade the environmental, safety, and health (ES&H) functions within the Department of Energy (DOE).

STATUS:

- o The Secretary of Energy has reorganized the ES&H organization structure (see fig. 1.1) within DOE. The Assistant Secretary for this organization reports to DOE's Under Secretary.
- o Figure 1.1: ES&H'S Organization Structure as of November 24, 1986



- o The Assistant Secretary, both Deputy Assistant Secretaries, and all office Director positions have been filled.
- o One hundred forty-five ES&H staff are assigned to this reorganization. This essentially meets the staffing level planned under the reorganization.

SECTION 2

REVISE ES&H ORDERS

PURPOSE: To redefine and strengthen ES&H oversight role and responsibilities in DOE operations.

STATUS:

- o DOE has revised and approved six ES&H orders.
- o The six orders, which were issued on September 23, 1986, are
 - Environmental, safety, and health programs for DOE operations (Order 5480.1B). This order delineates DOE headquarters' and field offices' responsibilities for implementing DOE's ES&H programs.
 - Safety of DOE reactors and other nuclear facilities (Orders 5480.5 and 5480.6). These orders set forth controls for preventing nuclear accidents and releases of radioactive material.
 - Preparation and review of safety analysis reports (Order 5481.1B). This order establishes DOE's requirements for reports that identify potential safety hazards at facilities and evaluate alternative actions to eliminate or mitigate these hazards.
 - The ES&H appraisal process (Order 5482.1B). This order establishes a hierarchical system of reviews for evaluating the ES&H performance of contractors and field offices.
 - Quality assurance requirements (Order 5700.6B). This order assigns responsibilities for establishing, implementing, and maintaining programs intended to optimize equipment reliability and personnel performance at all facilities.

DOE's PLANNED ACTIONS:

- o Revise DOE's hazardous waste orders to reflect changes in how DOE will dispose of its waste.

SECTION 3

CONDUCT COMPREHENSIVE ENVIRONMENTAL

SURVEYS OF DOE FACILITIES

PURPOSE: To identify any specific environmental problems existing at major DOE operating facilities and (2) to establish priorities for necessary corrective action.

STATUS:

- o ES&H's Office of Environmental Audit will conduct environmental surveys at approximately 40 nuclear and non-nuclear DOE sites. According to ES&H's Director, Office of Budget and Administration, these sites include all major DOE operating facilities.
- o The office has developed a management plan describing the survey's purpose, scope, and methodology. In general, it will examine existing and potential air, water, and soil contamination and other possible environmental problems at the DOE sites. The office has also developed a survey manual.
- o Field work at the Feed Materials Production Center in Ohio, the Hanford site in Washington, the Mound Laboratory in Ohio, the Portsmouth plant in Ohio, the Rocky Flats plant in Colorado, the Oak Ridge Y-12 plant in Tennessee, the Pantex plant in Texas, and the Lawrence Livermore National Laboratory in California has been essentially completed. Interim reports on these sites are scheduled to be issued in 1987.

DOE's PLANNED ACTIONS

- o In January 1987, survey work will begin at the Savannah River Plant in South Carolina.
- o Survey work at the remaining DOE sites is scheduled to be undertaken in 1987 and 1988.
- o A final report to the Secretary on all DOE sites is scheduled to be issued in late 1988 or early 1989. This report, according to DOE officials, will include a prioritization of environmental problem areas at the Department.

SECTION 4

CONDUCT TECHNICAL SAFETY APPRAISALS

OF DOE NUCLEAR FACILITIES

PURPOSE: (1) To identify any specific health and safety problems existing at DOE nuclear facilities, (2) to assure corrective actions are sufficient to correct problems, and (3) to promote excellence in DOE's nuclear operations.

STATUS:

- o ES&H's Office of Nuclear Safety will lead technical safety appraisals of DOE's nuclear facilities located at 16 sites. According to the office's director, the appraisals will include all DOE reactors and all other nuclear facilities that DOE has designated as "high hazard."
- o The Office has developed a management plan describing the appraisals' objective, scope, and methodology. In general, the objectives of these appraisals are to assure DOE-wide consistency in the application of particular safety elements of the DOE ES&H program, that appropriate nuclear industry lessons-learned are observed, and that appropriate licensed facility requirements are followed.
- o DOE uses a mixture of outside consultants and recognized experts from its National Laboratories to perform the appraisals. All appraisal teams are lead by senior technical staff from DOE's ES&H office.
- o Final appraisal reports have been completed for the following facilities: Fast Flux Test Facility and N Reactor in Washington; Feed Materials Production Center and the Portsmouth Plant in Ohio; H-area reprocessing plant and production reactors in South Carolina; Buildings 707, 771, and 774 at Rocky Flats in Colorado; Y-12's recovery facility in Tennessee; and the plutonium facility at Lawrence Livermore National Laboratory in California.

DOE's PLANNED ACTIONS:

- o Complete appraisals for the remaining facilities during 1987 and 1988 and issue a comprehensive appraisal report on all facilities in early 1989.

SECTION 5

REVISE INFORMATION REPORTING AND

TRACKING SYSTEM

PURPOSE: To develop an information system that DOE headquarters can use to monitor ES&H problems at facilities and the corrective actions taken.

STATUS:

- o ES&H's Office of Budget and Administration is responsible for developing the system.
- o A support service contract has been awarded to computerize ES&H-related information.
- o Recommendations from completed safety technical appraisals, operational safety appraisals, and quality assurance audits are being incorporated into the data base.
- o Background data on DOE sites are also being incorporated into the data base to provide an ES&H profile on a site-by-site basis.
- o Appraisal schedules are available on-line for current and future years.

DOE's PLANNED ACTIONS:

- o Add recommendations from environmental surveys and other appraisals and audits into the data base as they are completed.
- o Refine the type of information in the data base to meet the needs of program managers and ES&H staff.
- o Add summary status reports on environmental compliance issues at each DOE site.
- o Add tracking capability for DOE's prioritization of budget line items related to ES&H.
- o Add on-line display of current DOE orders related to ES&H.

SECTION 6

INCREASE ENVIRONMENTAL GUIDANCE

PURPOSE: To provide DOE program and field offices with additional and clearer environmental guidance to meet regulatory deadlines.

STATUS:

- o Issued a series of guidance memorandums on implementing the provisions of Resources Conservation and Recovery Act of 1976 (RCRA) at DOE facilities.
- o Issued guidance on reporting radionuclides regulated under the Clean Air Act (12/13/85).
- o Issued environmental policy statement (1/8/86).
- o Established a process within DOE to coordinate and resolve DOE environmental compliance issues (1/8/86).
- o Issued guidance on emission standards for hazardous air pollutants (2/13/86).
- o Issued DOE interim policy on state regulations of "Mixed Waste" and its implementation (3/31/86).
- o Issued guidance on reporting radionuclide emissions (4/18/86).
- o Issued a policy on off-site treatment, storage, and disposal of nonradioactive hazardous waste (6/24/86).
- o Issued interim policy on payment to states in settlement agreements and consent orders (8/1/86).
- o Issued a series of guidance on DOE's Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) activities.

DOE's PLANNED ACTIONS:

- o Revise Order 5480.2 governing RCRA.
- o Revise Order 5420.14 governing CERCLA.
- o Prepare a general environmental order.
- o Revise Order 5480 governing radiation protection of the public and the environment.

SECTION 7

ENHANCE PROFESSIONAL DEVELOPMENT

PURPOSE: To assure the continued professional competence of ES&H staff.

STATUS:

- o ES&H's Director of Budget and Administration is responsible for coordinating professional development activities.
- o To date, according to the Director, ES&H's efforts to enhance professional competencies have centered on hiring additional staff with specialized ES&H skills and experience to fill the organization's vacancies.

DOE's PLANNED ACTIONS:

- o According to the Director, DOE intends to develop a plan setting forth specific ES&H training needs and other professional development activities to enhance staff competencies. A time frame for implementing this plan has not been established.

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