United States General Accounting Office

GAO

Testimony

For Release
on Delivery
Expected at
1:30 p.m. EST
Thursday
March 15, 1990

DOE's Efforts to Correct Environmental Problems of the Nuclear Weapons Complex

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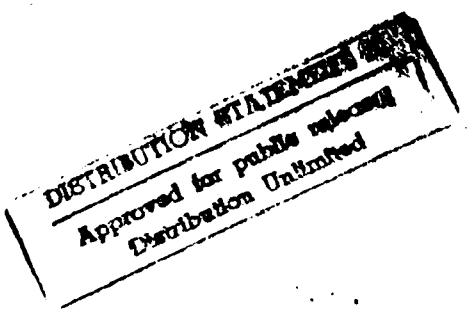
Before the
Department of Energy Defense
Nuclear Facilities Panel
Committee on Armed Services
House of Representatives



Mr. Chairman and Members of the Panel:

We are pleased to provide our views on correcting the environmental problems facing the Department of Energy's (DOE's) nuclear weapons complex. My testimony will cover four major points. These points relate to the environmental problems of the weapons complex, recent changes in DOE's organizational structure, DOE's 1991 budget request, and the need for effective management systems.

First, the weapons complex faces a wide variety of serious and costly environmental problems. These include the need to upgrade facilities so that they comply with environmental standards, dispose of radioactive wastes that have been stored for decades, and clean up contaminated groundwater and soil. The cost to address these problems is staggering--ranging over $100 billion. Further, because the full scope of the problems is not known, future costs may be greater as more is learned about the nature and extent of contamination. In the final analysis, some areas of the weapons complex may be irreversibly contaminated and thus require long-term institutional control.

Second, during the past year, DOE has made some important changes to its organization that should help change its management focus from one that emphasized materials production to one that more clearly focuses on environmental concerns. We have long

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pointed out that such a change in focus is needed to correct the environmental problems that face DOE in operating the weapons complex.

Third, as part of its management shift toward correcting environmental problems, DOE is increasing its budget for environmental and waste management activities. In this regard, DOE's fiscal year 1991 budget request of $2.8 billion for environmental restoration and waste management is about 25 percent more than DOE's fiscal year 1990 appropriation for these activities.

Fourth and finally, to successfully carry out its environmental restoration and waste management programs, DOE must have effective management systems in place to ensure that

-- the most serious environmental problems are identified for corrective actions and receive sufficient funding,

-- funds allocated for cleanup and waste management are effectively managed and spent, and

-- continued emphasis is placed on developing and maintaining a cultural commitment to resolving the environmental problems that confront the weapons complex.

The remainder of my testimony will address these four overall points in more detail.

DOE'S ENVIRONMENTAL PROBLEMS

In making nuclear weapons, enormous amounts of hazardous and radioactive wastes are generated. Historically, these wastes were either disposed of by methods that allowed the wastes to enter the environment, or stored until more permanent disposal alternatives were developed. As a result, DOE now faces formidable environmental problems. In this regard, our work over the past several years has described a variety of serious unresolved problems such as:

-- 3,500 inactive waste sites throughout the weapons complex that need to be cleaned up.

-- Groundwater at DOE sites contaminated with hazardous and/or radioactive material, some at levels hundreds to thousands of times above the drinking water standards.

-- DOE difficulties in maintaining compliance with various environmental laws.

-- Delays in DOE's multi-billion dollar effort to put transuranic waste[1] in the Waste Isolation Pilot Plant in New Mexico.

-- Shallow burial of transuranic waste at DOE sites that will not go to the Waste Isolation Pilot Plant.

-- Difficulties in finding a geological repository site for the disposal of high-level waste.

-- Single-shell tanks at Hanford, Washington, which have leaked or are suspected of leaking high-level radioactive waste into the environment.

Our analysis of DOE data shows that it may cost over $100 billion[2] to address environmental problems of the weapons complex. This includes $35 billion to $65 billion to restore the environment at inactive sites, $30 billion to dispose of radioactive wastes, $15 billion to decontaminate and decommission unused facilities, and $3 billion to $9 billion to bring facilities into compliance with environmental laws. Furthermore, costs are likely to increase because the full scope and magnitude of environmental problems are

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[1]Transuranic waste is material contaminated with man-made elements heavier than uranium. This material is generally long-lived and toxic.

[2]These estimates are not of budget quality and should be used only to illustrate the magnitude of the problem.

not known at many DOE sites. In this regard, DOE is in the early phases of characterizing these problems. Our experience in evaluating the Superfund Program administered by the Environmental Protection Agency (EPA) indicates that the less that is known about the extent of contamination, the more likely it is that the cost estimates will increase.

ORGANIZATIONAL CHANGES TO ADDRESS ENVIRONMENTAL PROBLEMS

As we have pointed out in several of our reports and testimonies, the seriousness of DOE's environmental problems was compounded by a management attitude in DOE that emphasized the production of nuclear materials over environmental, safety, and health concerns. During the past year, DOE has acted to change its management focus toward environmental problems. These changes include programmatic restructuring within DOE, the issuance of a 5-year plan for the environmental restoration and waste management, and efforts to make contractors more accountable.

To focus its management on environmental problems, DOE has established an Office of Environmental Restoration and Waste Management to consolidate environmental cleanup, compliance, and waste management activities. It has also restructured its budgeting system to reflect the creation of this office by establishing separate budget accounts for these activities. This

reorganization, in our view, provides a framework for establishing the clear line of responsibility needed to carry out the cleanup effort. Its success, however, will depend on many factors, including DOE's continuing commitment to correct environmental problems, and how well the commitment is implemented.

DOE also issued an Environmental Restoration and Waste Management Five-Year Plan which outlines a multi-billion dollar effort over the next 5 years (fiscal years 1991 through 1995) to (1) begin bringing its facilities into compliance with environmental laws, (2) begin cleaning up environmental contamination, and (3) effectively manage the wide variety of radioactive and hazardous wastes which DOE generates. We believe the plan is an important first step in beginning to outline an approach for cleaning up DOE facilities and bringing DOE operations into compliance with environmental laws.

DOE has also undertaken efforts to make its contractors more accountable for environmental and safety matters. In October 1989, we issued reports and testified that the DOE award fee process needs to be restructured so that it accurately reflects the contractor's performance in regards to environmental and safety matters. DOE is restructuring the process by, among other things, having headquarters review and concur in all awards; and requiring that environmental, safety, and health matters be weighed by at least 51 percent in the evaluation process. These changes, if

properly implemented, should increase the contractor's sensitivity to and performance regarding environmental compliance and safety matters.

These actions are important in creating an organization and management system with the capability to effectively plan, implement, and oversee environmental corrective actions. We believe it is wise that DOE is taking the time now to properly organize itself to manage the environmental restoration and waste management effort. This managerial restructuring will likely continue this year as DOE changes its culture and strives to acquire the necessary expertise to effectively deal with the problems.

DOE'S FISCAL YEAR 1991 BUDGET

Now, I would like to briefly discuss DOE's fiscal year 1991 budget request for addressing environmental problems of the weapons complex. DOE is requesting approximately $2.8 billion in fiscal year 1991 for environmental restoration and waste management activities, most of which is for the cleanup of weapons facilities and the disposal of wastes generated by the weapons complex.

The fiscal year 1991 request represents an increase of funding to deal with DOE's environmental problems. For environmental restoration activities, DOE is requesting approximately $849

million, nearly a 30-percent increase over the fiscal year 1990 appropriation. The requested funding will allow DOE to continue work to characterize environmental problems and to design and perform some restoration activities. DOE is also requesting $1.5 billion, a 23-percent increase, for waste management activities; and approximately $152 million, an increase of about 22-percent, to continue corrective actions at facilities that do not fully comply with environmental laws.

While DOE is requesting increased funding to address its environmental problems, it is important to note that the funding has not peaked. As we previously stated, it could cost over $100 billion to address environmental problems in the complex. DOE's 1991 budget request of $2.8 billion, however, only represents a small down payment on what will be needed to address these problems. This is particularly true in the environmental restoration area where DOE is requesting $849 million for a problem that may eventually cost from $35 billion to $65 billion to resolve. Clearly, higher funding levels will be needed in subsequent years.

Congress should also be aware that DOE's fiscal year 1991 budget request will not fully fund all activities outlined in the 5-year plan. Although DOE is requesting $2.8 billion for environmental restoration and waste management activities, its 5-year plan calls for approximately $3.3 billion to be spent during

fiscal year 1991. The reason for the difference between the budget request and the 5-year plan estimate is that (1) DOE is not funding some of the lower priority activities designated in the plan and (2) DOE anticipates some slippages in various projects attributable to delays in obtaining permits. The low-priority items not funded in the 1991 budget include over $200 million in disposal fees for high-level waste and some decontamination projects.

CONCERNS ABOUT DOE EFFORTS TO ADDRESS ENVIRONMENTAL PROBLEMS

While recognizing the changes DOE has recently made to improve its management, I would like to discuss some overall concerns that we have about DOE's future management of its environmental restoration and waste management effort. Specifically, as DOE begins to implement an enormously costly program, we believe that it needs to be especially attentive to ensuring that, over the long-term,

-- the most serious environmental problems are identified and receive sufficient funding,

-- funds allocated to addressing the problems are effectively managed and spent, and

-- continued emphasis is placed on developing and maintaining a cultural commitment to resolve the environmental problems that confront the complex.

Today, DOE does not have a formal method for setting funding priorities that is generally accepted by those affected by this cleanup. We believe that such a system is needed if there is to be the national consensus, particularly among affected states, to resolve the environmental problems of the weapons complex. I would like to point out that the development of such a system is extremely difficult, in part, because of the contentious nature of the environmental problems that DOE faces. For example, there is a great deal of uncertainty about (1) the levels of risk to health and the environment posed by conditions at the weapons complex and (2) future standards for cleaning up DOE sites and facilities.

DOE also recognizes the importance of a system to set priorities for its environmental problems that includes the views of affected parties. In its 5-year plan, DOE states its intention to develop a priority system that incorporates the views of state and Tribal groups, EPA, and the public, with independent technical review by the National Academy of Sciences. According to DOE officials, DOE's objective is to have a new priority system operational, at least on a trial basis, in time to update the 5-year plan and for the fiscal year 1992 budget.

We also believe that in order to develop and maintain a national consensus and commitment, DOE must effectively manage and spend funds allocated to correcting environmental problems. In this regard, the level of environmental funding must be tied closely to DOE's ability to oversee expenditures to ensure that funds are used for their intended purposes and that costs are reasonable. Adequate DOE oversight is especially important, given the fact that DOE relies heavily on contractors to carry out a large part of its activities.

Recent DOE announcements about its internal control systems and staffing levels raise concerns about DOE's ability to oversee its environmental program. For example, on December 28, 1989, the Secretary of Energy reported to the President and the Congress that DOE has several material internal control weaknesses that could affect DOE's environmental efforts. These weaknesses include contract management where improvements are needed in the oversight of contracts to ensure that the work performed is acceptable and in compliance with laws and regulations. The Secretary also reported to the President that DOE's programs are being severely affected by staffing inadequacies in critical areas such as environmental programs and contract management.

Finally, we believe DOE needs to continue to develop and, once established, maintain a culture committed to resolving the environmental problems that confront the weapons complex. For

decades, DOE and its predecessor agencies worked under a culture that stressed production. The Secretary of Energy, as part of his new management focus, is attempting to change this culture and increase DOE's sensitivity to environmental matters. However, such changes must filter down through all levels of DOE including its contractors. High level DOE management oversight is needed to ensure that DOE develops and maintains a cultural commitment to environmental matters throughout the three decades that the current Secretary has set as a goal for cleaning up the complex.

As DOE implements its environmental and waste management programs, we plan to continue our oversight evaluations of its efforts. However, in carrying out these efforts, we will be paying particular attention to DOE's ability to effectively manage these large programs. For example, we have recently started a focused effort to review DOE's oversight of its contractors and contracting procedures. In carrying out this work, we plan to examine the adequacy and technical capability of DOE's staff, the effectiveness of DOE's management structure, and DOE's budgeting process.

SUMMARY

In summary, the environmental problems facing DOE's nuclear weapons complex are enormous and will take decades to resolve. Widespread environmental contamination exists at many DOE sites, and the full extent of the environmental problems is not known.

During the past year, DOE has taken a number of steps to better deal with these problems. It has made organizational improvements and has requested additional funds for environmental restoration and waste management activities. Such actions are important as DOE develops an organization and management system capable of effectively planning, implementing, and overseeing corrective actions. We believe it is wise that DOE takes the time now to properly organize itself to manage the long-term program needed to address the many environmental problems it faces.

Although DOE is making progress in better organizing itself, further improvements are needed to ensure that the most serious environmental problems are identified and funded and that DOE effectively manages and spends funds allocated to correcting environmental problems. Furthermore, the seriousness and long-term nature of the task ahead necessitates continued oversight to ensure that DOE maintains a commitment to acceptable environmental practices. We will continue our oversight of DOE activities and plan to focus our attention during the coming year on evaluating DOE management systems, including its oversight of contractor operations.

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Thank you, Mr. Chairman and Members of the Panel. That concludes my testimony. We would be happy to respond to any questions.