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Key Elements of Effective Independent Oversight
of DOE's Nuclear Facilities

Statement of
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Before the
Subcommittee on Strategic Forces and Nuclear
Deterrence
Committee on Armed Services
United States Senate



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Mr. Chairman and members of the Subcommittee:

We are pleased to be here today to provide our comments on the proposed Nuclear Protections and Safety Act of 1987 (S. 1085). Our testimony today will focus on Title I which establishes a Nuclear Safety Board to oversee DOE's nuclear facilities. These facilities play a vital role in the nation's security by developing, producing, and testing nuclear weapons material. When considered together, these facilities make up DOE's nuclear defense complex, probably one of the more potentially dangerous industrial operations in the world. Therefore, special care and attention must be taken to ensure that the complex operates in a safe and environmentally sound manner.

GAO has a long history of supporting the need for independent oversight of various aspects of DOE's nuclear facilities. Many of these facilities are old, some are already operating beyond their expected life, and DOE must decide whether to refurbish them or build new facilities. Moreover, there are significant unresolved safety and environmental problems at many of these facilities. Billions of dollars will be needed to address these problems. The scope and importance of these concerns caused us not only to reiterate our positions on the need for independent oversight, but also to recommend that DOE develop a strategy for its defense complex. This strategy would define the universe of problems DOE faces and present an action plan with timeframes and cost estimates for upgrading or building new facilities. Development of this

strategy combined with effective oversight should help to assure the Congress and the public that these facilities, whether refurbished or new, will continue to meet defense needs while operating in a safe and environmentally sound manner.

We believe that for any oversight approach to be effective in ensuring safety, it should have five key elements:

- independence
- technical expertise
- ability to perform reviews of DOE facilities as needed
- clear authority to require DOE to address the organization's findings and recommendations
- a system to provide public access to the organization's findings and recommendations

Mr. Chairman, the proposed legislation creating a Nuclear Safety Board addresses each of these elements and therefore has the potential to be an effective mechanism for oversight of DOE's nuclear facilities. We also believe that these elements would serve as useful criteria in assessing any proposal that the Congress may consider.

Let me briefly describe our past positions on independent oversight, the types of problems we have identified in the safety area, and then describe the five key elements and how the Board meets those elements. In addition, we have some observations which

we believe should be considered as the bill moves through the legislative process.

GAO'S PAST WORK

We have a long history of recommending oversight of DOE operations. In a 1981 report, we pointed out that one of the basic, underlying causes of shortcomings in DOE's safety process was its structure within DOE.¹ In that report, we argued for a separate office within DOE specifically set up to oversee safety matters within the department, and we stated that the office should report to the Under Secretary of Energy. Although DOE originally disagreed with our recommendation, in September 1985, it established the Office of the Assistant Secretary for Environment, Safety, and Health, that reports to the Under Secretary. We believe that DOE's action, in effect, adopted our 1981 recommendation.

Also in the 1981 report and again in a 1986 report, we highlighted the need for outside, independent reviews of safety analysis reports--important documents which are designed to show that DOE facilities are safely designed, constructed, and operated. In response to our 1986 report, DOE believed that its own Office of Assistant Secretary for Environment, Safety, and Health provides sufficient independent review.² At that time DOE stated that

¹Better Oversight Needed for Safety and Health Activities at DOE's Nuclear Facilities (EMD-81-108, Aug. 4, 1981).

²Safety Analysis Reviews for DOE's Defense Facilities Can Be Improved (GAO/RCED-86-175, June 16, 1986).

". . .an additional level of oversight, over and above that already existing under the guidance of the Assistant Secretary for Environment, Safety, and Health, would not provide any additional assurances of the safe operations of DOE facilities. . ."

Our work on safety matters at DOE facilities over the years has strengthened our position on the need for this oversight by raising serious questions about both the safety of individual facilities and DOE operations as a whole. For example, during the Senate Committee on Governmental Affairs hearings in March of this year, we disclosed that DOE's Savannah River Plant reactors were potentially unable to cool the core in the event of a serious accident. Because of this safety concern, DOE's contractor at Savannah River reduced the operating power of the reactors in the fall of 1986. After the hearings, DOE further reduced the operating power because the National Academy of Sciences, which at DOE's request reviewed its reactors, felt the initial reduction was not sufficient to assure safety.

At that same hearing, we again highlighted the need for independent oversight as well as for DOE to develop a strategy for its defense complex. We recommended to the Secretary of Energy that DOE develop an overall strategic plan that sets forth the projected facility requirements for continued nuclear weapons production; a comprehensive picture of the environmental, safety, and health issues facing DOE; and solutions to resolve them.

In addition, during hearings of the Senate Committee on Governmental Affairs on S. 1085 in June 1987, DOE endorsed the concept of outside independent oversight and provided the department's views on various issues the Congress should consider in structuring that oversight.

KEY ELEMENTS OF EFFECTIVE

INDEPENDENT OVERSIGHT

As I indicated at the outset of my statement, there are five elements that should be incorporated into any approach for independent oversight. Let me briefly discuss each of these elements and why they are important.

Independence means the organization must be structurally distinct and separate from DOE. This is important so that the organization is visibly removed from DOE's influence in funding, staffing, and setting of safety agendas. Only in this way can conflicts between DOE's programmatic and safety goals be prevented. In the past, we have pointed out that such conflicts can and do occur. For example, during the 1970s, DOE considered closing the Fernald plant in Ohio. As a result, it did not make capital improvements and equipment became obsolete. In the early 1980s, DOE's production goals increased, putting a strain on the plant's resources. According to DOE's own documents, Fernald's management emphasized production over worker safety and health concerns.

The second element is technical capability. Any oversight organization must have the technical knowledge and capability to fully understand how DOE facilities are designed and operated and

what the safety ramifications are of their operation. This is particularly important in overseeing the unique facilities and operations that DOE manages. Such expertise is necessary so that sound safety assessments are made and so that the organization is not too dependent on DOE's information for developing its own findings and recommendations. This technical expertise must exist not only at the top level where decisions are made, but at the staff level where detailed analytic work is performed. Sufficient staffing is also important so that the technical staff is not limited to cursory reviews.

The organization should have the ability to perform reviews of DOE facilities as needed. These reviews could range from an annual review to continual day-to-day oversight depending on the nature of the issues being addressed. These reviews are important to maintain a working knowledge of DOE safety issues and to assess DOE's response to their recommendations. The organization's staff will also develop a better understanding of how DOE operates on a continuing basis rather than on a one-time or sporadic basis. Therefore, the organization could immediately respond to safety concerns. An important factor in the organization's ability to perform reviews when needed is clear access to DOE facilities and records. Without this access, timely and complete assessments may not be possible.

Next, the organization should have the clear authority to require DOE to address the organization's findings and recommendations. Such accountability is important so that DOE will

seriously consider and act on these findings and recommendations. Without such influence the organization could easily become a DOE "consultant-type" organization, which could be a drawback. For example, DOE established the Roddis panel--an outside group of nuclear experts--to review the safety of its N-reactor in Washington State. This panel raised a number of fundamental issues regarding various safety aspects of the N-reactor and made recommendations to improve its operation. These recommendations were not new to DOE; their own internal studies had already identified almost all of them. DOE was not required to act on the recommendations, but several months after receiving the panel's reports, DOE temporarily shut down the reactor ahead of schedule to upgrade safety systems. While the independent review by the Roddis panel surfaced important issues, DOE was not obligated to implement the recommendations ^{nor to} ~~and if not~~ provide its rationale for not doing so to the Congress and the public. X

This Committee has taken the position that the N-reactor should be placed in standby and supports the Senate Appropriations Committee, which did not provide operating funds for the N-reactor in FY 1988. DOE has told us that since the House Appropriations Committee did provide funds for the reactor's operation, restart of the N-reactor will hinge on the conference committee providing the necessary operating funds. If the decision is made to restart the reactor, depending on the timing, all of the Roddis panel's recommendations may not be implemented prior to restart.

Finally, the findings and recommendations of the organization, if they are not classified, should be publicly available. This is important so that the Congress and the public can have a better understanding of the problems DOE faces and the risk in operating DOE nuclear facilities. Public disclosure of safety issues as they are identified will avoid piece-meal disclosures, as have happened in the past, and will also keep the Congress and the public fully informed about the condition of DOE's facilities.

In summary, we believe the five elements are important to the establishment of an independent safety oversight organization. If these elements are present, the organization becomes more credible and thus can help to ensure that DOE operations are safe.

NUCLEAR SAFETY BOARD MEETS THE KEY

ELEMENTS OF EFFECTIVE INDEPENDENT OVERSIGHT

We believe that Congressional debate concerning the proper vehicle for outside independent oversight should consider the five key elements we have just laid out. Accordingly, we have assessed the provisions of S. 1085 within the context of these elements and concluded that all five elements were clearly met. In that regard, let me briefly summarize why we believe the Safety Board meets each of these elements.

Independence

The Nuclear Safety Board is a new organization established by this legislation and is organizationally separate and distinct from DOE. In this regard, the Board will be independent of DOE in obtaining funding and resources, and deciding on its own review

agenda. Further, it will also have no operational responsibilities for DOE nuclear facilities. The Board members are appointed by the President, with the advice and consent of the Senate, and a Board member can only be removed by the President. Since there is no link or line of authority between DOE and the Board, it separates those making production decisions from those reviewing the safety aspects of the facilities. Therefore, the Board can take strong positions on the results of its reviews without considering operational needs. DOE would then be responsible for factoring in these needs in responding to any safety concerns raised by the Board.

Technical capability

The Nuclear Safety Board, as proposed in the legislation, is structured to obtain or acquire the necessary expertise to perform the functions established for the Board. For example, the proposed legislation states that the Board members must be respected experts in the field of nuclear safety. In addition, they must have "a demonstrated competence and knowledge relevant to the independent investigative and prescriptive functions of the Board." Also, the Board is authorized to hire a technical staff and to employ consultants if needed. Further, the proposed legislation would authorize the Advisory Committee on Reactor Safeguards, a technical advisory group to the Nuclear Regulatory Commission, to expand its membership by up to five members and corresponding staff to assist the proposed Nuclear Safety Board in assessing DOE activities.

Ability to Perform Reviews of

DOE Facilities as Needed

The proposed legislation requires the Board to review for each DOE nuclear facility (1) the implementation of health and safety standards and (2) the quality and implementation of all DOE orders governing these facilities. The proposed legislation also provides sufficient flexibility for the Board to review any aspects of DOE's nuclear facilities at any time during the year. The intent is for the Board to have institutional knowledge about the DOE facilities and to be available to review those facilities as often as required. In order to perform these reviews as needed, the proposed legislation states that the Secretary of Energy and all contractors operating DOE nuclear facilities should fully cooperate with the Board and provide ready access to the facilities and information necessary to complete the Board's review.

Clear Authority to Require DOE to

Address the Organization's Findings

and Recommendations

DOE must take specific action on each of the Board's recommendations--either implementing it or notifying the Board and the Congress why it is not implementing it. In addition, if DOE chooses not to implement a recommendation that the Board deems important because it will have actual or potential adverse effects on the public's health and safety, DOE must notify the Board and the Congress that the recommendation cannot be accomplished because (1) it is technically or economically infeasible, (2) appropriated

funds are not currently available, or (3) the President has exempted the facility from complying with the recommendation because it is in the "paramount national security interest of the United States to provide such an exception." The exemption is effective for up to 1 year, but is renewable upon issuance of a new presidential determination. Further, if a recommendation is not implemented because it was technically or economically infeasible, the President must either support DOE's decision and certify that to the Congress or direct DOE to implement the recommendation. In addition, if a recommendation is not implemented because funds are not available, the facility must be closed unless the President requests congressional funding. Therefore, DOE is forced to seriously consider each and every recommendation raised by the Board, and the President must make a judgment concerning the recommendations the Board believes are important and DOE does not implement.

System to Provide for Public Access to
the Organization's Findings and Recommendations

The legislation states that the Board's recommendations shall be sent to the Congress, and if not classified, made available to the public. This will allow the people most affected by the operations of the facilities to obtain information on the safety of these facilities from an independent reviewer not affiliated with DOE.

POSSIBLE CLARIFICATIONS TO THE BILL

Overall, the Safety Board, as proposed by this legislation, meets the key elements, therefore, has the potential to effectively oversee DOE's nuclear activities. We do have the following observations which we believe will assist the Congress in fine-tuning the bill.

As I pointed out earlier, the Safety Analysis Reports are intended to show that DOE facilities are safely designed, constructed, and operated. These reports are prepared by the facility contractor operator and require approval by DOE. These reports establish a basis for both the operator and DOE to determine that its facility can operate safely and to conclude that operating the facility does not pose an unacceptable risk to public health and safety. However, we have found that these reports have not always done what they set out to do--some provided little or no comparison to safety criteria, some used different approaches to analyze accidents, and some have not been approved. Given the importance of these documents, we have recommended that the reports on the facilities which involve significant nuclear hazards be reviewed by an outside group to provide independent assurance that these facilities are safely designed and operated. Therefore, while the bill is flexible in allowing for the Board to review these reports, we believe the review function should be highlighted as a specific responsibility of the Board. The Board would review the Safety Analysis Reports and make any recommendations public. DOE, in turn could accept and/or rebut the review. This function

may become particularly important as DOE rebuilds its nuclear defense complex.

Another area that needs clarity is the frequency with which the Board will evaluate the implementation of DOE health and safety standards for each DOE nuclear facility and report to the Congress. A prior version of the bill required an annual assessment of each DOE nuclear facility. We understand this requirement was modified because it would be a large undertaking and could require a very large staff. However, by removing this annual requirement, the bill is now silent on how often the Board should evaluate DOE's facilities and report to the Congress on its work. We believe the Board should submit to the Congress an unclassified annual report which describes what facilities and events had been reviewed during the prior year, recommendations made, and actions DOE has taken or has agreed to take. In addition, the report should identify the Board's future evaluations and timetables for their initiation and completion. This will help to insure that all facilities are evaluated in a timely way and maintain congressional and public awareness of the Board's evaluations and recommendations.

KEY ELEMENTS SHOULD BE APPLIED

TO ANY OPTION CONSIDERED

Other bills which address oversight of DOE nuclear facilities are currently being debated in the Congress, and other approaches to independent oversight might be surfaced. DOE told us, for example, that it will be testifying before this Subcommittee to present its views on the workability of S. 1085. We believe that

any proposal that the Congress considers--including any approaches posed by DOE--must be analyzed to determine if it meets the five key elements. It is possible that some other proposals may satisfy all of these elements. If that is the case, then other considerations such as cost and the intensity of oversight that Congress believes is needed would enter the debate.

In closing, Mr. Chairman, we believe that S. 1985 clearly includes all five elements we believe important to establish an effective approach to independent oversight of DOE's nuclear facilities. As the Congress debates this and other proposals which exist or may be introduced, we believe that each proposal should be assessed as to whether or not it meets the five elements outlined.

That concludes my testimony. We would be pleased to respond to any questions you or members of the Subcommittee may have.