The Defense Nuclear Facilities Safety Board

and

12 Years of Work

Presented

at the

CNTA "Up and Atom" Breakfast

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by

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In 1988, Congress and the President enacted legislation that created the Defense Nuclear Facilities Safety Board (Board), "an independent establishment in the Executive Branch" to recommend to the Secretary of Energy, actions "the Board determines are necessary to ensure adequate protection of public health and safety."

Notwithstanding a safety record equivalent to or in most cases superior to private commercial companies, the Department of Energy (DOE) had been, for many years, subject to criticism from public interest groups for its safety program. Likewise, it had been criticized for what was alleged to be poor management and a tendency to use secrecy to protect its bad practices from public scrutiny. Efforts had been made throughout the years to subject DOE defense activities to more independent oversight, including regulatory review in order to correct these alleged failings. Efforts were even undertaken to have DOE placed under Nuclear Regulatory Commission regulation.

Despite strong initial opposition from DOE and the Administration, the Congress had concluded that safety oversight by an independent agency was essential. At the same time, the Congress strongly resisted efforts by some that would have made the Board a regulatory agency. Defense nuclear facilities operated by the Department of Energy were not to be subjected to a shutdown or mandated restrictions by an independent regulatory authority.

The Board is composed of five members appointed from civilian life by the President, by and with the advice and consent of the Senate, from among United States citizens who are respected experts in the field of nuclear safety. Not more than three members of the Board shall be of the same political party. Any vacancy in the membership of the Board shall be filled in the same manner in which the original appointment was made and no member of the Board may be an employee of, or have any significant financial relationship with, the Department of Energy or any contractor of the Department of Energy. Although legislation establishing the Board was enacted in 1988, it was not until October 1989 that the original five members were appointed.

By law, the Board is required to review and evaluate the content and implementation of health and safety standards, including DOE's Orders, rules, and other safety requirements, practices, and events relating to system design, construction, operation, and decommissioning of DOE's defense nuclear facilities. The Board makes recommendations to the Secretary of Energy that the Board believes are necessary to ensure adequate protection of public health and safety. The Board must consider the technical and economic feasibility of implementing the recommended measures.

The Secretary may accept in whole or in part or reject the recommendations. If the Secretary rejects a recommendation in whole or in part for any reason, the Board does not withdraw or modify the recommendation, and the Secretary maintains the rejection, the Secretary must publish his or her decision and reasoning in the Federal Register and must formally notify both Houses of Congress. The Secretary must report to the President and Congress if

implementation of a recommendation is impracticable because of budgetary considerations. Upon determining that an imminent or severe threat to public health or safety exists, the Board must transmit its recommendations to the President, and the Secretaries of Energy and Defense.

The Board may conduct investigations, issue subpoenas, hold public hearings, gather information, conduct studies, establish reporting requirements for DOE, and take other actions in furtherance of its review of health and safety issues at defense nuclear facilities.

The Board is required by law to submit an annual report to the Committees on Armed Services and Appropriations of the Senate and to the Speaker of the House of Representatives. This report is to include all recommendations made by the Board during the preceding year, and an assessment of (1) the improvements in the safety of DOE defense nuclear facilities during the period covered by the report; (2) the improvements in the safety of DOE defense nuclear facilities resulting from actions taken by the Board or taken on the basis of the activities of the Board; and (3) the outstanding safety problems, if any, of DOE defense nuclear facilities.

The Board has assembled a permanent staff with broad nuclear industry experience and competence in all major aspects of nuclear safety: nuclear, mechanical, electrical, chemical, and structural engineering, as well as physics and metallurgy. Currently, 92 percent of the Board's technical staff hold advanced degrees, of which 30 percent are at the Ph.D. level.

The Board has established site offices at six high-priority defense nuclear sites: the Pantex Plant in Texas, the Los Alamos site in New Mexico (added in 2001), the Y-12 National

Security Complex in Tennessee, the Savannah River Site in South Carolina, the Hanford Site in Washington State, and the Rocky Flats Environmental Technology Site in Colorado. These site offices are staffed with ten of the Board's technical staff and provide the Board with continuous on-site oversight capability.

At the Savannah River Site we have two site representatives, R. Todd Davis who has a Master of Electrical Engineering Degree from Stanford University and Thomas D. Burns Jr. who has a Ph.D. Degree in Nuclear Engineering and Applied Mathematics from the University of Virginia.

With me today is J. Kenton Fortenberry, the Board's Technical Director, who in addition to having a Masters Degree in Nuclear Engineering from the University of Virginia has held a U. S. Nuclear Regulatory Commission Senior Reactor Operator's license. Prior to assuming his present position, he served as the Board's site representative at the Savannah River Site from June 1996 to January 1999.

Shortly after the Board was formed in 1989, the then Secretary of Energy, Admiral Watkins closed down the defense nuclear facilities production activities for what at the time was considered to be a temporary situation. Nuclear materials in the pipe line were left in place or put into temporary storage. When it became obvious that production of new weapons was not to be restarted, the Board recognized that for safety reasons nuclear material had to be put into a more stable and long term storage form.

Accordingly from its earliest days and continuing to date, the Board has advocated that while safe management of hazards associated with nuclear defense activities is necessary, the prime objective should be to eliminate the hazards wherever possible by stabilizing the material prior to permanent storage. Many of the Board's recommendations pertain to this concept. The safe disposition of the hazardous remnants of nuclear weapons production is one of the three strategic areas of the Board's concentration. The two other strategic areas are: Safe management and stewardship of the Nation's nuclear stockpile and nuclear weapons components, and Complex-wide health and safety issues.

To date, the Board has submitted 42 formal sets of Recommendations to the Secretary of the Department of Energy containing a total of 198 specific recommendations. All 42 sets have been accepted. With a few exceptions most of the 198 specific recommendations have been agreed to.

The Board's most recent Recommendation 2001-1 has to do with the management of the Savannah River Site Tank Farms and set forth four specific recommendations. They are:

1. Initiate actions to remove transferable High Level Waste (HLW) liquid from Tank 6 to a level below all known leak sites.
2. Reassess the schedule and priority for selecting a technology for a salt processing capability, and vigorously accelerate the schedule leading to operation of a salt processing facility.

3. Develop and implement an integrated plan for HLW tank space management that emphasizes continued safe operation of the Tank Farms throughout its life cycle. This plan should include enough margin to accommodate contingencies and reduce overall programmatic risk. The plan should also restore an operating margin to the Tank Farms.

4. Reassess contractor incentives to ensure that near-term production at DWPF is not overemphasized at the expense of a safety margin in the Tank Farms.

When the Congress established the Defense Nuclear Facilities Safety Board, the Senate Armed Services Committee Report that accompanied the Bill stated that "the Board is expected to raise the technical expertise of the Department [of Energy]". . . and "above all, the Board should be instrumental in restoring public confidence in DOE's management capabilities. . . ."

The Board has encouraged DOE to develop and maintain a corporate program to recruit, develop, deploy, and retain technically capable personnel at defense nuclear facilities. DOE has made some improvements through its implementation of Recommendation 93-3, *Improving DOE Technical Capability in Defense Nuclear Facilities Programs*. DOE has improved the quality of the Facility Representative program. Outside of this accomplishment, progress has been minimal at best.

DOE's management is failing to take steps necessary to acquire and train young talent. A recent study submitted by DOE to the Office of Management and Budget indicated that the

average age of DOE employees is 48; only 9 percent are under the age of 35, and only 6 percent of technical employees are under the age of 35. DOE has not adequately used the excepted service hiring authority it has been granted by Congress to attract bright young engineers and scientists to the federal workforce. Even its Five Year Work Force Restructuring Plan which recognized and seeks to correct these problems is woefully inadequate. It states, "Thirty-two percent of the DOE Federal workforce requires scientific and/or technical skills." In view of the technical nature of its missions, 32 percent is far too low to meet the recognized increased needs of DOE. In comparison, other technical agencies such as the Nuclear Regulatory Commission and National Aeronautics and Space Administration have a federal workforce with a technical mix of 74.5 percent and 68.7 percent respectively.

Board Members have held 81 public meetings, 46 in Washington, DC and 35 at locations in proximity to DOE defense sites at which DOE and others openly review DOE defense activities. Board Members on visits to DOE sites seek out contacts with union representatives, local interested parties, and local elected officials. Board site representatives are encouraged to be responsive to Advisory Boards and other public interest group inquiries.

As many of you know, it has been a practice of the Board to put on its WEB site (www.dnfsb.gov) copies of its recommendations, correspondence with DOE, technical reports and weekly reports from its Site Representatives except for classified material. The Board has no authority to classify or declassify information and must rely on DOE to make that determination. Under the Atomic Energy Act, the Secretary of Energy may deny access to information provided

to the Board to any person who does not need such access in connection with the duties of such person. The Board is cooperating with DOE in its efforts to protect classified and other sensitive information.

However, the Department of Energy's reactions to the events of September 11th are having an adverse effect on DOE's past efforts to gain public support. Many documents that were declassified—some of us with National Defense Security background would say should not have been declassified—have been available to the public and potential terrorists for years. Attempts to withdraw them from the public web sites and public document rooms are resulting in not unexpected criticism.

While most Americans support the DOE security objectives, the news media and public interest groups, I believe, will subject DOE to increasing criticism, that will tend to erode public confidence in its management capabilities. How DOE can successfully respond to such criticism and maintain public confidence is yet to be seen. The extent to which the Defense Nuclear Facilities Safety Board will be able to continue to play a role or, as the Congress stated, be instrumental in restoring public confidence in DOE "management capabilities" will be made more difficult.