DEFENSE NUCLEAR FACILITIES SAFETY BOARD

625 Indiana Avenue, NW, Suite 700, Washington, D.C. 20004-2901
(202) 694-7000

October 3, 2002

The Honorable Spencer Abraham
Secretary of Energy
1000 Independence Avenue, SW
Washington, DC 20585-1000

Dear Secretary Abraham:

The Defense Nuclear Facilities Safety Board (Board) has been following the Department of Energy's (DOE) efforts to provide appropriate technical support to its defense nuclear facilities, particularly the Pantex Plant. The complexity and uniqueness of the technical safety issues that arise in the nuclear weapons complex require the concerted effort of a cadre of highly competent individuals with expertise not generally available in industry or academia. Most of the personnel with this training and experience are employed at Los Alamos National Laboratory, Lawrence Livermore National Laboratory, and Sandia National Laboratories.

The Board is concerned that the number of nuclear weapons experts is declining and the focus of remaining experts is being diverted to other areas. Action is required to change this trend and to re-emphasize the primary role and obligation of the weapons laboratories to support DOE's nuclear weapon-related activities, including the formal training and development of new experts.

As a result, the Board on October 3, 2002, unanimously approved Recommendation 2002-2, *Weapons Laboratory Support of the Defense Nuclear Complex*, which is enclosed for your consideration. After your receipt of this recommendation and as required by 42 U.S.C. § 2286d(a), the Board will promptly make it available to the public. The Board believes that the recommendation contains no information that is classified or otherwise restricted. To the extent this recommendation does not include information restricted by DOE under the Atomic Energy Act of 1954, 42 U.S.C. §§ 2161-68, as amended, please see that it is promptly placed on file in your regional public reading rooms. The Board will also publish this recommendation in the *Federal Register*.

Sincerely,

John T. Conway
Chairman

c: The Honorable Linton Brooks
Mr. Mark B. Whitaker, Jr.

Enclosure

DEFENSE NUCLEAR FACILITIES SAFETY BOARD
RECOMMENDATION 2002-2 TO THE SECRETARY OF ENERGY
Pursuant to 42 U.S.C. § 2286a(a)(5)
Atomic Energy Act of 1954, as Amended

Dated: October 3, 2002

Background

In the past, the Defense Nuclear Facilities Safety Board (Board) has issued recommendations addressing the need for weapons laboratories to support the safety of nuclear explosive operations at the Pantex Plant. Specifically, Recommendation 93-6, *Maintaining Access to Nuclear Weapons Expertise in the Defense Nuclear Facilities Complex*, addressed preserving expertise in the defense nuclear facilities complex. Both the Board and the Department of Energy (DOE) have devoted significant resources to implementing this recommendation and to maintaining access to the unique knowledge of individuals who were engaged for many years in critical defense nuclear activities, such as weapons design and testing. The continued support by such individuals is necessary to avoid future safety problems in these and related activities, and to maintain the safety of activities with existing weapons.

The Board is encouraged by the initiatives undertaken thus far to ensure access to the capabilities and experience of such individuals while they are still available. Activities such as those at the Theoretical Institute for Thermonuclear and Nuclear Studies at Los Alamos National Laboratory and the Intern Program at Sandia National Laboratories provide excellent opportunities to introduce new personnel to the weapons programs.

However, after visiting each of the weapons laboratories (Los Alamos National Laboratory, Lawrence Livermore National Laboratory, and Sandia National Laboratories) to discuss laboratory support for the safety of nuclear explosive operations at the Pantex Plant, the Board has become increasingly concerned that an additional problem regarding technical expertise must be addressed. The weapons laboratories have not taken adequate steps to ensure that experienced staff members who can employ their specialized knowledge are readily available to the defense nuclear complex, especially to operations at the Pantex Plant. While some new talent is being developed, it will be years before these new individuals can be shepherded adequately through the nuclear weapons complex, inculcated with the unique knowledge gained through years of dedicated weapons laboratory work, and mentored in those skills required to maintain the stockpile safely. In the meantime, highly experienced specialists responsible for individual weapon programs are leaving the complex and delays in addressing safety issues continue to occur.

Some of these delays were highlighted in a letter dated August 1, 2002, from the Board to the Acting Director of the National Nuclear Security Administration, which addressed a specific safety improvement at the Pantex Plant. In that letter, the Board emphasized the need to designate a single person who would serve as the point of contact for each weapon system at each

appropriate weapons laboratory. That individual should be empowered to integrate and coordinate for his or her laboratory all information needed to respond to questions concerning the system under his or her purview and to provide the technical support required by the defense nuclear complex with regard to that system. The significant responsibilities assigned to these individuals will require care in their selection. There should be an internal process in place that provides for training and mentoring to ensure that they fully understand their weapon system and can competently judge how and when to draw on appropriate laboratory resources for the support needed by the complex to ensure safety. DOE is not adequately addressing this issue.

The example highlighted in the Board's August 2002 letter also indicated the need for better coordination between points of contact. In the example, both internal laboratory and inter-site communications were necessary between personnel who had been developing a technical application for several weapon programs and those responsible for one of the weapon programs. Both lines of communication broke down. As part of its actions to establish adequate points of contact, DOE will need to address proper communications amongst groups working on cross-platform projects, and to ensure that the appropriate resources are prioritized to provide critical stockpile support.

In formulating its Recommendation 93-6, the Board recognized some of the difficulties DOE would face in its stockpile stewardship program. That recognition was implicit in the statement: "Although it may be relatively straightforward to maintain these capabilities in the near term, ensuring their availability 5 to 20 years in the future may be very difficult." The Board is concerned that, without attention to the near-term problems associated with supporting the stockpile, the gains achieved in addressing Recommendation 93-6 are in danger of being lost.

Further, since the size and scope of the nuclear weapons stockpile have been reduced, and research and development leading to new weapons has been restricted, it appears that there has been an increase in "work-for-others" programs. The focus of the nuclear weapons laboratories on the nuclear weapons complex as their number one priority has waned. The Board was encouraged by the Secretary's statement at DOE's October 2001 Quarterly Leadership Meeting that DOE's "overarching mission is national security." However, it appears that this message is still not being effectively implemented within DOE and its weapons laboratories.

Recommendation

To address the above issues, the Board makes the following recommendations to ensure safety in weapons programs:

1. That the Secretary of Energy update and reemphasize DOE policies and Orders (e.g., DOE Order 5600.1, *Management of the DOE Weapon Program and Weapon Complex*) as needed to ensure that the nuclear weapons program is assigned the top priority among all activities at the weapons laboratories.

2. That a process be developed to ensure the assignment of a senior individual, as the point of contact for each weapon system under the purview of each weapons laboratory. This process should include:

   (a) Adequate selection criteria;

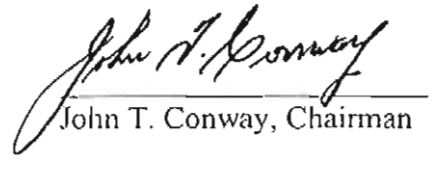
   (b) Appropriate training and mentoring programs (as necessary) to ensure that each individual selected is fully knowledgeable about the weapon system assigned to him or her, as well as internal weapons laboratory programs and procedures;

   (c) Formal planning for succession of individuals when they retire or are replaced; and

   (d) Periodic dissemination of updated listings of points of contact to the defense nuclear complex.

3. That the internal organizational structure, programs, and procedures of the weapons laboratories be aligned to ensure that these senior, technically competent individuals are empowered (i.e., given the authority and the funding) to direct appropriate resources of their laboratories to provide the support needed to ensure the safety of operations in the nuclear complex related to the weapons under their purview.

4. That DOE establish a position at each DOE site office with responsibility for a nuclear weapons laboratory to ensure that requirements of the defense nuclear complex for support by that laboratory are tracked and met. These positions should be filled by personnel with the appropriate competence and experience who have the authority to resolve competing requirements for resources.



John T. Conway, Chairman

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

[Recommendation 2002–2]

Weapons Laboratory Support of the Defense Nuclear Complex

AGENCY: Defense Nuclear Facilities Safety Board.

ACTION: Notice, recommendation.

SUMMARY: The Defense Nuclear Facilities Safety Board has made a recommendation to the Secretary of Energy pursuant to 42 U.S.C. 2286a(a)(5) concerning weapons laboratory support of the defense nuclear complex.

DATES: Comments, data, views, or arguments concerning the recommendation are due on or before November 12, 2002.

ADDRESSES: Send comments, data, views, or arguments concerning this recommendation to: Defense Nuclear Facilities Safety Board, 625 Indiana Avenue, NW., Suite 700, Washington, DC 20004–2901.

FOR FURTHER INFORMATION CONTACT: Kenneth M. Pusateri or Andrew L. Thibadeau at the address above or telephone (202) 694–7000.

Dated: October 7, 2002.

John T. Conway,

Chairman.

Background

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John T. Conway,

Chairman.

Appendix—Transmittal Letter to the Secretary of Energy

Defense Nuclear Facilities Safety Board

October 3, 2002.

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Secretary of Energy, 1000 Independence Avenue, SW., Washington, DC 20585–1000.

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Sincerely,

John T. Conway,

Chairman.

[FR Doc. 02–25846 Filed 10–9–02; 8:45 am]

BILLING CODE 3670–01–P