

John T. Conway, Chairman
A.J. Eggenberger, Vice Chairman
John W. Crawford, Jr.
Joseph J. DiNunno
Herbert John Cecil Kouts

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

625 Indiana Avenue, NW, Suite 700, Washington, D.C. 20004
(202) 208-6400



September 14, 1994

The Honorable Victor H. Reis
Assistant Secretary for
Defense Programs
Department of Energy
Washington, D.C. 20585

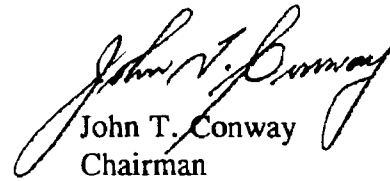
Dear Dr. Reis:

The Defense Nuclear Facilities Safety Board (Board) has received the five deliverables that reflect the July and August commitments made by the Department of Energy (DOE) as part of their implementation of the Board's Recommendation 93-6, *"Maintaining Access to Nuclear Weapons Expertise in the Defense Nuclear Facilities Complex."* The Board's review of these deliverables has identified technical and/or procedural deficiencies in all but the first deliverable, Commitment 5.1. Therefore, the Board requests that the deliverables provided under Commitments 1.1, 2.1.1, 3.1, and 7.1.1 be revised, for the reasons outlined in the enclosure.

In general, the deliverables do not meet the commitments in the Implementation Plan or the intent of Recommendation 93-6. For example, the identification of critical functional areas that support safe dismantlement and modification procedures, including the performance of relevant safety analyses, at Pantex, does not address either training and qualification of personnel or conduct of operations. In addition, deliverable 2.1.1 (which identifies key positions associated with underground nuclear testing) does not include the ability to conduct relevant safety analyses, as specified in the Board's recommendation. Deliverable 3.1 is an outside contractor's summary and conclusions based on interviews with a small group of Defense Programs (DP) personnel. The deliverable does not address either of the explicit requirements of the commitment (i.e., the status of current staffing and recommendations for additional staff). The Board notes with considerable dismay that the task of assessing both current and future DP staffing needs was assigned to an outside contractor.

In summary, the necessary level of management attention is not evident in the quality of the deliverables provided to date as part of the implementation of Recommendation 93-6. The Board expects acceptable revisions of all the rejected deliverables to be provided by the date of the first quarterly report. If you require any clarification or assistance, please contact me or Mr. Steven Krahn at (202) 208-6580.

Sincerely,



John T. Conway
Chairman

c: Mark Whitaker, Acting EH-6

Enclosure

COMMENTS ON RECOMMENDATION 93-6 DELIVERABLES

1. **Commitment 1.1** - Identify critical functional areas that support safe dismantlement and modification procedures, including the performance of relevant safety analysis at Pantex. Currently defined functional areas for assembly, disassembly, modification, retrofit, and stockpile evaluation programs will be reviewed and selected based on their applicability to development of safe dismantlement and modification procedures.
 - a. The list of Critical Functional Areas delivered includes nine topics ranging from nuclear explosives safety to industrial hygiene to environmental protection.
 - b. The "currently defined functional areas" could be assumed to include the Critical Safety Elements (CSEs) developed during DOE's implementation of Recommendation 93-1. The CSEs were defined as, "topics involving nuclear explosives considered to be truly critical to safe nuclear explosive operations." The following list is some of the apparently applicable CSEs that are not identified or addressed in the 93-6 Commitment 1.1 deliverable:
 - 1) Configuration Management
 - 2) Maintenance
 - 3) Tooling and Equipment
 - 4) Work Control
 - 5) Training and Qualification
 - 6) Human Factors
 - 7) Human Reliability
 - 8) Conduct of Operations
 - 9) Quality Assurance
 - 10) Fire Protection
2. **Commitment 2.1.1** - Identify key positions associated with critical safety activities, functions, and operations, with emphasis on the skills and knowledge to conduct operations safely such as assembly, onsite transportation, insertion/emplacement, arming and firing, timing and control, and postshot operations for preparation of an underground nuclear test.
 - a. The deliverable is a copy of view-graphs listing the Key Positions for the Safe Execution of Nuclear Test Activities, divided into seven functional areas with 39 positions.
 - b. The deliverable does not appear to identify all key positions. In addition, unlike the deliverable for commitment 1.1, there is no discussion of the "currently defined functional areas that would permit a comparison to work performed under Recommendation 93-1. Also, the Board recommendation stated DOE should include "the ability to conduct relevant safety analyses." Key personnel who perform these functions, including personnel involved in developing safety analysis reports and risk assessments, are not included in the list.

- c. In addition, the deliverable does not provide a description of the function and responsibilities of the key positions, making it impossible for the Board to independently verify the adequacy of the list to envelope key positions required to safely conduct test operations.
3. **Commitment 3.1** - To address the Defense Nuclear Facilities Safety Board (DNFSB) letter of May 27, 1994, Defense Programs (DP) will conduct an immediate review to determine the effect of the recent loss of Headquarters personnel. This review will be a qualitative assessment to determine the current status of Defense Programs staffing and the need for additional, technically competent personnel within Defense Programs. The actual deliverable required was a letter to the DNFSB stating current status of Defense Programs staffing and recommendations for additional staff.
- a. The deliverable provided is part of a report prepared for DOE by Pacific Northwest Laboratory (PNL), and not a letter from DOE (i.e., it is part of DOE's data gathering rather than DOE's results and conclusions). It summarized the opinions of the seven Defense Programs personnel interviewed as part of the study and provided recommendations to modify DP programs for training personnel and for providing HQ personnel with field experience. It is not apparent, from the document provided, how the assessment objectively determined the technical requirements of headquarters positions based on established safety responsibilities such as those outlined in the *Manual of Functions, Assignments, and Responsibilities for Nuclear Safety*, Revision 1 dated May 25, 1994.
 - b. Although the report states that PNL reviewed a list of DP personnel who had applied for or were pending early retirement, no conclusions from that assessment (i.e., effects of recent losses of headquarters personnel) are included. Although the deliverable includes a recommendation to revitalize the DP intern program, there are no recommendations regarding additional staff (e.g., how many, when, what skills, what organizations).
 - c. The deliverable states that a "Formal letter to the DNFSB stating current status of Defense Programs staffing and recommendations for additional staff" will be provided in January 1995. This appears to be the letter required to satisfy the original August 1994 commitment. Given the urgency of this analysis expressed in the Board's May 27, 1994 letter, this unexplained five-month slip is not acceptable.
4. **Commitment 7.1.1** - Readiness Exercise/Activity Schedule that describes the exercise/activity location, purpose, description, and date of every exercise and activity related to the safe conduct of nuclear testing operations.
- a. The deliverable does not adequately address the commitment to relate the exercise/activity to the safe conduct of nuclear testing operations. For example, the "Purpose/ Description" section of the schedule does not describe those safety critical skills that will be exercised during the activity. Without this information, it is difficult to determine how the exercise will support the maintenance of expertise in operations key to the safety of nuclear testing.