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DEFENSE NUCLEAR FACILITIES SAFETY BOARD

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June 1, 1998

The Honorable Victor H. Reis
Assistant Secretary for Defense Programs
Department of Energy
1000 Independence Avenue, SW
Washington, D.C. 20585-0104

Dear Dr. Reis:

The Defense Nuclear Facilities Safety Board (Board) requests additional information on the process by which the Department of Energy (DOE) performs change control for its nuclear explosive operations at the Pantex Plant.

In a memorandum dated October 27, 1997, the Manager of DOE's Albuquerque Operations Office (DOE-AL) authorized the use of a Nuclear Explosive Safety Evaluation (NESE) rather than the more complete Nuclear Explosive Safety Study to determine the appropriate level of analysis for a proposed change to ensure that an adequate safety margin will be preserved. Since this authorization was issued, DOE-AL has conducted two NESEs.

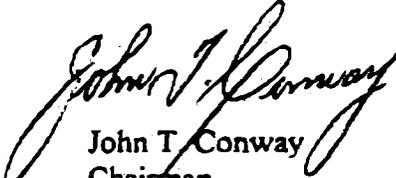
The DOE-AL memorandum authorizing the plan to use the NESE process states that the complexity of a proposed change is to be the criterion for determining whether an NESE is the appropriate vehicle for evaluating and recommending approval of a new process or piece of equipment for a nuclear explosive operation. However, a very simple change could have a dramatic impact on nuclear explosive safety, whereas a relatively complex change could have no effect. Therefore, complexity is questionable as the sole criterion for selecting the level of analytical rigor and approval authority against which a change will be evaluated.

On April 7, 1998, guidance was issued by the Manager of DOE-AL concerning a planned NESE for the B61-11 Disassembly and Inspection operation. This memorandum directed the Nuclear Explosive Safety Study Group to consider seven questions in making their determination as to the significance of proposed changes. These seven questions were modeled after corresponding questions that would be appropriate to the Unreviewed Safety Question (USQ) process used by DOE for nuclear facilities to determine the safety significance of a proposed authorization basis change and, as a result, the required level at which that change must

be approved. The Board believes a USQ-like process for evaluating the nuclear explosive safety implications of proposed changes to weapons activities is appropriate and necessary. A robust safety-related change control process to meet this need will still have to rely heavily on the expertise of the DOE nuclear explosive safety community (at least for the foreseeable future), but ought to be codified to the extent practicable to ensure that the process is repeatable, defensible, and auditable. The Board would like to have a better understanding of how DOE-AL selects the appropriate nuclear explosive safety approval mechanism.

The Board is available to discuss this issue with you or your representatives as the NESE process is further defined. In addition, we request that the Board be briefed prior to issuance of guidance on the NESE process in DOE-AL's Supplemental Directives. If you have any questions, please do not hesitate to call me.

Sincerely,



John T. Conway
Chairman

c: Mr. Victor Stello
Mr. Gene Ives
Mr. Mark B. Whitaker, Jr.
Mr. Bruce Twining