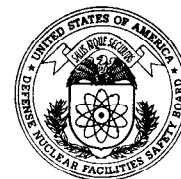


John T. Conway, Chairman  
A.J. Eggenberger, Vice Chairman  
John E. Mansfield

# DEFENSE NUCLEAR FACILITIES SAFETY BOARD

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



December 19, 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 reviewed the Department of Energy's (DOE) Implementation Plan of October 28, 2002, for the Board's Recommendation 98-2, *Safety Management at the Pantex Plant*. The Board is encouraged by DOE's renewed commitment to effective and efficient implementation of Seamless Safety for the 21<sup>st</sup> Century (SS-21) at the Pantex Plant, and therefore accepts the plan. However, execution of the plan is dependent on several key assumptions that will require DOE's explicit attention in order to achieve closure of this recommendation.

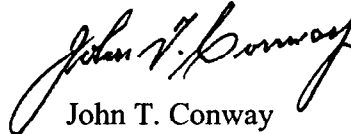
DOE is planning to treat weapons that use insensitive high explosives (IHE) under an abbreviated SS-21 program. The Board has several concerns regarding this proposed path:

- The full range of accident scenarios must be considered when tailoring the scope of an SS-21 project, including those not involving inadvertent nuclear detonation and high explosive violent reaction. Aggressive application of the principles of engineered controls inherent in SS-21 is appropriate for the control of all significant hazards associated with nuclear explosive operations, including those involving primarily on-site or worker safety consequences.
- For accident scenarios that may involve multiple abnormal environments, the combined effects of these environments must be taken into account explicitly to make an adequate assessment of the IHE response.

On a more general level, the Board is concerned that the weapons response information developed by the weapons laboratories and provided to the Pantex Plant as part of each SS-21 project is not being developed under a well-defined and standardized process. An attempt to address this need was made under the previous Implementation Plan for Recommendation 98-2, but the Board's recent experience suggests that additional refinements may be warranted to ensure uniform interpretation and understanding of information on weapons response. In particular, DOE must ensure that the quality assurance requirements of Title 10, Code of Federal Regulations, Part 830, Subpart A, are applied as part of the process of developing information on weapons response.

The Board looks forward to continuing to work closely with DOE and its contractors throughout the remainder of the implementation process for Recommendation 98-2. Upon completion of all deliverables in the Implementation Plan, DOE should be satisfied that the issues outlined above have been addressed before proposing closure of this recommendation.

Sincerely,

A handwritten signature in black ink, appearing to read "John T. Conway". The signature is written in a cursive style with a large, sweeping initial "J".

John T. Conway  
Chairman

c: Mr. Mark B. Whitaker, Jr.