

Peter S. Winokur, Chairman  
Jessie H. Roberson, Vice Chairman  
Joseph F. Bader  
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**DEFENSE NUCLEAR FACILITIES  
SAFETY BOARD**

Washington, DC 20004-2901

June 2, 2014



The Honorable Frank G. Klotz  
Administrator  
National Nuclear Security Administration  
U. S. Department of Energy  
1000 Independence Avenue, SW  
Washington, DC 20585-1000

Dear Administrator Klotz:

The Defense Nuclear Facilities Safety Board (Board) is concerned that the National Nuclear Security Administration (NNSA) and Babcock & Wilcox Technical Services Pantex, LLC (B&W), have not demonstrated that the special tooling used in nuclear explosive operations at Pantex adequately protects the public and workers from the potential consequences of a falling man event. B&W's analysis of the falling man hazard does not bound the accident conditions to which a nuclear explosive could be subjected.

Process and tooling improvements from the Seamless Safety for the 21<sup>st</sup> Century initiative along with efforts to implement Title 10, Code of Federal Regulations, Part 830, revealed the need to evaluate the falling man hazard. Thus, B&W developed an analysis of this hazard in 2002. Since 2006, ten Nuclear Explosive Safety evaluations have documented concerns related to this falling man analysis. In a letter to NNSA dated July 6, 2010, the Board communicated concerns associated with the falling man analysis. In 2012, NNSA contractors and Virginia Polytechnic Institute and State University performed experiments, which demonstrated that the existing falling man analysis may underestimate the load and energy of the falling man by a factor of five or more. Additionally, the Board's staff has identified several pieces of special tooling for which credible falling man scenarios remain unanalyzed.

The Board is aware that a new set of falling man experiments is nearing completion. Therefore, pursuant to 42 U.S.C. § 2286b(d), the Board requests a report and briefing by NNSA within 45 days of receipt of this letter that details (a) the results of all applicable falling man experiments, (b) any immediate compensatory measures deemed necessary based on these results, and (c) the actions and timeline associated with revising the falling man analysis and, as needed, reevaluating special tooling based on these results.

Sincerely,  
  
Peter S. Winokur, Ph.D.  
Chairman

c: Mr. Steven C. Erhart  
Mr. Joe Olencz