

Peter S. Winokur, Chairman  
Jessie H. Roberson, Vice Chairman  
John E. Mansfield  
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Sean Sullivan

**DEFENSE NUCLEAR FACILITIES  
SAFETY BOARD**

Washington, DC 20004-2901



July 15, 2013

The Honorable Ernest J. Moniz  
Secretary of Energy  
U.S. Department of Energy  
1000 Independence Avenue, SW  
Washington, DC 20585-1000

Dear Secretary Moniz:

In November 2012, former Secretary of Energy Steven Chu notified the Defense Nuclear Facilities Safety Board (Board) that the Department of Energy (DOE) needed additional time to revise its implementation plan for Recommendation 2010-2, *Pulse Jet Mixing at the Waste Treatment and Immobilization Plant*, which was issued on December 17, 2010. In his notice, Secretary Chu acknowledged the need to address uncertainties with properties of the tank waste, the treatment of non-Newtonian fluids, and the shortcomings of computational fluid dynamics models to predict full-scale performance of the pulse jet mixers. In addition, Secretary Chu alerted the Board on the need to change the current design verification philosophy to add confidence in the ability of the black cell components to operate reliably and safely over its 40-year design life. To date, the Board has not received sufficient information to fully understand DOE's revised design verification philosophy or a firm date for completing the revised implementation plan.

Therefore pursuant to 42 U.S.C § 2286b(d), the Board requests a report within 60 days that provides the schedule for completing a revised Recommendation 2010-2 implementation plan, and within 90 days a briefing that describes in detail the design verification philosophy DOE will employ to demonstrate reliable operation of the pulse jet mixers. Additionally, the Board requests the designation of your assigned responsible manager for this recommendation.

Sincerely,

A handwritten signature in black ink, appearing to read 'Peter S. Winokur', is written over a faint, larger version of the same signature.

Peter S. Winokur, Ph.D.  
Chairman

c: Mr. David G. Huizenga  
Mrs. Mari-Jo Campagnone