

Bruce Hamilton, Chairman  
Jessie H. Roberson  
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**DEFENSE NUCLEAR FACILITIES  
SAFETY BOARD**

Washington, DC 20004-2901



November 18, 2019

The Honorable James Richard Perry  
Secretary of Energy  
U.S. Department of Energy  
1000 Independence Avenue, SW  
Washington, DC 20585-1000

Dear Secretary Perry:

We received a letter from the Department of Energy's Office of River Protection (ORP) on May 15, 2019, providing notification that DOE has resolved a technical issue related to the design of the pulse-jet mixer (PJM) control system. DOE opened the technical issue, in part, because of concerns raised by the Board regarding (a) the system's ability to prevent frequent overblows in process tanks within the Pretreatment Facility at Hanford's Waste Treatment and Immobilization Plant (WTP), and (b) whether frequent overblows could potentially damage the process vessels and related equipment. ORP's letter documents substantial work, including full-scale testing, performed by DOE to ensure that the PJM control system will work. DOE has made design changes and performed structural analyses that show that PJM overblows, if they occur, will not damage the process vessels or other installed equipment, as currently designed. Based on the results of the testing, DOE determined that the technical issue is resolved.

We acknowledge the work performed by DOE and note that it strengthens the technical foundation for use of PJM systems in black cells. We will continue to follow the design process as DOE further matures it.

Yours truly,

A handwritten signature in black ink that reads "Bruce Hamilton".

Bruce Hamilton  
Chairman

c: Mr. William I. White  
Mr. Brian T. Vance  
Mr. Joe Olencz