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**DEFENSE NUCLEAR FACILITIES  
SAFETY BOARD**

Washington, DC 20004-2901



June 4, 2018

The Honorable Anne Marie White  
Assistant Secretary for  
Environmental Management  
U.S. Department of Energy  
1000 Independence Avenue, SW  
Washington, DC 20585-1000

Dear Ms. White:

The Defense Nuclear Facilities Safety Board congratulates you on your confirmation as Assistant Secretary of Energy for Environmental Management. We look forward to a positive and productive working relationship with you and your leadership team as the Office of Environmental Management carries out its important and challenging missions.

Congress established the Board in 1988; our mission is to provide independent analysis, advice, and recommendations to inform the Secretary of Energy in providing adequate protection of public health and safety at DOE's defense nuclear facilities. A brief summary of some of our current nuclear safety oversight activities is provided for your information in the enclosure to this letter.

We welcome the opportunity to introduce ourselves and discuss the Board's work at your earliest convenience.

Yours truly,

A handwritten signature in black ink that reads "Bruce Hamilton". The signature is written in a cursive style.

Bruce Hamilton  
Acting Chairman

Enclosure

c: Mr. Joe Olencz

## Enclosure

### **Oversight Priorities of the Defense Nuclear Facilities Safety Board at the Office of Environmental Management's Defense Nuclear Facilities (as of April 2018)**

**Safety Management at the Savannah River Site (SRS).** The Board has observed that progress in updating safety-related controls to meet current requirements and guidance is slow, and the rigor associated with safety management programs (e.g., conduct of operations, specific administrative controls, implementation of technical safety requirements) is declining.<sup>1</sup>

**Liquid Waste Processing at SRS.** The Salt Waste Processing Facility is undergoing system testing, but has encountered several delays. At the Defense Waste Processing Facility, the Board recently has observed several operational missteps involving, for example, the execution of technical safety requirements. Taken as a whole, the Board is concerned that significant management attention is required to sustain liquid waste operations at SRS for the long term.

**Structural Integrity of the H-Canyon Exhaust Tunnel at SRS.** The Board communicated with your office in December 2015 regarding safety concerns with the seismic performance and structural condition of the tunnel. Site personnel have since gathered additional information through sampling and are now performing a nonlinear analysis of the tunnel to determine if it can perform its safety function after a design basis earthquake. H-Canyon is an important asset for the defense nuclear complex as a whole. The ventilation system, including the exhaust tunnel, is a safety-class system that is essential to the safe operation of H-Canyon. Failure of the tunnel coupled with the design basis seismic event may result in dose consequences to the public exceeding DOE's evaluation guideline, and dose consequences to the collocated worker categorized as high. SRS personnel have a Justification for Continued Operation with compensatory measures in place to address this issue in the short term.

**Execution of Recommendation 2012-1, Savannah River Site Building 235-F Safety.** Recommendation 2012-1 identified the need for the Department to take actions to reduce the risk to collocated workers associated with Building 235-F. These actions include removing or immobilizing the residual contamination within Building 235-F, taking near-term actions to improve the safety posture of the facility, and ensuring the emergency response to a radiological release from Building 235-F is adequate. The Secretary of Energy provided an implementation plan that has a projected completion date of May 2021. The Board is concerned that the pace at which the Department is addressing this challenge is not sufficient with the level of risk involved. Specifically, since the facility still contains in excess of 200 grams of plutonium, much of it in a highly dispersible form, the risk to the collocated workers for several accident scenarios remains high.

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<sup>1</sup> See, for example, the Board's letter to Secretary Perry dated January 4, 2018.

**High Level Waste at the Hanford Site (Hanford).** The overall strategy to treat high-level waste appears to be undergoing significant change, while the infrastructure associated with storage systems continues to age.

**Planning and Executing Building Decontamination and Demolition at Hanford.** Building 324, the Waste Technology Engineering Laboratory, operated until 1996. Over time, a breach in the sump below B-cell resulted in the migration of radioactive materials into the soil beneath the cell. The Board is focused on EM's plans and preparations for the remediation of the contaminated soil below Building 324's B-cell. The Board's staff has reviewed the radiological hazards associated with the removal of contaminated soil, including project plans to mitigate risks. At the end of 2017, the Board's staff was reviewing the structural implications on Building 324 due to the planned soil removal, as well as the proposed changes to the Building 324 safety basis. Recently complications involving alpha contamination in C-Cell have also come to light and are of concern to the Board. Meanwhile, the site has experienced contamination control issues during execution of the most recent large-scale outdoor demolition project.

**Safety Management at the Waste Isolation Pilot Plant (WIPP).** WIPP has resumed operations, but still appears to be struggling with important safety management programs, such as ground control and maintenance, and the design of safety-related systems. WIPP remains the only ultimate disposition facility for defense-related transuranic waste in the complex.

**Recent Drum Over-Pressurization Event at Idaho National Laboratory (INL).** INL personnel are investigating this recent event at Accelerated Retrieval Project-V. The results of this investigation may have important implications for all generator sites shipping waste to WIPP.

**Emergency Preparedness and Response (EP&R).** Throughout 2017, the Board and its staff reviewed emergency response drills and exercises at the following EM sites: SRS, WIPP, Hanford Site, and Los Alamos National Laboratory, to evaluate the current competencies and capabilities associated with EP&R at each of these defense nuclear sites. Although the Board closed Recommendation 2014-1, *Emergency Preparedness and Response*, in December 2017, we continue to see challenges to all elements of DOE's EP&R program that require concerted management attention.