



**UNITED STATES  
NUCLEAR WASTE TECHNICAL REVIEW BOARD**

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November 27, 2018

Dr. William Boyle  
Deputy Assistant Secretary for Spent Fuel and Waste Disposition  
U.S. Department of Energy  
1000 Independence Ave., SW  
Washington, DC 20585

Mr. Kenneth Picha  
Acting Associate Principal Deputy Assistant Secretary for Field Operations  
U.S. Department of Energy  
1000 Independence Ave., SW  
Washington, DC 20585

Dear Dr. Boyle and Mr. Picha:

On behalf of the U.S. Nuclear Waste Technical Review Board (Board), I want to thank you and your staff for supporting the Board's tour of the Waste Isolation Pilot Plant (WIPP) on October 22, 2018. A number of Board members and Board staff toured WIPP prior to the Board's public meeting on recent U.S. Department of Energy (DOE) research and development (R&D) activities related to managing and disposing of commercial spent nuclear fuel (SNF), which took place on October 24, 2018, in Albuquerque, New Mexico.

Congress created the Board in the 1987 Nuclear Waste Policy Amendments Act (Public Law 100-203) to evaluate the technical and scientific validity of activities undertaken by the Secretary of Energy to implement the Nuclear Waste Policy Act and to advise Congress and the Secretary on technical issues related to nuclear waste management. Among the topics specifically identified in the law for Board evaluation are DOE activities relating to packaging or transportation of SNF and high-level radioactive waste (HLW).

In addition to serving as the nation's only operating deep geologic repository for disposal of defense-related transuranic waste, the WIPP site hosts underground R&D experiments relevant to disposal of SNF and HLW in salt host rock. In that capacity, the site is part of an international network of underground research laboratories devoted to studies that can improve understanding of processes affecting isolation of radioactive wastes in geologic repositories. The Board will be holding a workshop on April 24-25, 2019, in the San Francisco Bay area in California to discuss recent advances in repository science and operations from international underground research laboratory collaborations.

The main purpose of the Board's WIPP tour was to learn about a program of heater tests at WIPP, which are funded by DOE's Office of Nuclear Energy. The Board appreciates the close coordination between the DOE Office of Nuclear Energy and Office of Environmental Management that led to a successful tour. Staff members from both offices and the DOE Carlsbad Field Office, and their contractors, worked to ensure that the tour and above-ground

briefings proceeded effectively and efficiently. The frank discussions about the heater tests, including the canister heater buried in run-of-mine salt, the borehole heater shake-down test, and the proposed borehole heater test, were enlightening. DOE's Office of Nuclear Energy has learned about experimental design from the early tests and the lessons learned are being used in designing the proposed borehole heater test. The Board anticipates hearing more about the WIPP borehole heater test at its Spring 2019 workshop.

At its June 2018 public meeting on DOE R&D activities in support of SNF and HLW transportation issues that was held in Idaho Falls, Idaho, the Board heard about the transportation lessons learned from the WIPP transportation program. The Board's visit to WIPP allowed it to gain further insights on waste transportation issues and WIPP repository operations. Transportation to and handling of multiple types of waste packages at the WIPP repository are like those expected for a geologic repository for SNF and HLW.

These constructive exchanges at WIPP provided valuable information for the Board as it continues its evaluation of DOE activities related to the management and disposal of SNF and HLW. We look forward to future productive interactions with you and your staff.

Sincerely,

{Signed by}

Jean M. Bahr  
Chair

cc:

Dr. Jeff Griffin, DOE Office of Environmental Management

Mr. Ed McGinnis, DOE Office of Nuclear Energy

Ms. Anne White, DOE Office of Environmental Management