



**UNITED STATES
NUCLEAR WASTE TECHNICAL REVIEW BOARD**

2300 Clarendon Boulevard, Suite 1300
Arlington, VA 22201-3367

May 28, 2013

Dr. Peter Lyons
Assistant Secretary for Nuclear Energy
Office of Nuclear Energy
U.S. Department of Energy
1000 Independence Avenue SW
Washington, DC 20585

Dear Dr. Lyons:

On behalf of the U.S. Nuclear Waste Technical Review Board, I thank you for participating in the Board's meeting held in Richland, Washington, on April 16, 2013. The Board particularly appreciates your making time to travel to the meeting during what we know was a busy period. Your presentation and responses to questions on the Department of Energy's (DOE) strategy for implementing the recommendations of the Blue Ribbon Commission on America's Nuclear Future were very informative, and your personal involvement in the meeting was noted and remarked on positively by many meeting attendees.

DOE Strategy for Management and Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste

The Board found your articulation of DOE's strategy for managing and disposing of spent nuclear fuel (SNF) and high-level radioactive waste (HLW) particularly useful because it provides a framework for the Board's future technical and scientific peer-review activities. The Board looks forward to evaluating the technical validity of DOE activities related to implementation of the strategy, and we note that almost everything in the strategy will affect or be affected by technical and scientific issues. We also observe that developing guidelines for a consent-based process for siting SNF and HLW storage and/or repository facilities will have both institutional and technical components and that the process itself will benefit from lessons that can be learned from other countries. The Board is developing a report on repository siting that we plan to release later this year, which will include a summary of international siting experience.

The DOE strategy document identifies several technical and scientific activities that the DOE Office of Nuclear Energy (NE) is undertaking in fiscal year 2013, including: (1) evaluating the potential for direct disposal of the SNF storage containers in use at utility sites in different geologic media; (2) evaluating the types and design features of back-filled engineered barriers systems and materials; (3) evaluating geologic media for their impacts on waste isolation; (4) evaluating thermal management options for different geologic media; (5) establishing cooperative agreements with other countries involved in nuclear waste management; and (6) developing a research and development plan for deep borehole disposal. As part of the Board's ongoing technical and scientific review, we look forward to learning about the status and details of these activities at future Board meetings.

Research on Direct Disposal of Large SNF Dry-Storage Containers

The Board is particularly interested in NE's work related to the direct disposal of SNF containers currently used in dry-storage facilities at nuclear power plants. The rationale for undertaking this research was established at the Board's meeting held in Arlington, Virginia, in January 2012. The Board commends Deputy Assistant Secretary Monica Regalbuto for recognizing the merit of evaluating the potential system-wide effects of repackaging SNF for transportation and/or disposal. Dr. William Boyle discussed some of these issues at the Board meeting, and we will be interested in learning about the results of the activities NE undertakes in this area. Because repackaging of SNF for transportation and/or disposal has potential implications for the entire waste management system, the Board is planning a workshop on this subject later this year. We look forward to working with NE in arranging this event.

I would like to thank you again on behalf of the Board for your support of, and participation in, the Board's meeting.

Sincerely,

{Signed}

Rodney C. Ewing
Chairman