



UNITED STATES  
NUCLEAR WASTE TECHNICAL REVIEW BOARD  
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## **U.S. NWTRB Releases Report on Technical Issues Associated with Implementation of DOE Initiative on Separate Disposal of DOE-Managed SNF and HLW**

On June 16, 2015, the U.S. Nuclear Waste Technical Review Board issued a report titled *Evaluation of Technical Issues Associated with the Development of a Separate Repository for U.S. Department of Energy-Managed High-Level Radioactive Waste and Spent Nuclear Fuel*. The Report is based on the Board's review of U.S. Department of Energy (DOE) reports and studies supporting a new DOE initiative involving the development of two mined geologic repositories: one to dispose of defense high-level radioactive waste (HLW) and possibly some DOE-managed spent nuclear fuel (SNF), and another to dispose of commercially generated HLW and SNF, together with other DOE-managed HLW and SNF. The new initiative also includes consideration of options for disposal of smaller DOE-managed waste forms in deep boreholes. The Board's objective in conducting this review was to evaluate the technical and scientific issues associated with the implementation of DOE's new initiative.

Based on its review, in the Report the Board makes the following recommendations to DOE:

1. Consider waste form performance in different host-rock types after degradation of the waste package in future assessments. Much information can initially be obtained by looking at the performance of commercial SNF and vitrified HLW in different host-rock types.
2. Develop a better understanding of the degradation rates of DOE SNF in potential repository geologic environments, particularly the DOE SNF types that could contribute most to radionuclide release and calculated dose, in order to improve the basis for the separate repository safety assessment.

3. Evaluate approaches, benefits, and costs of repackaging cooler naval SNF into smaller disposal packages.
4. Conduct research on borehole sealing technology and assess whether more robust engineered barriers might be required for disposing of selected waste forms in deep boreholes.

The Board was established in the Nuclear Waste Policy Amendments Act of 1987 to perform ongoing evaluation of the technical and scientific validity of U.S. DOE activities related to the management and disposal of SNF and HLW. The Board is required to report its findings, conclusions, and recommendations to Congress and the Secretary of Energy. Board members serve part time and are appointed by the President from a list of nominees submitted by the National Academy of Sciences. The Board is an independent federal agency in the Executive Branch.

This Report, as well as, other Board reports, correspondence, testimony and information are available on the Board's website at [www.nwtrb.gov](http://www.nwtrb.gov).

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