

U.S. Nuclear Waste Technical Review Board



U.S. Nuclear Waste Technical Review Board

Presented at: Fall 2019 Board Meeting: DOE Research and Development Related to Packaging, Drying, and Dry-storage of Spent Nuclear Fuel

Presented by:

Dr. Jean M. Bahr, Chair

November 19, 2019 Alexandria, VA

About the Board



The U.S. Nuclear Waste Technical Review Board (Board) was established by Congress as an independent federal agency in the 1987 amendments to the Nuclear Waste Policy Act (NWPA).









Board Member Appointment



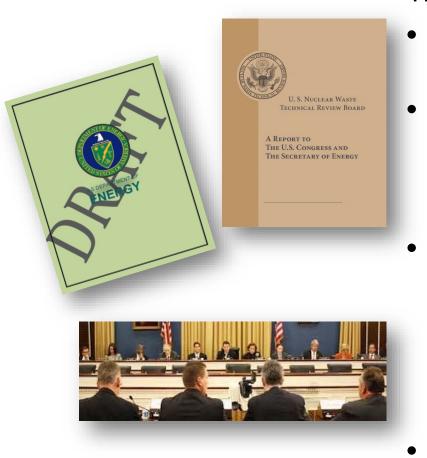
- At full strength, the Board is composed of eleven members
- Board members are nominated by the National Academy of Sciences and appointed by the President to four-year terms
- Terms are staggered, and Board members may continue to serve until they are reappointed or replaced



U.S. Nuclear Waste Technical Review Board November 19, 2019

NWTRB www.nwtrb.gov

About the Board



The Board:

- Conducts independent and objective peer review of DOE activities
- Reports its findings, conclusions, and recommendations to the U.S. Congress and the Secretary of Energy
- By law, has access to draft DOE documents—according to the Legislative History of the NWPAA, so that Board recommendations can be made during decision-making, not after the fact
- Provides congressional testimony at the invitation of Congress



NWTRB

About the Board (cont.)



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- Holds public meetings each year in different locations in the United States—meetings are webcast
- Provides technical and scientific comments in letters or reports to DOE following public meetings
 - Makes all official documents and information (meeting transcripts, archived webcasts, and presentations; reports, correspondence, and congressional testimony) available on its website: www.nwtrb.gov





Board Members

- Jean M. Bahr, Ph.D., Chair University of Wisconsin, Madison
- Steven M. Becker, Ph.D. Old Dominion University
- Susan L. Brantley, Ph.D. Pennsylvania State University
- Allen G. Croff, Graduate Nuc. Engr. Degree, MBA Vanderbilt University
- Efi Foufoula-Georgiou, Ph.D. University of California, Irvine
- Tissa H. Illangasekare, Ph.D., P.E. Colorado School of Mines
- Kenneth Lee Peddicord, Ph.D., P.E. Texas A&M University
- Paul J. Turinsky, Ph.D. North Carolina State University
- Mary Lou Zoback, Ph.D. Stanford University
- ✤ (vacant)
- (vacant)





Meeting Information

- Check out <u>www.nwtrb.gov</u> for meeting materials and Board reports, correspondence, and testimony
- Public comment periods (before noon and before adjournment)
- Written comments may be submitted by the public (will be part of meeting record)
- The meeting is being webcast live (the transcript and archived version of the webcast will be available at <u>www.nwtrb.gov</u>)





Meeting Objectives

- Review DOE research and development (R&D) activities related to drying and dry-storage of <u>DOE-managed aluminum-clad spent</u> <u>nuclear fuel</u> (SNF)
- Review DOE efforts to develop a DOE Standardized Canister for DOE-managed SNF
- Review DOE R&D activities related to packaging and drying <u>commercial SNF</u> as well as related computer modeling of temperatures inside SNF casks and canisters
- Examine potential lessons learned from the experience in the with drying and dry storage of <u>SNF in the United Kingdom</u>





Meeting Agenda

- DOE Office of Nuclear Energy (DOE-NE)
 - o Introduction
 - Review of the High Burnup Dry Cask Research and Demonstration Project (HDRP)
 - Thermal modeling of SNF storage casks
- NWTRB Staff Summary of DOE-managed SNF
- DOE-NE
 - Design work on the DOE Standardized Canister for DOE-managed SNF
- DOE Office of Environmental Management

 R&D related to the drying and dry-storage of aluminum clad SNF
- Sellafield, Ltd., United Kingdom (UK)
 - R&D related to the drying of UK SNF, including aluminum-clad SNF
- Panel discussion



