



U.S. Nuclear Waste Technical Review Board

NWTRB
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U.S. Nuclear Waste Technical Review Board

Presented to:

Fall 2020 Board Meeting

Presented By:

Dr. Jean M. Bahr, Chair

Board Members

- ❖ **Jean M. Bahr, Ph.D., Chair** – University of Wisconsin, Madison
- ❖ **Steven M. Becker, Ph.D.** – Old Dominion 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
- ❖ **Susan L. Brantley, Ph.D.** – Pennsylvania State University
- ❖ (vacant)
- ❖ (vacant)



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



NATIONAL ACADEMY
OF SCIENCES



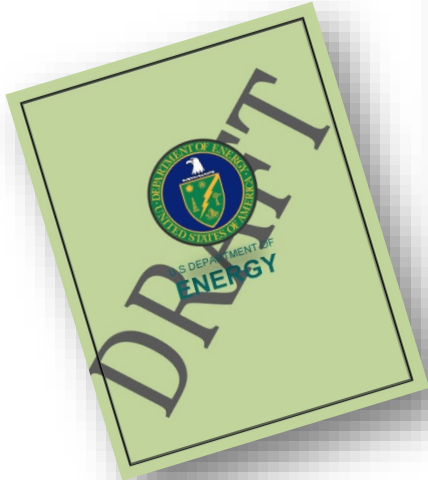
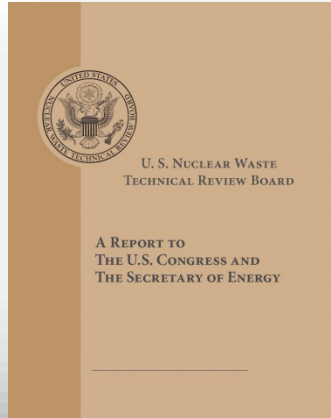
- At full strength, the Board is composed of eleven members
- Board members are nominated by the National Academy of Sciences and appointed by the President to four-year terms
- Terms are staggered, and Board members may continue to serve until they are reappointed or replaced



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



About the Board (cont.)



- Holds public meetings each year, normally 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



Meeting Information

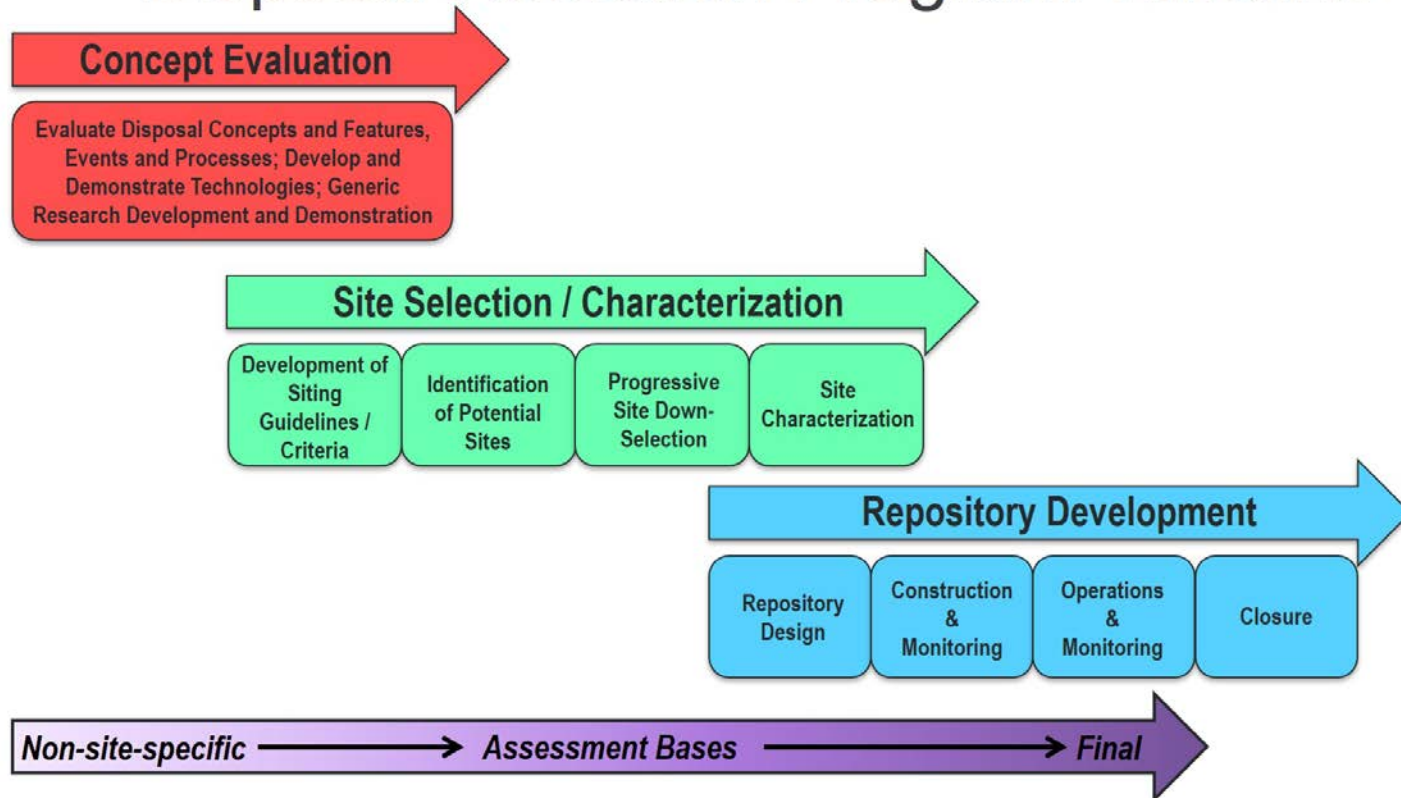
- Go to www.nwtrb.gov for meeting materials and Board reports, correspondence, and testimony
- Public comment period (at the end of each day)
 - Comments received by the end of each day's last break period will be read online by Board staff member Bret Leslie
 - Time for each comment may be limited, but the entirety of the comment will be included in the meeting record
- The meeting is being recorded (the transcript and archived recording of the meeting will be available at www.nwtrb.gov)



Meeting Objective

- Review DOE's non-site-specific geologic disposal research and development program

Disposal Research Program Timeline



(Source: Gunter 2020, redrawn for clarity)



Meeting Agenda (December 2)

- 12:15 p.m. EST** **U.S. Department of Energy (DOE) Non-Site-Specific Disposal Research Program: Program Overview, Purpose, Scope, and Goals**
Timothy Gunter, DOE, Office of Nuclear Energy
- 12:50 p.m. EST** **Technical Approach and Prioritization of Activities**
David Sassani, Sandia National Laboratories
- 1:50 p.m. EST** **Break**
- 2:05 p.m. EST** **Crystalline Host Rock: Reference Disposal Concepts and Key Considerations**
Yifeng Wang, Sandia National Laboratories
- 2:55 p.m. EST** **Salt Host Rock: Reference Disposal Concepts and Key Considerations**
Kris Kuhlman, Sandia National Laboratories
- 3:45 p.m. EST** **Break**
- 3:55 p.m. EST** **Argillite Host Rock: Reference Disposal Concepts and Key Considerations**
Carlos Jové Colón, Sandia National Laboratories
- 4:45 p.m. EST** **Public Comments**
- 5:00 p.m. EST** **Adjourn**



Meeting Agenda (December 3)

- 12:05 p.m. EST** **Geologic Disposal Research Strategies from Abroad: Examples from IGD-TP (Implementing Geological Disposal of radioactive waste Technology Platform) and the United Kingdom**
Irina Gaus, (Nagra, Switzerland) and Lucy Bailey (Radioactive Waste Management, United Kingdom)
- 1:15 p.m. EST** **Prioritization of Cross-Cutting Research and Development Activities: Unsaturated Alluvium Reference Case, Disposal of Dual-Purpose Canisters, and Geologic Disposal Safety Assessment**
Emily Stein, Sandia National Laboratories
- 2:05 p.m. EST** **Break**
- 2:35 p.m. EST** **Prioritization of Cross-Cutting Research and Development Activities: Engineered Barrier System**
Ed Matteo, Sandia National Laboratories and LianGe Zheng, Lawrence Berkeley National Laboratory
- 3:35 p.m. EST** **Prioritization of International Activities and Moving Forward: Disposal Research R&D 5-Year Plan**
Jens Birkholzer, Lawrence Berkeley National Laboratory and David Sassani, Sandia National Laboratories
- 4:35 p.m. EST** **Public Comments**
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