



U.S. Nuclear Waste Technical Review Board

NWTRB
www.nwtrb.gov

BRC Report to the Secretary of Energy – On Your Marks, Get Set...

Presented to:
Waste Management Symposium 2012

Presented By:
Nigel Mote
Executive Director

February 29, 2012 Phoenix Convention Center, Phoenix, Arizona

The Board's Statutory Mandate

- Established by the 1987 amendments to the Nuclear Waste Policy Act (NWPA).
- The Board evaluates the “technical and scientific validity” of U.S. Department of Energy (DOE) activities related to implementing the NWPA, including inter alia:
 - Transportation, packaging, and storage of spent nuclear fuel (SNF) and high-level radioactive waste (HLW)
 - Site characterization, design, and development of facilities for disposing of such wastes.
- These activities fall under the Board's technical peer-review mandate – initially undertaken by OCRWM, now DOE-NE
- The Board is required by law to report its findings, conclusions, and recommendations at least twice each year to the U.S. Congress and the U.S. Secretary of Energy.



About the Board

- Independent Federal Agency in the Executive Branch
- The Board's eleven members:
 - technical and scientific experts
 - nominated by the National Academy of Sciences and appointed by the President
 - serve on a part-time basis for four-year terms.
- By law, has access to draft DOE documents to allow recommendations to be made during decision-making, not after the fact
- Holds public meetings
- Has fact-finding discussions
- Board documents (meeting transcripts and materials, reports, correspondence, congressional testimony, etc.) at www.nwtrb.gov .



What the BRC Said About Technical Oversight

- Report to the Secretary (January 2012) ---

- *Independent scientific and technical oversight of the nuclear waste management program is essential and should continue to be provided for out of nuclear waste fee payments. The existing NWTRB currently provides this type of wide-ranging technical oversight.*

- Final Report of the Disposal Subcommittee (January 2012) ---

- Recommendation #7:

- *The Nuclear Waste Technical Review Board (NWTRB) should be retained as a valuable source of independent technical advice and review*
- *Decision makers ... require access to sound, independent technical advice and expertise. ...the NWTRB has performed this role with distinction; it should therefore be retained as a valuable part of our larger institutional infrastructure for ensuring the responsible management of nuclear wastes.*

- Section 5.4.4:

- *The NWTRB would be an appropriate organization for providing this type of wide-ranging technical oversight on an ongoing basis*



Impact of the BRC Recommendations on Technical Oversight

What would not/not need to change:

- Independent agency in the Federal Government
- Access to pre-decisional information
- Open discussion in the public domain, including with experts from other countries
- A mix of scientific and engineering expertise
- Change of Members with time and as the program progresses

What would/may need to change:

- Revision to the NWPA
- Reports to Congress and the Secretary and to the FedCorp CEO
- Independent, external oversight of cost/financing issues, if merged with technical oversight



Board Interactions with the BRC

- Extensive Board/BRC interactions, including meetings and presentations to the full BRC and BRC sub-committees
- Board commented in separate letters on the three BRC sub-committee draft reports
- Panel on draft BRC report with John Kotek (BRC Executive Director) and Ward Sproat (former Director of DOE Office of Civilian Radioactive Waste Management) at Board meeting held in August 2011
- Board letter commenting on draft BRC report sent in late October
- Focus of BRC reports was primarily policy, not technical
- All Board letters are on the Board's website:
www.nwtrb.gov



Board Interactions with the BRC (Cont'd)

Main Points from the Board's response to the draft BRC Report:

- Recommends that ongoing technical work continue as decisions are made on how to accomplish deep geologic disposal
- Concurs with recommendation to develop generic siting criteria
- Concurs that a repository will be needed – and a site can be found and developed
- Recommends consideration of different disposal methods for different waste-types
- Determining the source term realistically can support the compliance case
- Concurs that research into fuel degradation mechanisms is needed
- Discussion of disposal of DOE-owned waste is needed in the BRC final report
- Recommends a systems approach to the program for SNF/HLW management
- Recommends priority be given to research related to transportation of high-burnup fuel and the technical basis for taking burnup credit
- Concurs in urging increased international cooperation to benefit from experience gained in other countries
- Believes it is imperative that information generated by OCRWM be preserved and recommends that the final BRC Report should address this issue



Future Board Meetings

- Wednesday March 7, 2012
 - Location: Albuquerque, NM
 - Theme: Geological Disposal - in a repository and in boreholes
- Tuesday October 16, 2012:
 - Location: Chicago, IL
 - Theme: Transportation and Packaging



Back up



Principal Recommendations from BRC Final Report

- Site selection should be: adaptive, staged, consent based, transparent, standards-and-science based
- The program should be the responsibility of a new, single-purpose government-owned organization or “FedCorp”
- Access to funding should be assured, and removed from the political appropriations process
- A permanent, deep geologic repository will be needed – “prompt efforts” should start now
- One or more consolidated interim storage (CIS) facilities is needed, particularly for “stranded” fuel – “prompt efforts” should start now
- Stable, long-term support is needed for research, development and demonstration programs for advanced reactor and fuel cycle technologies
- The U.S. must promote and lead international efforts related to global non-proliferation concerns and the safety and security of facilities and materials
- Transportation regulations need to be revised to support a CIS facility: affected communities need access to financial aid and technical assistance



Other Issues from the BRC

- Cover letter recommends designation of senior DOE Official with authority to coordinate DOE elements involved in implementation of the recommendations
- “Getting started” on siting new waste management facilities:
 - EPA and DOE should develop generic disposal standard, and supporting regulatory requirements, early in the process
 - The new waste management organization should:
 - Develop basic initial siting criteria early
 - Encourage expressions of interest from communities with potentially suitable sites
 - Establish initial program milestones in a mission plan



Other Issues from the BRC (cont'd)

- The Final Report recognizes that “legislative changes”, including revision to the NWPA, will be needed to:
 - Establish a new siting process
 - Authorize consolidated interim storage facilities
 - Provide financial and technical support to affected communities
 - Establish a new waste management organization
 - Ensure access to dedicated funding
 - Promote international cooperation, support and leadership
- It did not:
 - “Render an opinion” on either the suitability of Yucca Mountain as a repository site or on DOE’s action to withdraw the license application
 - Propose an alternative site or sites
 - Offer an opinion about the role of nuclear energy in the U.S., or the world, energy supply mix
 - Define “consent”
 - Plot a timescale for the recommendations in the report or those identified separately

