

U.S. NUCLEAR WASTE TECHNICAL REVIEW BOARD



STRATEGIC PLAN FISCAL YEARS 2018-2022

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U.S. NUCLEAR WASTE TECHNICAL REVIEW BOARD

MESSAGE FROM THE CHAIR

February 2018



It is my pleasure to present the U.S. Nuclear Waste Technical Review Board's *Strategic Plan for Fiscal Years 2018-2022*. This plan supersedes the Board's *Strategic Plan for Fiscal Years 2014-2018*, which was published in 2014. This updated plan describes the Board's mission and the vision and values that guide the Board's work and the development of the Board's Strategic Objectives.

As an independent Federal agency in the Executive Branch, the Board is committed to effectively carrying out its statutory mandate to evaluate the technical and scientific validity of the Department of Energy's activities related to managing and disposing of spent nuclear fuel and high-level radioactive waste. The Board's *Strategic Plan for Fiscal Years 2018-2022* provides a roadmap to guide us in achieving our Strategic Objectives and a benchmark against which to evaluate the Board's performance in meeting those objectives in the years ahead.

Jean M. Bahr
Chair



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U.S. NUCLEAR WASTE TECHNICAL REVIEW BOARD

STRATEGIC PLAN

FISCAL YEARS 2018-2022

OVERVIEW

The U.S. Nuclear Waste Technical Review Board was established in the 1987 Nuclear Waste Policy Amendments Act (NWPAA) (P.L. 100-203) to “...evaluate the technical and scientific validity of activities [related to managing and disposing of spent nuclear fuel and high-level radioactive waste] undertaken by the Secretary [of Energy], including –

- (1) site characterization activities; and
- (2) activities relating to the packaging or transportation of high-level radioactive waste or spent nuclear fuel.”

As recorded in the legislative history of the NWPAA, the purpose of the Board is to provide independent expert advice to Congress and the Secretary of Energy on technical and scientific issues and to review the technical and scientific validity of the U.S. Department of Energy’s (DOE) implementation of the Nuclear Waste Policy Act (NWPA) (P.L. 97-425, as amended). In accordance with this mandate, the Board also develops relevant technical and scientific information that will be useful to Congress and the Secretary of Energy as they consider nuclear waste management policies. The Board reports its findings, conclusions, and recommendations to Congress and the Secretary of Energy at least twice yearly.

MISSION STATEMENT

By performing ongoing and independent peer review of the highest quality, the Board will make a unique and essential contribution to increasing confidence in the technical and scientific validity of DOE activities related to managing and disposing of spent nuclear fuel (SNF) and high-level radioactive waste (HLW) and to informing, from a technical and scientific perspective, policy discussions undertaken by decision-makers on managing and disposing of SNF and HLW. The Board will provide objective and relevant technical and scientific information to Congress, the Administration, DOE, and the public on a wide range of technical and scientific issues related to the management and disposition of such waste.

VALUES

The Board’s technical and scientific peer review reflects its commitment to the following values:

- ✚ **Objectivity.** Board members have no real or perceived conflicts of interest related to the Board’s mission. Board findings and recommendations are based on impartial evaluations of the technical and scientific validity of the Secretary’s activities.
- ✚ **Openness.** Board deliberations are transparent and are conducted in such a way that the Board’s integrity and objectivity are above reproach.

- ✚ **Technical and Scientific Competence.** Board findings, conclusions, and recommendations are technically and scientifically sound and are based on expert judgment and the best available technical and scientific information and analyses.
- ✚ **Timeliness.** Board findings, conclusions, and recommendations are communicated clearly and in time for them to be useful to Congress, the Secretary, and the public.

MEMBERS

The Board is composed of eleven members who are appointed by the President from a list of nominees submitted by the National Academy of Sciences (NAS). Nominees to the Board must be eminent in a field of science or engineering and are selected solely on the basis of established records of distinguished service. The Board is nonpartisan and apolitical.

POWERS

The NWPAA grants significant investigatory powers to the Board: “The Board may hold such hearings, sit and act at such times and places, take such testimony, and receive such evidence as it considers appropriate.” At the request of the Board, and subject to existing law, DOE is required to provide all records, files, papers, data, and information necessary for the Board to conduct its technical and scientific review, including drafts of work products and documentation of work-in-progress. According to the legislative history of the NWPAA, Congress provided such access to allow the Board to review and comment on DOE decisions, plans, and actions as they occur, not after the fact.

HISTORY AND CONTINUING ROLE

When Congress amended the NWPA in 1987 to identify Yucca Mountain in Nevada as the sole site to be characterized for its suitability as the location for a deep geologic repository, concerns were raised that, without a comparison of sites, the technical and scientific credibility of the site-characterization effort might be questioned. Congress created the Board to ensure that an ongoing, independent peer review of DOE’s work related to activities including packaging and transporting SNF and HLW, and developing a repository for their disposal, would be undertaken.

For more than 20 years following the enactment of the NWPAA, the Board reviewed DOE work focused on characterizing the Yucca Mountain site and developing the designs of a deep geologic repository and the associated waste management facilities. Since 2013, the Board has focused its review activities on DOE efforts to integrate the waste management system and research related to the performance of SNF and HLW in a repository. Throughout this period, the Board has continued to report to Congress and the Secretary of Energy its findings, conclusions, and recommendations from its review of the technical and scientific validity of DOE activities.

The Board’s objective and independent peer review of DOE activities related to packaging, transportation, and disposal of SNF and HLW will continue to be indispensable to the technical credibility, successful implementation, and public acceptance of DOE’s nuclear waste management program in the future.

STRATEGIC OBJECTIVES

The Board has established three Strategic Objectives for fiscal years (FY) 2018-2022. The Strategic Objectives reflect the Board's continuing commitment to its mission established in the NWPAA, which includes (1) conducting an ongoing, independent technical and scientific evaluation of DOE activities related to the NWPA and (2) advising Congress and the Secretary. During FYs 2018-2022:

- ✚ The Board will continue its evaluation of DOE activities related to implementation of the NWPA and relevant amendments to that Act. Based on its evaluation, the Board will report its findings, conclusions, and recommendations to Congress and the Secretary.
- ✚ The Board will develop objective technical and scientific information that will be useful to policy makers in Congress and the Administration on issues related to SNF and HLW management and disposal. The Board will communicate such information to Congress and the Secretary in letters, reports, and testimony.
- ✚ The Board will compile information and report to Congress and the Secretary on its findings, conclusions, and recommendations from experience gained over more than twenty-five years of reviewing the U.S. nuclear waste management and disposal program and from observing waste management efforts in other countries.

ACHIEVING THE STRATEGIC OBJECTIVES

LEADERSHIP ENGAGEMENT – On an annual basis, in accordance with the Government Performance and Results Act, as amended, the Board's leadership identifies Performance Goals that will lead to the accomplishment of the Strategic Objectives. The Performance Goals are included in the Board's Performance Plan.

ONGOING EVALUATION OF PERFORMANCE – The Board includes in its annual Congressional Budget Justification an evaluation of the Board's performance in achieving its Performance Goals for the preceding fiscal year.

EVIDENCE BASED EVALUATION OF BOARD PERFORMANCE – The Board's Performance Plan for a given year includes its *Strategic Objectives*, its *Performance Goals*, its *Management Goals*, and a description of Board activities and practices supporting the achievement of the Goals. The Board's Performance Plan is updated annually. In updating and implementing the plan, the Board's leadership is committed to using a learning agenda approach by consistently building and using evidence to:

- (1) proactively evaluate the agency's performance to determine what works well and where performance can be improved;
- (2) focus on where the needs are greatest to effectively, efficiently, and accountably fulfill the agency's mission; and
- (3) ascertain how the agency can achieve better results.

Adopting a learning agenda approach ensures that the Board's Performance Goals and Strategic Objectives are prioritized to meet the agency's mission.

The Board uses annual evaluations of its performance as input in developing its Performance Goals for the following fiscal year. The Performance Goals reflect the objectives of the agency leadership and are outcome-oriented. The annual evaluations of the Board's performance are also used as input in developing the Board's budget allocations for the subsequent year. The evaluation of the Board's performance in achieving its Performance Goals is evidence-based, and the referenced documents and meeting records may be accessed on the Board's website at www.nwtrb.gov.

STAKEHOLDER AND PUBLIC ENGAGEMENT

As part of its peer review and information gathering activities, the Board organizes public meetings at which technical information is presented by representatives of DOE, its contractors, and other organizations involved in nuclear waste management and disposal. At these meetings, Board members and Board staff question the presenters, and time is provided for input and comments from interested members of the public. The Board usually holds two or three public meetings per year. Meetings are announced in the *Federal Register*, typically four to six weeks before being held. The Board has increased the transparency of its deliberations by "webcasting" its public meetings. Webcasts are archived and are available on the Board's website.

TRANSPARENCY, PARTICIPATION, AND COLLABORATION

The Board is committed to the principles of open government, specifically the principles of transparency, participation, and collaboration.

TRANSPARENCY – As discussed in the previous section, the Board holds public meetings, at which it discusses DOE's activities with DOE staff and staff from the National Laboratories, DOE contractors, and other experts. In addition, the Board reports the results of its review of DOE activities to Congress and the Secretary of Energy on an ongoing basis. All Board reports, correspondence, fact sheets, written meeting materials, and meeting webcast videos are posted on the Board's website. When developing or updating its Strategic Plan, the Board seeks comments from the Office of Management and Budget and Congress and posts a copy of the plan on the Board's website.

PARTICIPATION – Opportunities for public comment are provided at all Board public meetings. In addition to public meetings held by the full Board, Board panels or other small groups of Board members and staff may hold other meetings, as needed, to investigate specific technical and scientific topics.

COLLABORATION – The Board members and senior professional staff enhance their scientific and technical expertise through knowledge-sharing and peer engagement. Board members and staff participate in technical symposia and conferences related to SNF and HLW management and disposal. On occasion, Board members and/or staff travel to other countries to meet with organizations involved in the management and disposal of SNF and HLW, to observe their technical programs and best practices, perform benchmarking, assess potential analogs, and for other purposes. The information gathered from these visits is used to enhance the Board's evaluation of DOE activities and to advise Congress and the Secretary of Energy.

CROSSCUTTING FUNCTIONS

Many organizations and entities are involved in some aspect of managing and disposing of SNF and HLW, including, but not limited to, Congress, DOE, the Nuclear Regulatory Commission, the Environmental Protection Agency, the Department of Transportation, the NAS, the Government Accountability Office, the State of Nevada and other state governments, Native American Tribes, affected local governments, the National Association of Regulatory Utility Commissioners, the National Governors Association and regional groups, the National Conference of State Legislatures, the Nuclear Energy Institute, the Electric Power Research Institute, and environmental organizations, such as the Natural Resources Defense Council.

The Board's technical and scientific evaluation is at once different from and complementary to the activities of most of these entities. The Board is (1) unconstrained by any stake in the outcome of the activities it reviews, beyond technical and scientific validity; (2) charged with advising both Congress and the Secretary of Energy on technical issues related to nuclear waste management and disposal; (3) limited to reviewing the technical and scientific validity of DOE activities (not the policy implications or regulatory compliance); and (4) a permanent independent federal agency whose members are appointed by the President.

MANAGEMENT CHALLENGES

Factors that are outside the Board's control could affect the Board's ability to achieve its Strategic Objectives or Performance Goals. The Board will continue to evaluate the status of the challenges discussed below, identify any new factors, and, if necessary, update its Strategic Objectives and Performance Goals, as appropriate.

- ✚ *The Board has no statutory authority to implement its recommendations.* The Board is a technical and scientific peer-review body that makes findings, conclusions, and recommendations. The Board's enabling statute does not obligate DOE to comply with Board recommendations. However, according to the legislative history of the NWPAA, in creating the Board, Congress expected that DOE would accept Board recommendations or indicate why the recommendations could not or should not be implemented. If DOE does not accept a Board recommendation, the Board can reiterate its recommendation, advise Congress, or both.
- ✚ *Operational constraints may impede the Board's ability to fully meet its performance goals on the timetable planned.* Operational constraints can affect the Board's ability to complete its review of DOE activities and to provide its technical and scientific findings, conclusions, and recommendations to Congress and the Secretary of Energy in accordance with its annual Performance Goals. Funding levels and allocation decisions may affect the nature and extent of DOE activities that are subject to the Board's review.
- ✚ *Administrative, judicial, or legislative actions may alter nuclear waste policy.* Changes to the program or the law made by any of the external entities may also affect the nature or extent of the Board's technical and scientific review. Since passage of the NWPAA in 1987, several administrative or judicial actions have affected the direction of DOE's nuclear waste management program, and these actions have on occasion affected the Board's work.

EFFECTIVE USE OF RESOURCES

Technical and scientific analyses of DOE waste management and disposal activities are performed by Board members, all of whom are eminent scientists and experts in their fields. The Board members serve part-time and are supported by a small, full-time professional staff whose members are highly credentialed in relevant scientific and technical disciplines. When necessary, the Board is authorized to hire expert consultants to support its in-depth reviews of specific technical topics. Board members and members of the Board's senior professional staff are assigned by the Chair to lead or support Board activities, as appropriate. The Board maintains the option of organizing panels or working groups to help facilitate, integrate, and focus its technical and scientific review, and for other purposes.

CULTURE OF ACCOUNTABILITY

The Board considers its independence and objectivity to be among its most important assets. To avoid any real or perceived conflict, the NWPAA stipulates that individuals nominated to serve on the Board may not be an employee of DOE, a laboratory under contract with the DOE, or an entity performing HLW or SNF activities under contract with DOE.

The Board reports its findings, conclusions, and recommendations to Congress and the Secretary of Energy, and the Chair and other members of the Board and Board staff testify before Congress, as requested. Board reports, testimony, correspondence and other documents related to its activities, along with meeting agendas, transcripts, presentations, webcasts, and public comments, are posted on the Board's website at www.nwtrb.gov.