



# **U.S. NUCLEAR WASTE TECHNICAL REVIEW BOARD**

**CONGRESSIONAL BUDGET JUSTIFICATION  
FISCAL YEAR 2021**

**INCLUDING BOARD PERFORMANCE AND MANAGEMENT GOALS FOR  
FISCAL YEARS 2020 THROUGH 2021**

**AND**

**EVALUATION OF BOARD PERFORMANCE IN FISCAL YEAR 2019**

**FEBRUARY 10, 2020**



**U.S. NUCLEAR WASTE TECHNICAL REVIEW BOARD**  
**CONGRESSIONAL BUDGET JUSTIFICATION**  
**FISCAL YEAR 2021**

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## INTRODUCTION

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The U.S. Nuclear Waste Technical Review Board (Board) is an independent agency in the Executive Branch of the federal government. The Board was established by Congress to perform ongoing and objective peer review of the technical and scientific validity of activities undertaken by the Secretary of Energy under the Nuclear Waste Policy Act (NWPA) (Public Law 97-425), as amended, including the packaging, transportation, and disposal of spent nuclear fuel (SNF) and high-level radioactive waste (HLW). The Board also advises and makes recommendations to Congress and the Secretary on technical issues related to nuclear waste management and disposal.

Contained in this Fiscal Year (FY) 2021 Congressional Budget Justification is the Board's Performance Plan for FYs 2020 through 2021 and the Board's evaluation of its FY 2019 performance. The Board's Budget Request for FY 2021 is \$5,600,000, which is a \$2,000,000 increase from the agency's appropriations for FYs 2016 through 2020. This increase specifically supports a legislative proposal to expand the Board's authority to enable it to conduct independent analyses and other activities as appropriate. The Board's mission activities as currently defined under the NWPA are funded at \$3,600,000. The Board's Budget Request reflects its proposed expanded authority and continued strong commitment to sound budgeting and cost-effective management practices and the focus of the Board's leadership on maximizing program performance and efficiency through evidence-based decision making and ongoing evaluation of the agency's performance.

## ABOUT THE BOARD

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The Board was established in the 1987 amendments to the NWPA to "...evaluate the technical and scientific validity of activities undertaken by the Secretary after the date of enactment of the Nuclear Waste Policy Amendments Act of 1987 (NWPAA). In accordance with this mandate, and in line with the legislative history of the Nuclear Waste Policy Amendments Act (NWPAA), the Board conducts independent analyses of U.S. Department of Energy (DOE) activities and provides expert advice to DOE and Congress on technical issues related to nuclear waste management and disposal.

The law requires the Board to report its findings, conclusions, and recommendations to Congress and the Secretary not less than two times per year. The legislative history of the NWPAA makes clear that the Board cannot compel DOE to accept Board recommendations, but DOE is expected to heed the Board's advice or clearly state why it does not. According to the NWPAA, "the Board shall cease to exist not later than one year after the date on which the Secretary begins disposal of high-level radioactive waste or spent nuclear fuel in a repository."

## THE BOARD'S CONTINUING ROLE

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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 nuclear waste management activities would be undertaken, including packaging and transporting SNF and HLW and developing a repository for the permanent disposal of the wastes.

For more than 20 years following the enactment of the NWPAA, the Board's review focused on DOE work related to characterizing the Yucca Mountain site and developing a deep geologic repository. Since 2013, the Board has focused on DOE research related to the performance of SNF and HLW in a repository and efforts to integrate the waste management system. From the time the Board began operation, it has continued to report the findings, conclusions, and recommendations from its ongoing review of the technical and scientific validity of DOE's activities to Congress and the Secretary of Energy. The Board will continue these ongoing activities in FY 2021.

Under the proposed expanded authority, the Board plans to leverage its expertise in the geosciences, material sciences, and engineering fields to conduct independent analyses and other activities as appropriate.

The Board's objective and independent review of waste management and disposal activities in addition to its oversight and analysis of federal nuclear waste management programs will continue to be indispensable to the technical credibility, successful implementation, and public acceptance of the nuclear waste management program in the future.

## **BOARD STRATEGIC OBJECTIVES FOR FYS 2018 THROUGH 2022**

The Board established three Strategic Objectives in its Strategic Plan for FY 2018 through 2022. The Strategic Objectives reflect the Board's continuing commitment to its mission established in the NWPAA, including (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 through 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.
- 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.
- 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**

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**LEADERSHIP ENGAGEMENT.** On an annual basis, the Board’s leadership updates its Performance Goals (PGs) and Management Goals (MGs) for the current year and identifies Goals for the subsequent year that will lead to the accomplishment of the Strategic Objectives. The PGs and MGs are included in the Board’s Performance Plan.

**LEARNING AGENDA APPROACH.** The Board’s Performance Plan for a given year includes its *Strategic Objectives*, its *Performance Goals*, its *Management Goals*, and a description of Board attributes, activities, and practices supporting achievement of the Goals. An evaluation of Board performance in a given year is included in the Board’s budget request and is used as input in updating the Performance Plan and developing the Board’s budget request for the subsequent year. In updating and implementing the plan, the Board’s leadership will continue to use a learning agenda approach, which includes using evidence to:

- 1) proactively evaluate the agency’s performance to determine what works well and where performance can be improved;
- 2) maximize results by strategically focusing resources and attention where the needs are greatest;
- 3) reinforce the strategic direction, timeliness, and relevance of the Board’s technical evaluations of DOE activities;
- 4) adapt agency direction as evidence and context shifts;
- 5) ensure effective communications with DOE and Congress and ensure other stakeholders are informed of the Board’s activities.

**EVIDENCE-BASED APPROACH.** To ensure the effective and efficient execution of its mission, as noted above, the Board employs a learning agenda and evidence-based approach to set priorities that guide its decision making, operational planning, and development of its budget. Additionally, in accordance with OMB Memorandum M-19-23, *Phase 1 Implementation of the Foundations for Evidence-Based Policymaking Act of 2018*, the Board has appointed a Chief Data Officer and Data Governance Body.

## **PERFORMANCE PLAN FOR FYS 2020 THROUGH 2021**

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**STRATEGIC OBJECTIVES AND PERFORMANCE GOALS FOR FYS 2020 THROUGH 2021.** Presented below are the Board’s Strategic Objectives for FYS 2018 through 2022, followed by the relevant PGs and MGs for FYS 2020 through 2021. Both the Strategic Objectives and the PGs reflect the goals of the agency leadership and are outcome-oriented.

***STRATEGIC OBJECTIVE #1:** 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.*

**PERFORMANCE GOALS FOR FYS 2020 THROUGH 2021**

**PG 1-A:** In FY 2020, the Board will hold a public meeting on DOE's research and development (R&D) on packaging, drying, and storing SNF.

**PG 1-B:** In FY 2020, the Board will hold a public meeting on DOE's R&D to examine the potential for direct disposal of dual-purpose (storage and transportation) canisters for commercial SNF.

**PG 1-C:** In FYS 2020 through 2021, the Board will continue to review the technical issues DOE will need to address before it can begin the implementation of an integrated program for the nationwide transport of SNF and HLW.

In FYS 2020 through 2021, the Board may also initiate additional reviews of DOE activities related to the management and disposal of SNF and HLW.

***STRATEGIC OBJECTIVE #2:** 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.*

**PERFORMANCE GOALS FOR FYS 2020 THROUGH 2021**

**PG 2-A:** In FY 2020 the Board will finalize a report on the performance of high burnup SNF during extended dry storage and transportation.

**PG 2-B:** In FY 2020, the Board will finalize a report on the system-wide implications of using large canisters for the dry storage of SNF.

**PG 2-C:** In FY 2020, the Board will finalize a report summarizing its review activities, and its findings, conclusions and recommendations, from January 1, 2016, through December 31, 2018.

**PG 2-D:** In FY 2020 through 2021, the Board plans to issue a report on DOE's R&D to examine the potential for direct disposal of dual-purpose (storage and transportation) canisters for commercial SNF.

**PG 2-E:** In FY 2020 through 2021, the Board plans to issue a report on specific technical issues that DOE must resolve before it begins an integrated nationwide program to transport SNF and HLW.

In FYS 2020 through 2021, the Board may also initiate additional reviews and analyses relevant to the management and disposal of SNF and HLW.

***STRATEGIC OBJECTIVE #3:** 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.*

**PERFORMANCE GOALS FOR FYS 2020 THROUGH 2021**

**PG 3-A:** In FY 2020, the Board will issue a report to Congress and the Secretary on advances in repository science and operations from international underground research laboratory collaborations.

**PG 3-B:** In FY 2020 through 2021, the Board will conduct technical information exchange activities with other countries, such as Finland and Sweden, where deep geologic repositories for SNF or HLW are being licensed or constructed.

**PG 3-C:** In FYs 2020 through 2021, the Board will continue to monitor activities in other countries related to programs for the management and disposal of SNF and HLW.

**MANAGEMENT GOALS FOR FYs 2020 THROUGH 2021.** To enhance the effectiveness and efficiency of Board activities supporting its Strategic Objectives and PGs, the Board has identified the following MGs for FYs 2020 through 2021:

**MG-1:** The Board will continue to implement actions to optimize organizational efficiency and accountability and maximize employee performance.

**MG-2:** The Board will identify any potential constraints on the agency's ability to perform its mission and implement the changes that may be necessary for mitigating such constraints through proactive management and allocation of resources.

**MG-3:** The Board will continue to maintain effective communications among its geographically dispersed Board members. The Board will also facilitate communication between Board members and the senior professional staff members who support the Board's technical and scientific review of DOE activities from the Board offices in Arlington, Virginia.

**MG-4:** The Board will continue webcasting its meetings and making available archived recordings of the webcasts on its website.

**MG-5:** The Board will continue to conduct its ongoing reviews in the most cost-effective means possible.

**MG-6:** The Board will take action to ensure that institutional memory and expertise are passed on to succeeding Board members and staff. When appropriate, the Board may also provide opportunities for one or more undergraduates or graduate students in disciplines related to the Board's activities to support the Board's technical staff in performing information research and technical analysis.

**MG-7:** The Board will update its technical resources and capabilities, as necessary, to maintain and improve the core competencies of its professional staff. The Board will develop and implement initiatives to identify, recruit when necessary, and retain highly qualified professionals with the expertise and related knowledge needed to support the work of the Board members and to help the Board achieve its Strategic Objectives and PGs.

**BOARD ATTRIBUTES, ACTIVITIES, AND PRACTICES SUPPORTING ACHIEVEMENT OF THE PERFORMANCE GOALS AND STRATEGIC OBJECTIVES.** The following attributes, activities, and practices support the implementation of the Board's ongoing peer review and reflect the Board's commitment to its core values of objectivity, openness, technical and scientific rigor, and timeliness.

**AUTHORITY UNDER THE LAW.** The Board has the necessary authority, under current law, to achieve its Strategic Objectives and PGs.

**CULTURE OF ACCOUNTABILITY.** Analyses of DOE's technical and scientific work are performed by Board members who are appointed by the President from a list of nominees submitted by the National Academy of Sciences. The Board members are eminent experts in their fields and serve



part-time. They are supported by a small, full-time professional staff whose members are highly credentialed in the relevant scientific and technical disciplines. 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, and correspondence, along with meeting agendas, transcripts, presentations, webcasts, and public comments, are posted on the Board's website at [www.nwtrb.gov](http://www.nwtrb.gov).

**EFFECTIVE USE OF ANALYTICAL RESOURCES.** 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 and working groups to help facilitate, integrate, and focus its technical and scientific review, and for other purposes. When necessary, the Board is authorized by its enabling legislation to hire expert consultants to support the Board's in-depth reviews of specific technical topics.

**TRANSPARENCY, COLLABORATION, AND PUBLIC ENGAGEMENT.** To support its peer review and information gathering activities, the Board holds 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 presenters, and time is provided for input and comments from interested members of the public. The Board typically holds two or three public meetings per year and announces them in the *Federal Register* from four to six weeks before the meetings are held. The Board continues its goals of transparency of deliberations by webcasting its public meetings and archiving them on the Board's website. In addition to the Board's public meetings, Board panels or other small groups of Board members and staff also hold smaller meetings, as needed, to investigate specific technical topics.

Board members and staff also engage in site visits, visits to national laboratories and facilities, and meetings with DOE and national laboratory and contractor staff working on specific projects and programs. Board members and staff attend technical symposia and conferences related to SNF and HLW management and disposal. Representatives of domestic and international organizations involved in the management and disposal of SNF and HLW are invited to participate in Board public meetings and workshops. On occasion, Board members and/or staff travel to other countries to meet with such organizations to observe their technical programs and best practices, perform benchmarking, and assess potential analogs, among other things. Information gathered from these visits is used to enhance the Board's evaluation of DOE activities and to advise and inform Congress and the Secretary of Energy.

## **EVALUATION OF BOARD PERFORMANCE IN FY 2019**

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The Board uses annual evaluations of its performance as input in updating its PGs and MGs for the current year and identifying PGs for the subsequent year. The PGs reflect the objectives of the agency leadership and are outcome-oriented. The annual evaluations of the Board's performance also are used as input to the development of the Board's annual budget request submittal.

**BOARD PERFORMANCE IN FY 2019 – PERFORMANCE GOALS.** The PGs, which are the subject of this evaluation, were included as part of the Board's Performance Plan for FYs 2019 through 2020 contained in the Board's Budget Request Submittal for FY 2020. In the following evaluation, the

Strategic Objectives on which the PGs are based are stated followed by a table displaying the associated PGs and the activities undertaken by the Board to accomplish the PGs in FY 2019.

**STRATEGIC OBJECTIVE #1:** *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.*

<b>FY 2019 PERFORMANCE GOAL</b>	<b>BOARD ACTIVITIES</b>
<p><b>PG 1-A:</b> The Board will hold a public meeting on DOE’s SNF-related R&amp;D activities, including R&amp;D on casks for high burnup SNF and activities and studies on direct disposal of SNF dry-storage canisters.</p>	<p>On October 24, 2018, the Board held a public meeting in Albuquerque, New Mexico, on DOE R&amp;D activities related to cask storage of high burnup SNF and on direct disposal of SNF dry-storage canisters: <a href="#">October 24, 2018, Board Meeting</a>.</p> <ul style="list-style-type: none"> <li>➤ Following the meeting, the Board issued a letter to DOE, providing the Board’s observations: <a href="#">November 27, 2018, Board letter</a>.</li> </ul>
<p><b>PG 1-B:</b> The Board will review DOE R&amp;D activities related to the management and disposal of aluminum-based and accident-tolerant SNF.</p>	<p>In May 2019, the Board attended the annual campaign meeting of the DOE Office of Nuclear Energy, Office of Spent Fuel and Waste Disposition to remain fully apprised of DOE R&amp;D activities in areas related to the management and disposal of SNF.</p> <p>In June 2019, the Board began planning a Fall 2019 public meeting on DOE R&amp;D on the packaging, drying, and storage of SNF.</p>
<p><b>PG 1-C:</b> The Board will continue to monitor and review DOE R&amp;D activities related to transport, storage, and disposal of borosilicate glass waste.</p>	<p>Throughout 2019, the Board obtained and reviewed DOE research results and reports on the disposal of borosilicate glass waste to remain cognizant of ongoing DOE efforts in this area.</p>
<p><b>PG 1-D:</b> The Board will continue to review the technical issues DOE will need to address before it can begin the implementation of an integrated program for the nationwide transport of SNF and HLW.</p>	<p>In 2019, the Board continued its review of issues related to the transport of SNF and HLW, which contributed to the completion of a Board report detailed in PG 2-A.</p>

**STRATEGIC OBJECTIVE #2:** *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.*

<b>FY 2019 PERFORMANCE GOAL</b>	<b>BOARD ACTIVITIES</b>
<p><b>PG 2-A:</b> The Board will issue a report on the technical issues DOE will need to address before it can begin the implementation of an integrated program for the nationwide transport of SNF and HLW.</p>	<p>In 2019, the Board issued a report to Congress and the Secretary of Energy on <i>Preparing for Nuclear Waste Transportation: Technical Issues that Need to be Addressed in Preparing for a Nationwide Effort to Transport Spent Nuclear Fuel and High-Level Radioactive Waste.</i></p> <ul style="list-style-type: none"> <li>➤ In 2019, the Board issued a Synopsis to accompany the Transportation Report.</li> </ul>
<p><b>PG 2-B:</b> The Board will issue a report summarizing its review activities, and its findings, conclusions and recommendations, from January 1, 2016, through June 30, 2018.</p>	<p>In 2019, the Board continued to develop a report to Congress and the Secretary of Energy summarizing its review activities, and its findings, conclusions, and recommendations. The reporting period of the report has been extended to include January 1, 2016, through December 31, 2018. The report is expected to be completed in FY 2020.</p>
<p><b>PG 2-C:</b> The Board plans to issue a report on the performance of high burnup SNF during extended dry storage and transportation.</p>	<p>In 2019, the Board continued to draft a report on the performance of high burnup SNF during extended dry storage and transportation. The report is expected to be completed in FY 2020.</p>
<p><b>PG 2-D:</b> The Board plans to issue a report on the system-wide implications of using large canisters for the dry storage of SNF.</p>	<p>In 2019, the Board continued to draft a report on the system-wide implications of using large canisters for the dry storage of SNF. The report is expected to be completed in FY 2020.</p>

***STRATEGIC OBJECTIVE #3:** 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.*

FY 2019 PERFORMANCE GOAL	BOARD ACTIVITIES
<p><b><u>PG 3-A:</u></b> The Board will hold a workshop on advances in repository science and operations from international underground research laboratory collaborations.</p>	<p>During April 24-25, 2019, the Board held a workshop in Burlingame, California, on advances in repository science and operations from international underground research laboratory collaborations:  <a href="#">April 24-25, 2019, Workshop.</a></p> <ul style="list-style-type: none"> <li>➤ The Board began drafting a report and a letter to Congress and the Secretary of Energy that will include the Board’s findings and recommendations. The report is expected to be completed in FY 2020.</li> </ul>
<p><b><u>PG 3-B:</u></b> The Board will continue to monitor activities in other countries related to programs for the management and disposal of SNF and HLW and update the information on its website, as appropriate.</p>	<p>The Board invited several presenters from other countries to participate in its April 24-25, 2019, workshop on advances in repository science and operations from international underground research laboratory collaborations. The presentations given at the workshop are posted on the Board’s website:  <a href="#">April 24-25, 2019, Workshop.</a></p> <p>In May 2019, the Chair and a member of the staff attended a meeting of the Advisory Bodies to Government, where the Board and advisory bodies from other countries shared new information and lessons learned on the topics of nuclear waste management and disposal.</p>

**BOARD PERFORMANCE IN FY 2019 – MANAGEMENT GOALS.** To enhance the effectiveness and efficiency of Board activities supporting its Strategic Objectives and PGs, the Board identified the MGs in the table below for FYs 2018 through 2019. The MGs were included in the Board’s Budget Request Submittal for FY 2019. The associated activities undertaken to accomplish the MGs are opposite their respective MGs in the table.

<b>FY 2019 MANAGEMENT GOAL</b>	<b>BOARD ACTIVITIES</b>
<p><b><u>MG-1:</u></b> The Board will continue to implement actions to optimize organizational efficiency and accountability and maximize employee performance.</p>	<p>In FY 2019, the Board:</p> <ul style="list-style-type: none"> <li>• proactively evaluated its performance to identify opportunities for improvement;</li> <li>• focused on where needs were greatest to ensure efficient operations;</li> <li>• evaluated how to achieve the best results.</li> </ul>
<p><b><u>MG-2:</u></b> The Board will identify any potential constraints on the agency’s ability to perform its mission and develop and implement integrated strategies for mitigating such constraints through proactive management and allocation of resources.</p>	<p>On an annual basis, the Board strategically assesses operational constraints that may affect its ability to achieve its mission and focuses attention and resources on addressing and mitigating the constraints. During FY 2019, two of the Board’s senior professional staff members retired; the Board announced vacancies but was not successful in identifying suitable candidates for recruitment. The Board has restarted its efforts to bring onboard both junior and senior personnel to support the Board achieving its technical mission.</p>
<p><b><u>MG-3:</u></b> The Board will maintain and enhance effective communications among Board members who are geographically dispersed. The Board will also facilitate communication between the Board members and the senior professional staff members who support the Board’s technical and scientific review of DOE activities from the Board offices in Arlington, Virginia.</p>	<p>In FY 2019, the Board continued to use an electronic drop box to facilitate Board member access to source materials, information write-ups by professional staff, and draft Board documents. The Board continued to hold monthly teleconferences.</p>
<p><b><u>MG-4:</u></b> The Board will continue webcasting its meetings and making available archived video recordings of the webcasts on its website.</p>	<p>In FY 2019, the Board continued to webcast its public meetings. Webcasts are archived and are available on the Board’s website at <a href="http://www.nwtrb.gov">www.nwtrb.gov</a>.</p>
<p><b><u>MG-5:</u></b> The Board will continue to conduct its ongoing reviews in the most cost-effective means possible.</p>	<p>The Board reduces costs and increases public participation by holding meetings near DOE facilities. In FY 2019, meetings were held in Albuquerque, NM, near Sandia National Laboratories and in Burlingame, CA, near the Lawrence Berkeley National Laboratory. The Board continues to reduce the number of</p>

	<p>printed reports by making them available on its website. Internal documents are coordinated electronically, and the staff will continue transitioning to electronic records.</p>
<p><b>MG-6:</b> The Board will take action to ensure that institutional memory and expertise are passed on to succeeding Board members and staff. When appropriate, the Board may also provide opportunities for one or more undergraduates or graduate students in disciplines related to the Board’s activities to support the Board’s technical staff in performing information research and technical analysis.</p>	<p>In FY 2019, updates and briefings on the Board’s mission, the Board’s work-in-progress, and plans for future review activities were provided to Board members and staff at Board business meetings held in conjunction with the Board’s public meetings. The Board held an additional business meeting to share information and plan future review activities.</p>
<p><b>MG-7:</b> The Board will update its technical resources and capabilities, as necessary, to maintain and improve the core competencies of its professional staff. The Board will develop and implement initiatives to identify, recruit when necessary, and retain, highly qualified professionals with the expertise and related knowledge needed to support the work of the Board members and help the Board achieve its Strategic Objectives and Performance Goals.</p>	<p>In FY 2019, the Board continued to increase the efficiency of its technological resources and capabilities by providing training on relevant software. On an ongoing basis, key IT systems and programs are updated to take advantage of recent technological advances. The Board is currently moving to maximize the use of electronic resources to reduce its reliance on its physical library system.</p>

## **APPROPRIATIONS LANGUAGE**

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### **U.S. NUCLEAR WASTE TECHNICAL REVIEW BOARD**

#### **SALARIES AND EXPENSES (INCLUDING TRANSFER OF FUNDS)**

“For expenses of the U.S. Nuclear Waste Technical Review Board, as authorized by Public Law 100-203, section 5051, \$3,600,000 to be derived from the Nuclear Waste Fund and to remain available until September 30, 2022.”

(Energy and Water Development and Related Agencies Appropriations Act, 2020.)

#### **SALARIES AND EXPENSES**

“Contingent upon enactment of authorizing legislation expanding the functions of the Nuclear Waste Technical Review Board to include the conduct of independent technical evaluations of research and development activities, processes, and facility designs and operations, and of alternative storage, transportation, and disposal strategies for spent nuclear fuel and high-level radioactive waste an additional \$2,000,000 for necessary expenses, to remain available until September 30, 2022, to be derived from the Nuclear Waste Fund.”

## **DETAILS OF BUDGET JUSTIFICATION FOR FY 2021**

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To fulfill its statutory mandate for reviewing the technical and scientific validity of activities undertaken by the Secretary of Energy related to nuclear waste management and for providing independent technical and scientific information and advice to Congress and the Secretary, the Board requests \$5,600,000, which is an increase from the agency's appropriations in FYs 2016 through 2020. The Board's Budget Request reflects the current request of \$3,600,000 coupled with the additional \$2,000,000 contingent upon enactment of authorizing legislation to expand its functions. The Board will continue its commitment to efficient and cost-effective budgeting and management practices even as costs rise.

A detailed explanation of the Board's request by Object Class follows.

### **OBJECT CLASS 11.0, SALARIES: \$2,745,000**

The estimate for this object class includes funding for 11 part-time Board members, one senior executive, senior professional staff, and General Schedule support staff, and includes within-grade increases. The Board members are Special Government Employees and, in accordance with the Board's enabling legislation, each member is compensated at the rate of pay of Executive Schedule Level III. The senior executive acts as the chief operating officer for the Board, and the senior professional staff members support the work of the Board members in evaluating the technical and scientific validity of DOE activities related to the management and disposal of SNF and HLW. The General Schedule (GS) staff members perform administrative activities related to the Board's ongoing technical and scientific evaluation and the operation of the organization. Administrative support activities include budget preparation and financial management, dissemination of Board publications, information technology activities, facilities management, travel planning, management of meeting logistics, and preparation and implementation of Board responses to federal directives. The Board's expanded mission will result in the need to increase its full-time equivalents (FTEs) by four personnel at a projected cost increase of \$580,000. The additional personnel needed to fulfill the expanded mission include one GS staff member and three professional staff members.

The Request also includes a one percent pay increase in civilian salaries, FERS increase, and supplemental funds for performance award pool increase in FY 2021. In accordance with OMB memo M-19-24, the Board established a Workforce Fund Plan which identifies the strategic spending of award funds. The Board plans to spend three percent of its projected employee salaries, including the salaries of those personnel expected to be hired during FY 2020, on awards to staff to incentivize continued high-level performance. As a result, the Board's projected awards spending level is \$48,884.

### **OBJECT CLASS 12.0, CIVILIAN PERSONNEL BENEFITS: \$748,000**

The estimate for this object class represents the government's contribution for the government employee fringe benefits for Board members and staff as required by OMB memo M-08-13. This includes the estimated increase of \$182,000 due to the four additional FTEs the Board plans to hire.



**OBJECT CLASS 21.1, TRAVEL AND TRANSPORTATION: \$335,000**

The estimate for this object class includes travel costs for Board members, staff, and consultants who are required to travel to Board meetings, fact-finding meetings, professional meetings, conferences, orientation activities, national laboratories, and other events and venues related to accomplishing the Board's Strategic Objectives and Performance Goals, as detailed in the Board's Performance Plan for FYs 2020 through 2021. With additional FTEs and the Board's expanded mission, travel is projected to increase by \$210,000 to ensure the Board meets its management and performance goals.

**OBJECT CLASS 23.0, RENTAL PAYMENTS TO THE GENERAL SERVICES ADMINISTRATION (GSA): \$300,000**

The amount requested in this object class category is to cover the expense of rental payments to GSA Public Building Services (PBS) under an Occupancy Agreement for leased office space in Arlington, VA. The amount reflected includes an estimated increase of \$36,000 for the estimated tax assessment, tax escalation fee, and GSA PBS fee for the FY 2021 lease year period.

**OBJECT CLASS 23.3, COMMUNICATION, UTILITIES, MISCELLANEOUS: \$200,000**

The estimate for this object class includes a projected increase of \$150,000 and represents costs for long-distance and local telephone service, postage, local courier services, video teleconferencing, webcasting support, internet, and mailing services. Furthermore, this amount includes the cost to achieve the Board's objective of network consolidation, modernization, and network re-architecture by transitioning to GSA's Enterprise Infrastructure Systems (EIS) contract.

**OBJECT CLASS 24.0, PRINTING AND REPRODUCTION: \$197,000**

The estimate for this object class is for costs associated with creating and publishing Board reports that are required by statute to be sent to Congress and the Secretary of Energy. The estimate includes an projected increase of \$177,000 which also includes the costs associated with the publication of additional reports and technical materials, as well as the costs associated with publishing meeting notices in the *Federal Register*. In keeping with the federal government's efforts to increase efficiency, the Board makes all its reports, publications, and correspondence available for download from its website. Hard copies of the reports are provided only on a limited distribution and when requested.

**OBJECT CLASS 25.0, CONSULTANTS: \$250,000**

The estimate for this object class includes a projected increase of \$170,000 to include funding for consultants to support and supplement Board and staff analyses of specific technical and scientific issues as authorized by the Board's enabling statute. Requested funding for this object class also includes estimates for creative consultants to assist the Board in developing and implementing methods that will increase public on-line access to its publications, informational resources, and other Board matters.

### **OBJECT CLASS 25.1/2, CONTRACTUAL SERVICES – OTHER: \$300,000**

The estimate for this object class is estimated to increase by \$215,000 and includes contractual costs associated with accomplishing the Board's mission. Estimated commercial contract costs include meeting-room rentals, stenography and audio-visual support services, webcasting, and video recording equipment rentals for public meetings; facility maintenance agreements; and professional development for Board supervisors and staff. Other program support contracts include services for report editing and production along with contracted commercial information technology (IT) support in compliance with the Federal Information Security Modernization Act (FISMA) of 2014. Support includes information security protections to prevent unauthorized access, use, disclosure, disruption, modification, or destruction of information and information systems on our network. Furthermore, the Board's network is monitored to timely detect and report cyber incidents and ensure necessary resources are maintained for cybersecurity needs at the Board's offsite data center. This budget estimate also includes funding to hire an additional contractor to support the Board to maintain compliance with Executive Order 13556, Controlled Unclassified Information (CUI), policies issued by the National Archives and Records Administration (NARA), 32 CFR Part 2002, "Controlled Unclassified Information," and OMB M-19-21, *Transition to Electronic Records*. This estimate further includes funding a contract to support the Board's requirement to maintain an Equal Employment Opportunity (EEO) program as required in Executive Order 12067, Providing for coordination of Federal Equal Employment Opportunity programs.

### **OBJECT CLASS 25.3, CONTRACTUAL SERVICES - FEDERAL: \$250,000**

The estimate for the object class includes a projected increase of \$50,000 which includes funding for administrative support services provided by other federal agencies, including payroll and accounting services received from GSA Office of the Chief Financial Officer (OCFO) as well as human resource services related to managing electronic official personnel folders, conducting personnel actions, and initiating personnel clearances, and legal support services received from GSA Commissions and Boards Services (CABS). The estimate also includes security background investigations performed by the Department of Defense, USAJOBS recruitment assistance received through the Office of Personnel Management and other support provided through interagency agreements. The Board's enabling legislation authorizes the procurement of necessary administrative services from GSA on a reimbursable basis. This estimate includes an increase in the costs of payroll and financial reporting and services and \$6,100 in building security fees levied by the Department of Homeland Security (DHS) Federal Protective Service (FPS). Furthermore, this estimate encompasses the support received from the Department of Health and Human Services (HHS), Federal Occupational Health Service (FOH) to provide occupational and/or environmental health services as well as personal identity verification (PIV) card support from GSA's Managed Service Office (MSO) for all Board personnel.

**OBJECT CLASS 26.0, SUPPLIES AND MATERIALS: \$175,000**

This estimate includes an estimated increase of \$150,000 for anticipated expenses for office supplies, subscriptions to technical publications and on-line academic journals and research databases, meeting supplies, and off-the-shelf technical reports and studies.

**OBJECT CLASS 31.0, EQUIPMENT: \$100,000**

This object class includes a projected increase of \$80,000 which includes costs to maintain IT and other electronic equipment, including computer hardware and software. The object class includes funding for the continuation of upgrades and ongoing maintenance to the Board's IT and physical security equipment, continuity of operations (COOP), support of E-Gov telecommuting efforts, and technical support for the management and ongoing maintenance and upgrades of the Board's cybersecurity initiatives.

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## U.S. NUCLEAR WASTE TECHNICAL REVIEW BOARD

### FY 2021 Budget Justification by Object Class

(Figures Rounded in Thousands of Dollars)

Object Class	Object Class Title	FY 2019 Enacted	FY 2020 Enacted	FY 2021 Request
11.0	Salaries	\$2,075	\$2,165	\$2,745
12.0	Benefits	519	566	748
21.0	Travel and Transportation	250	125	335
23.1	Rent	261	264	300
23.3	Communications and Utilities	40	50	200
24.0	Printing and Reproduction	20	20	197
25.0	Consultants	50	80	250
25.1/2	Contractual Services - Other	205	85	300
25.3	Contractual Services - Federal	80	200	250
26.0	Supplies and Materials	50	25	175
31.0	Equipment	50	20	100
<b>Total Budgetary Resources</b>		<b>\$3,600</b>	<b>\$3,600</b>	<b>\$5,600</b>
Total Full Time Equivalent Employees		14	16	20