

U.S. NUCLEAR WASTE TECHNICAL REVIEW BOARD



CONGRESSIONAL BUDGET JUSTIFICATION FISCAL YEAR 2019

INCLUDING BOARD PERFORMANCE GOALS FOR FISCAL YEARS 2018-2019

AND

EVALUATION OF BOARD PERFORMANCE IN FISCAL YEAR 2017

FEBRUARY 12, 2018



U.S. NUCLEAR WASTE TECHNICAL REVIEW BOARD

CONGRESSIONAL BUDGET JUSTIFICATION

FISCAL YEAR 2019

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U.S. NUCLEAR WASTE TECHNICAL REVIEW BOARD CONGRESSIONAL BUDGET JUSTIFICATION FISCAL YEAR 2019

INTRODUCTION

The U.S. Nuclear Waste Technical Review Board (Board) is an independent agency in the Executive Branch of the federal government. The Board performs 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) 2019 Congressional Budget Justification is the Board's Performance Plan for FYs 2018-2019 and the Board's evaluation of its FY 2017 performance. The Board's budget request for FY 2019 is \$3,600,000, which is the same as the agency's appropriation in FY 2017 and is consistent with the net total provided for the Board in the FY 2019 column of the Administration's FY 2018 Budget. The Board's budget request for FY 2019 reflects its continued strong commitment to sound budgeting and cost-effective management practices. Moreover, as outlined in this Congressional Budget Justification, the Board's leadership is dedicated to maximizing the Board's performance and efficiency through evidence-based decision-making and ongoing analysis and evaluation of the agency's performance.

ABOUT THE BOARD

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, including

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

In accordance with this mandate, and in line with the legislative history of the Nuclear Waste Policy Amendments Act (NWPAA) of 1987, the Board conducts an independent peer review 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 it 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

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 NWPA, 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 the findings, conclusions, and recommendations from its review of the technical and scientific validity of DOE’s activities to Congress and the Secretary of Energy.

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.

THE BOARD’S PERFORMANCE PLAN FOR FYs 2018-2019

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 and what does not work;
- (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.

The results of adopting a learning agenda approach will ensure that the Board’s Performance Goals and Strategic Objectives are prioritized to meet the agency’s mission.

STRATEGIC OBJECTIVES AND PERFORMANCE GOALS FOR FYs 2018-2019 – Following are the Strategic Objectives established in the Board’s Strategic Plan for FYs 2018-2022, followed by the relevant Performance Goals for FYs 2018-2019. The Performance Goals 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 GOAL 1-A: In FYs 2018-2019, the Board will continue to evaluate DOE activities under the NWPA related to the packaging, transportation, and disposal of SNF or HLW, including the following:

- Research and Development (R&D) related to the performance of high-burnup SNF during extended dry storage and transportation
- R&D related to degradation of dry-storage canisters and changes in spent fuel properties during long-term storage that may affect subsequent transport and disposal
- The status of DOE activities related to preparing to transport SNF and HLW
- DOE R&D activities related to disposal of SNF and HLW
- Other activities undertaken by DOE related to implementation of the NWPA and relevant amendments to that Act

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 GOAL 2-A: In FYs 2018-2019, the Board will hold public meetings and develop reports to Congress and the Secretary of Energy, as appropriate, on technical information and issues related to activities undertaken by DOE related to the implementation of the NWPA and relevant amendments to that Act.

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 GOAL 3-A: In FYs 2018-2019, the Board will consider reviewing activities related to DOE's efforts to develop a plan for retrieval of nuclear waste for a limited period prior to repository closure.

PERFORMANCE GOAL 3-B: In FYs 2018-2019, the Board will continue to monitor activities in other countries related to programs for the management and disposal of SNF and HLW. The Board also intends to update the information on its website periodically to record changes and progress made in the development of nuclear waste management programs in the U.S. and other countries.

BOARD MANAGEMENT GOALS FOR FYs 2018-2019 – To enhance the effectiveness and efficiency of Board activities supporting its Strategic Objectives and Performance Goals, the Board has identified the following Management Goals for FYs 2018-2019:

- The Board will implement actions to optimize organizational efficiency and accountability and maximize employee performance.
- The Board will identify risks to the agency and develop and implement integrated strategies for mitigating risk through proactive management and allocation of resources.
- 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's offices in Arlington, Virginia.
- The Board will continue webcasting its meetings and making available archived video recordings of the webcasts on its website.
- The Board will endeavor to conduct its ongoing review in the most cost-effective means possible.
- The Board will take action to ensure that institutional memory and expertise are passed on to succeeding Board members and staff, in order to maintain the utility of the Board's work to Congress, the Secretary of Energy, and interested members of the public. 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.
- The Board will update its technical resources and capabilities, as necessary, in order 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.

ACHIEVING THE BOARD'S STRATEGIC OBJECTIVES AND PERFORMANCE GOALS IN FYs 2018-2019 –

Following is a description of Board activities and practices that will support the successful achievement of the Strategic Objectives and Performance Goals presented above.

- **AUTHORITY UNDER THE LAW** - The Board has the necessary authority, under current law, to achieve its Strategic Objectives and Performance Goals.
- **LEADERSHIP ENGAGEMENT** - The Board's current Strategic Objectives are established in its Strategic Plan covering FYs 2018-2022. 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, which plays an important role in the formulation of the Board's annual budget request.
- **EFFECTIVE ALLOCATION OF RESOURCES** - Analyses of DOE's technical and scientific information 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 the relevant scientific and technical disciplines. Based on the Board's analyses, the Board reports its findings, conclusions, and recommendations to Congress and the Secretary of Energy.

When necessary, the Board is authorized to hire expert consultants to support its in-depth reviews of specific technical topics.

- **ONGOING EVALUATION OF PERFORMANCE** - The Board includes in its annual Budget Request Submittal and Congressional Budget Justification an evaluation of the Board's performance in achieving its Performance Goals for the preceding fiscal year.
- **CULTURE OF ACCOUNTABILITY** - 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. The Board reports its findings, conclusions, and recommendations to Congress and the Secretary of Energy at least twice each year, 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.
- **TRANSPARENCY, COLLABORATION, AND PUBLIC ENGAGEMENT** - To support 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 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. Beginning in 2015, the Board increased the transparency of its deliberations by "webcasting" its public meetings. Webcasts are archived and are available on the Board's website. In addition to these public meetings, Board panels or other small groups of Board members and staff hold other meetings, as needed, to investigate specific technical topics.

The Board also engages 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. 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 in order to observe their technical programs and best practices, perform benchmarking, and assess potential analogs, among other things. 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.

EVALUATION OF BOARD PERFORMANCE IN FY 2017

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 also are used as input to the development of the Board's annual budget request. The evaluation of the Board's performance in achieving its Performance Goals is evidence-based, and the referenced documents and meeting records can be accessed on the Board's website at www.nwtrb.gov.

In its Budget Request Submittal for FY 2018, the Board identified Performance Goals for FYs 2017-2018. The Performance Goals were based on Strategic Objectives established in the Board's Strategic Plan for FYs 2014-2018.

EVALUATION OF PERFORMANCE IN FY 2017 RELATED TO PERFORMANCE GOALS

STRATEGIC OBJECTIVE #1: *The Board will continue its evaluation of DOE activities related to implementation of the NWPA. Based on its evaluation, the Board will report its findings, conclusions, and recommendations to Congress and the Secretary.*

PERFORMANCE GOAL 1-A: In FY 2017-2018, the Board will continue to monitor or evaluate DOE activities related to the packaging, transportation, or disposal of SNF and HLW, including the following:

- Research and development (R&D) related to the performance of high-burnup SNF during extended dry storage and transportation
- R&D related to degradation of dry-storage canisters

EVALUATION OF BOARD PERFORMANCE IN FY 2017 – PERFORMANCE GOAL 1-A

- A Board report, “Evaluation of DOE Research Program to Determine the Potential Degradation of Commercial High Burn-Up SNF during Extended Storage and Transportation,” is underway and is scheduled for release in FY 2018. (See evaluation of Goal 2-E.)
- In FY 2017, the Board monitored DOE’s work on chloride-induced stress corrosion cracking of dry-storage canisters and developed a [fact sheet](#) on the topic. (See evaluation of Goal 2-F.)
- On December 19, 2016, the Board posted its [Report to Congress and the Secretary of Energy - Board Activities for the Period January 1, 2013 - December 31, 2015.](#)

PERFORMANCE GOAL 1-B: In FY 2017-2018, the Board will continue to evaluate activities undertaken by DOE’s Office of Environmental Management (DOE-EM) that will affect the packaging, transportation, or disposal of HLW, including R&D planned by DOE on HLW forms, specifically on borosilicate glass degradation and long-term performance in a repository.

EVALUATION OF BOARD PERFORMANCE IN FY 2017 – PERFORMANCE GOAL 1-B

- On December 8, 2016, the Board sent [a letter to Dr. Monica Regalbuto of the DOE Office of Environmental Management \(DOE-EM\) and Mr. John Kotek of the DOE Office of Nuclear Energy \(DOE-NE\)](#) with observations and recommendations from the [Board public meeting held in Washington, DC](#) on August 24, 2016, at which DOE activities related to developing an integrated program for transporting and disposing of SNF and HLW were discussed.
- On August 16, 2017, the Board sent [a letter to Mr. James Owendoff of DOE-EM and Mr. Edward McGinnis of DOE-NE](#) with Board observations from the [Board public meeting held in Richland, Washington](#) on June 21, 2017, on the corrosion of HLW borosilicate glass. (See evaluation of Performance Goal 2-D.)

STRATEGIC OBJECTIVE #2: *The Board will develop objective technical 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, correspondence, and testimony.*

PERFORMANCE GOAL 2-A: In FY 2017-2018, the Board will finalize and issue a report on the management and disposal of DOE SNF stored at federal facilities. The report is the culmination of a study by the Board of, among other things, the status of DOE SNF and the facilities where it is stored, the condition of DOE SNF, and the amounts of DOE SNF being stored at Hanford, the Idaho National Laboratory, the Savannah River Site, and Fort St. Vrain.

EVALUATION OF BOARD PERFORMANCE IN FY 2017 – PERFORMANCE GOAL 2-A

- The Board expects to issue the report, “Management and Disposal of U.S. Department of Energy Spent Nuclear Fuel,” in FY 2018.¹

PERFORMANCE GOAL 2-B: In FY 2017-2018, the Board will publish a report to Congress and the Secretary on technical information and issues related to the use of large canisters for dry-storage of SNF at utility sites and the impacts of the canisters on the waste management system, including transportation and disposal of SNF.

EVALUATION OF BOARD PERFORMANCE IN FY 2017 – PERFORMANCE GOAL 2-B

- The report on dry storage canisters is underway, and the Board expects to issue it in FY 2018.

¹ The Board report, *Management and Disposal of U.S. Department of Energy Spent Nuclear Fuel*, was published electronically in December 2017. It is available on the Board’s website at <https://www.nwtrb.gov/docs/default-source/reports/nwtrb-mngmntanddisposal-dec2017-508a.pdf?sfvrsn=8>.

PERFORMANCE GOAL 2-C: In FY 2017-2018, concurrent with the report on dry-storage canisters referenced above, the Board will issue a report on a system analysis tool developed by the Board to support its evaluation of DOE activities.

EVALUATION OF BOARD PERFORMANCE IN FY 2017 – PERFORMANCE GOAL 2-C

- Preparation of the report on the system analysis tool is underway, and the Board expects to issue it, together with the report on dry-storage canisters, in FY 2018.

PERFORMANCE GOAL 2-D: In FY 2017-2018, the Board will hold a meeting on June 21, 2017, on corrosion of HLW borosilicate glass and the performance of HLW borosilicate glass in a repository. The Board will convey to DOE its findings, conclusions, and recommendations from its review of DOE activities in these areas.

EVALUATION OF BOARD PERFORMANCE IN FY 2017 – PERFORMANCE GOAL 2-D

- On August 16, 2017, the Board sent [a letter to Mr. James Owendoff of DOE-EM and Mr. Edward McGinnis of DOE-NE](#) with Board observations from the [Board public meeting held in Richland, Washington](#) on June 21, 2017, on the corrosion of HLW borosilicate glass. (See evaluation of Performance Goal 1-B.)

PERFORMANCE GOAL 2-E: In FY 2017-2018, the Board will issue a report on the performance of high burnup fuel during storage and transportation and the impacts on the waste management system.

EVALUATION OF BOARD PERFORMANCE IN FY 2017 – PERFORMANCE GOAL 2-E

- A Board report, “Evaluation of DOE Research Program to Determine the Potential Degradation of Commercial High Burn-Up SNF during Extended Storage and Transportation,” is underway and is scheduled for release in FY 2018. (See evaluation of Goal 1-A.)

PERFORMANCE GOAL 2-F: In FY 2017-2018, the Board will develop fact sheets on issues related to its review of SNF and HLW management, and synopses of recent Board reports. The fact sheets and synopses will be posted on the Board’s website and used to inform decision-makers and members of the public on technical issues related to nuclear waste management.

EVALUATION OF BOARD PERFORMANCE IN FY 2017 – PERFORMANCE GOAL 2-F

- A [fact sheet](#) was developed on chloride-induced stress corrosion cracking of dry-storage canisters and posted on the Board’s website in March 2017. (See evaluation of Goal 1-A.)

STRATEGIC OBJECTIVE #3: *The Board will compile information and report to Congress and the Secretary on its findings, conclusions, and recommendations from experience gained from almost thirty years of reviewing the U.S. nuclear waste management and disposal program and from observing waste management efforts in other countries.*

PERFORMANCE GOAL 3-A: In FY 2017-2018, the Board will continue to bring up to date its Survey reports on programs in the U.S. and other countries with nuclear waste management programs. The updates will be posted on the Board's website.

EVALUATION OF BOARD PERFORMANCE IN FY 2017 – PERFORMANCE GOAL 3-A

- In FY 2017, the Board continued to monitor information on programs in other countries. In FY 2018, the Board intends to update the information on its website, periodically, to record changes and progress made in the development of nuclear waste management programs in the U.S. and other countries.

EVALUATION OF PERFORMANCE IN FY 2017 RELATED TO MANAGEMENT GOALS

PERFORMANCE GOAL FOR FYS 2017- 2018	EVALUATION OF FY 2017 PERFORMANCE
<ul style="list-style-type: none"> The Board will maintain effective communications among Board members who are geographically dispersed. The Board will also facilitate communication among the Board members and the professional staff members who support the Board's review of DOE activities from the Board's offices in Arlington, Virginia. 	<ul style="list-style-type: none"> ➤ In FY 2017, the Board continued to use an electronic “drop box” to facilitate Board member access to source materials and draft Board documents. The drop box has improved access to the documents and reduced the need for multiple paper copies. The Board continues to hold monthly teleconferences.
<ul style="list-style-type: none"> The Board will, to the extent feasible, enable access to the Board's discussions and deliberations by interested members of the public. 	<ul style="list-style-type: none"> ➤ In FY 2017, the Board continued webcasting of its meetings. The webcasts are archived and available on the Board's website: www.nwtrb.gov.
<ul style="list-style-type: none"> The Board will endeavor to obtain information and conduct its review in the most cost-effective means possible. 	<ul style="list-style-type: none"> ➤ When possible, the Board reduces costs and increases public participation by holding meetings in the vicinity of DOE facilities. The Board continued this practice in 2017 by holding a public meeting in Richland, Washington, near the Hanford site and the Pacific Northwest National Laboratory (PNNL). PNNL conducts research on the meeting topic: performance and degradation of borosilicate glass.
<ul style="list-style-type: none"> The Board will take actions to ensure that its institutional memory and expertise can be passed on to succeeding Board members and staff, as well as to Congress, the Secretary of Energy, and interested members of the public. The Board may also provide opportunities for undergraduates or graduate students in fields related to the backend of the nuclear fuel cycle to gain practical experience by supporting the Board's technical staff in performing information research and technical analyses as part of a summer internship program. 	<ul style="list-style-type: none"> ➤ In FY 2017, a day-long orientation session was held for a new Board member, at which the senior professional staff and the Board Chair provided information and briefings on the Board's mission, the Board's work-in-progress, and plans for future evaluations of DOE activities.
<ul style="list-style-type: none"> The Board will regularly update its technological resources and capabilities and assess the core technical and scientific competencies of its senior professional staff. The Board will develop and implement initiatives to identify, recruit when necessary, and retain, highly qualified professionals with the technical and scientific knowledge needed to support the Board's work and achieve its Strategic Objectives. 	<ul style="list-style-type: none"> ➤ In FY 2017, the agency continued to increase the efficiency of its technological resources and capabilities by providing training sessions on the use of collaboration software. Some key IT systems and programs were updated to take advantage of recent technological advances.

U.S. NUCLEAR WASTE TECHNICAL REVIEW BOARD

SALARIES AND EXPENSES (INCLUDING TRANSFER OF FUNDS)

For necessary 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, 2020.

DETAILS OF CONGRESSIONAL BUDGET JUSTIFICATION FOR FY 2019

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 \$3,600,000 for FY 2019, which is the same amount as the agency's appropriation in FY 2017 and is consistent with the net total provided for the Board in the FY 2019 column of the Administration's FY 2018 Budget. The Board's budget request reflects its continuing commitment to efficient and cost-effective budgeting and management practices.

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

OBJECT CLASS 11.0, SALARIES: \$2,075,000

The estimate for this object class includes funding for 11 part-time Board members, Executive Schedule senior professional staff, and General Schedule support staff. The 11 part-time 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 professional staff members support the work of the 11 part-time 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 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.

OBJECT CLASS 12.0, CIVILIAN PERSONNEL BENEFITS: \$519,000

The estimate for this object class represents the government's contribution for employee benefits for Board members and staff.

OBJECT CLASS 21.1, TRAVEL AND TRANSPORTATION: \$250,000

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 2018-2019.

OBJECT CLASS 23.0, RENTAL PAYMENTS TO THE GENERAL SERVICES ADMINISTRATION: \$261,000

The estimate for this object class represents the amount that the Board will pay to the General Services Administration under its contract for rental of the Board's office space in Arlington, VA.

OBJECT CLASS 23.3, COMMUNICATION, UTILITIES, MISCELLANEOUS: \$40,000

The estimate for this object class represents costs for long-distance and local telephone service, postage, local courier services, video teleconferencing, webcasting support, internet, and mailing services. Following analysis of actual spending in the previous fiscal year, the Board's request for this object class category is consistent with the amount requested for FY 2017.

OBJECT CLASS 24.0, PRINTING AND REPRODUCTION: \$20,000

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 at least twice per year. The estimate 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*. The amount requested in this object class category has been reduced by 50%. 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 only provided on a limited distribution and when requested.

OBJECT CLASS 25.0, CONSULTANTS: \$50,000

The estimate for this object class includes funding for consultants to support and supplement Board and staff analyses of specific technical and scientific issues as authorized by Congress. Requested funding for this object class category also includes estimates for creative consultants to assist the Board in developing and implementing methods that will increase public on-line access to its deliberations, informational resources, and other Board matters.

OBJECT CLASS 25.1/2, CONTRACTUAL SERVICES - OTHER: \$205,000

The estimate for this object class 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 Board Meetings, facility maintenance agreements, and professional development for Board supervisors and staff. Other program support contracts include services for contracted commercial IT support and report editing and production.

OBJECT CLASS 25.3, CONTRACTUAL SERVICES - FEDERAL: \$80,000

The estimate for the object class includes funding for administrative support services provided by other federal agencies such as payroll, accounting services, human resource support related to management of official personnel folders, recording various personnel actions, and initiating personnel clearances. Also included is legal advice from the General Services Administration, security clearances through the Office of Personnel Management, building security services from the Department of Homeland Security, website hosting services from the Government Printing Office, and other support provided through miscellaneous interagency agreements. The Board's enabling legislation authorizes the procurement of necessary administrative services from the General Service Administration on a reimbursable basis. Following analysis of actual spending in the previous fiscal year, the Board's request for this object class category has been reduced from the amount requested for FY 2017.

OBJECT CLASS 26.0, SUPPLIES AND MATERIALS: \$50,000

This estimate includes 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: \$50,000

The estimate for this object class includes costs to purchase 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.

U.S. NUCLEAR WASTE TECHNICAL REVIEW BOARD

FY 2019 Budget Request by Object Class

(Figures Rounded in Thousands of Dollars)

Object Class Code	Object Class	FY 2017 Actual	FY 2018 Request	FY 2019 Request
11.0	Salaries	\$1,998	\$2,036	\$2,075
12.0	Benefits	500	509	519
21.1	Travel and Transportation	250	250	250
23.0	Rent	240	240	261
23.3	Communications and Utilities	40	40	40
24.0	Printing and Reproduction	40	40	20
25.0	Consultants	55	50	50
25.1/2	Contractual Services - Other	268	255	205
25.3	Contractual Services - Federal	84	80	80
26.0	Supplies and Materials	60	50	50
31.0	Equipment	65	50	50
Total Budgetary Request		\$3,600	\$3,600	\$3,600
Total Full Time Equivalent Employees		14	14	14