

FY 2021  
Congressional Budget  
Request

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FY 2019  
Annual Performance  
Report



Defense Nuclear  
Facilities Safety Board

**February 19, 2020**

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## GOVERNMENT PERFORMANCE AND RESULTS ACT (GPRA) MODERNIZATION ACT

### **GPRA Strategic Planning Reporting Requirements**

The GPRA Modernization Act of 2010 requires each agency to make available on its website a strategic plan establishing general strategic goals and objectives for a period of not less than four years. The Defense Nuclear Facilities Safety Board's (Board) Strategic Plan for Fiscal Years (FY) 2018–2022 (revised December 2019) is available on the Internet at [www.dnfsb.gov](http://www.dnfsb.gov). In addition, agencies are required to develop an Annual Performance Report (APR) that provides information on the agency's progress achieving the goals and objectives described in the Strategic Plan and Annual Performance Plan (APP). The Board's FY 2019 APR, based on the original plan, and the FY 2021 APP, based on the revised plan, are included in this Budget Request in accordance with the requirements of the Office of Management and Budget Circular A-11.

# Defense Nuclear Facilities Safety Board

FY 2021 Congressional Budget Request • FY 2019 Annual Performance Report

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## PROPOSED APPROPRIATIONS LANGUAGE

### Salaries and Expenses

For expenses necessary for the Defense Nuclear Facilities Safety Board in carrying out activities authorized by the Atomic Energy Act of 1954, as amended by Public Law 100-456, section 1441, \$28,836,000, to remain available until September 30, 2022.

### FY 2021 REQUEST EXECUTIVE SUMMARY

The Board requests \$28,836,000 and 114 full-time equivalents (FTEs) to carry out its mission in FY 2021. This is a seven percent decrease from the agency's FY 2020 appropriation level of \$31,000,000.

The Board's foundation is built on the expertise of its Board members and its staff in support of the Board's mission, and approximately two-thirds of the Board's annual budget is dedicated to salaries and benefits. The Board will be executing an aggressive staffing plan for FY 2020 and FY 2021 focused on hiring highly skilled engineers, scientists, and professionals to support the agency's mission. These hiring levels will significantly reduce the carryover funding in FY 2021.

The Board's FY 2021 request also includes maintaining cybersecurity, physical security, and secure communications. The Board will also continue to focus on employee engagement and strategic planning. These investments enable the staff to do mission-critical work more efficiently and effectively.

### Operating Expense Summary

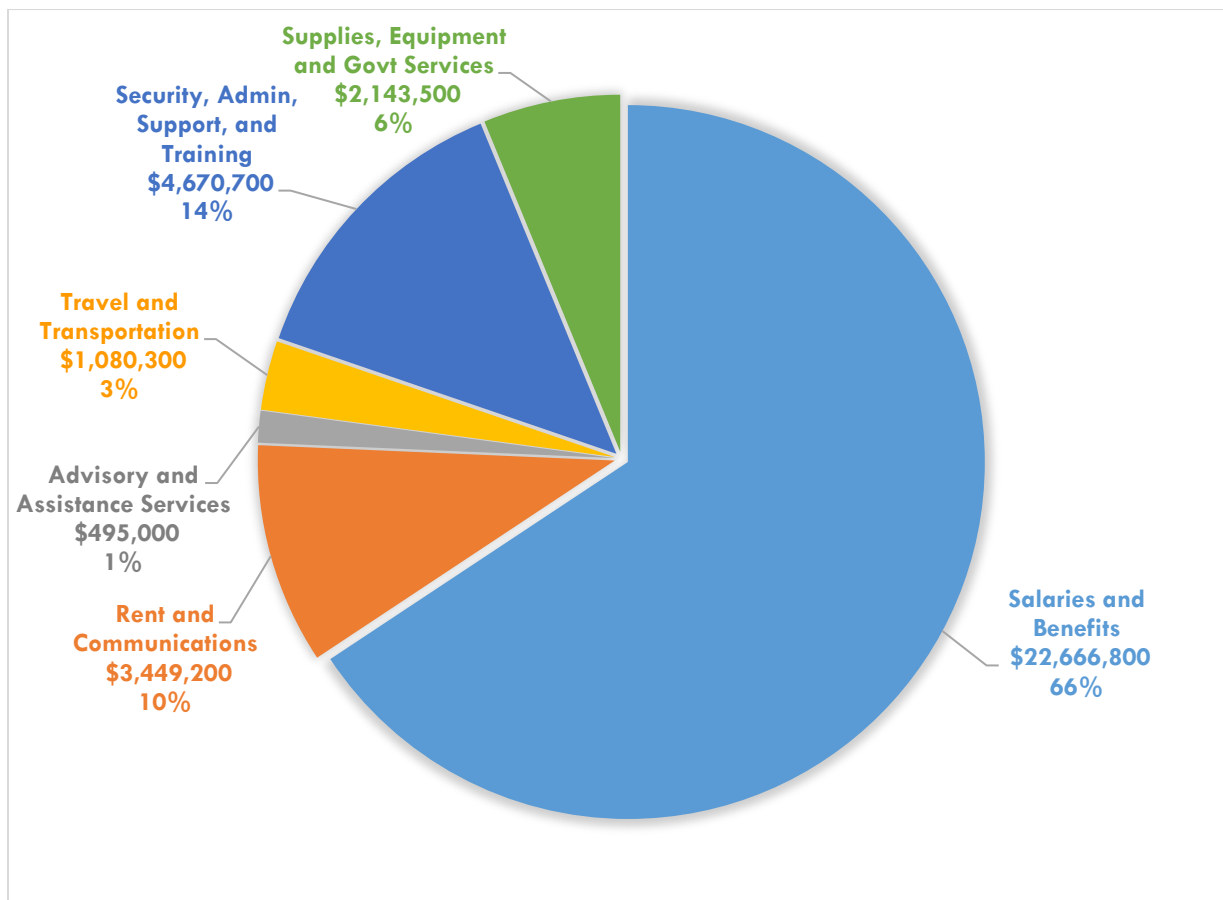
	FY 2019 Actual	FY 2020 Plan	FY 2021 Request
<b>Budget Authority</b>	31,000	31,000	28,836
<b>Obligations</b>	28,362	31,487	34,505
<b>Outlays</b>	26,007	29,598	32,435

*Numbers in thousands*

### Personnel Summary

	FY 2019 Actual	FY 2020 Plan	FY 2021 Request
<b>Statutory Personnel (FTE) Ceiling</b>	130	130	130
<b>On-Board</b>	87	113	116
<b>FTE Usage</b>	87	100	114

### FY 2021 Projected Obligations by Major Category



## THE MISSION

### Mission Statement

The mission of the Board shall be to provide independent analysis, advice, and recommendations to the Secretary of Energy to inform the Secretary, in the role of the Secretary as operator and regulator of the defense nuclear facilities of the Department of Energy, in providing adequate protection of public health and safety at such defense nuclear facilities, including with respect to the health and safety of employees and contractors at such facilities.

42 U.S.C. § 2286a(a)

### The Board's Legislative Mandate

The Board's specific functions are delineated in its enabling statute at 42 U.S.C. § 2286a(b):

- The Board shall review and evaluate the content and implementation of the standards relating to the design, construction, operation, and decommissioning of defense nuclear facilities of the Department of Energy (including all applicable Department of Energy orders, regulations, and requirements) at each Department of Energy defense nuclear facility. The Board shall recommend to the Secretary of Energy those specific measures that should be adopted to ensure that public health and safety are adequately protected. The Board shall include in its recommendations necessary changes in the content and implementation of such standards, as well as matters on which additional data or additional research are needed.
- The Board shall investigate any event or practice at a Department of Energy defense nuclear facility that the Board determines has adversely affected, or may adversely affect, public health and safety.
- The Board shall have access to and may systematically analyze design and operational data, including safety analysis reports, from any Department of Energy defense nuclear facility.
- The Board shall review the design of a new Department of Energy defense nuclear facility before construction of such facility begins and shall recommend to the Secretary, within a reasonable time, such modifications of the design as the Board considers necessary to ensure adequate protection of public health and safety. During the construction of any such facility, the Board shall periodically review and monitor the construction and shall submit to the Secretary, within a reasonable time, such recommendations relating to the construction of that facility as the Board considers necessary to ensure adequate protection of public health and safety. An action of the Board, or a failure to act, under this paragraph may not delay or prevent the Secretary of Energy from carrying out the construction of such a facility.
- The Board shall make such recommendations to the Secretary of Energy with respect to Department of Energy defense nuclear facilities, including operations of such facilities, standards, and research needs, as the Board determines are necessary to ensure adequate protection of public health and safety. In making its recommendations, the Board shall consider, and specifically assess, risk (whenever sufficient data exists), and the technical and economic feasibility of implementing the recommended measures.

### FY 2018 – 2022 Strategic Plan

The Board published an updated FY 2018–2022 agency Strategic Plan that established these strategic goals and objectives in December 2019. The FY 2019 Annual Performance Report provided herein is aligned with the goals and objectives established in the original FY 2018–2022 agency Strategic Plan,

not the updated plan summarized on this page. The original FY 2018–2022 agency Strategic Plan is summarized on page 13.

### **Strategic Goal 1**

Provide proactive and independent oversight of the defense nuclear complex.

Strategic Objective 1.1 – Complete timely, high-quality safety reviews that identify and analyze safety issues and best practices, and search for similar challenges complex-wide.

Strategic Objective 1.2 – Develop and issue advice and recommendations designed to ensure safety and employ best practices within the defense nuclear complex.

Strategic Objective 1.3 – Provide robust field oversight of facilities and projects across the defense nuclear complex.

### **Strategic Goal 2**

Enhance transparency of ongoing Agency initiatives and the state of safety within the defense nuclear complex.

Strategic Objective 2.1 – Proactively sustain sound working relationships with relevant government and non-governmental entities.

Strategic Objective 2.2 – Improve timely dissemination of information about the Board priorities and conclusions regarding the state of safety at Defense Nuclear Facilities.

### **Strategic Goal 3**

Develop and maintain an outstanding workforce to achieve the Agency’s mission.

Strategic Objective 3.1 – Cultivate an agile workforce with the skills necessary to meet the mission.

Strategic Objective 3.2 – Use professional development and training to efficiently and effectively accomplish the mission.

### **Strategic Goal 4**

Maximize the DNFSB’s performance by pursuing excellence in our Agency culture and operations.

Strategic Objective 4.1 – Pursue efficiency through continuous improvement of internal policies and procedures through testing and evaluation.

Strategic Objective 4.2 – Establish and maintain a culture that encourages teamwork and innovation across the Agency in accordance with core values.

Strategic Objective 4.3 – Strengthen operational performance by modernizing Agency processes and associated infrastructure.

## ORGANIZATIONAL STRUCTURE

The five-member Board<sup>1</sup> leads the agency in accomplishing its mission and determines actions regarding the safety aspects of the design, construction, operation, and decommissioning of the Department of Energy's (DOE) defense nuclear facilities.



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### CHAIRMAN

Mr. Bruce Hamilton



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### Board Member

Ms. Jessie Hill Roberson



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### Board Member

Ms. Joyce L. Connery

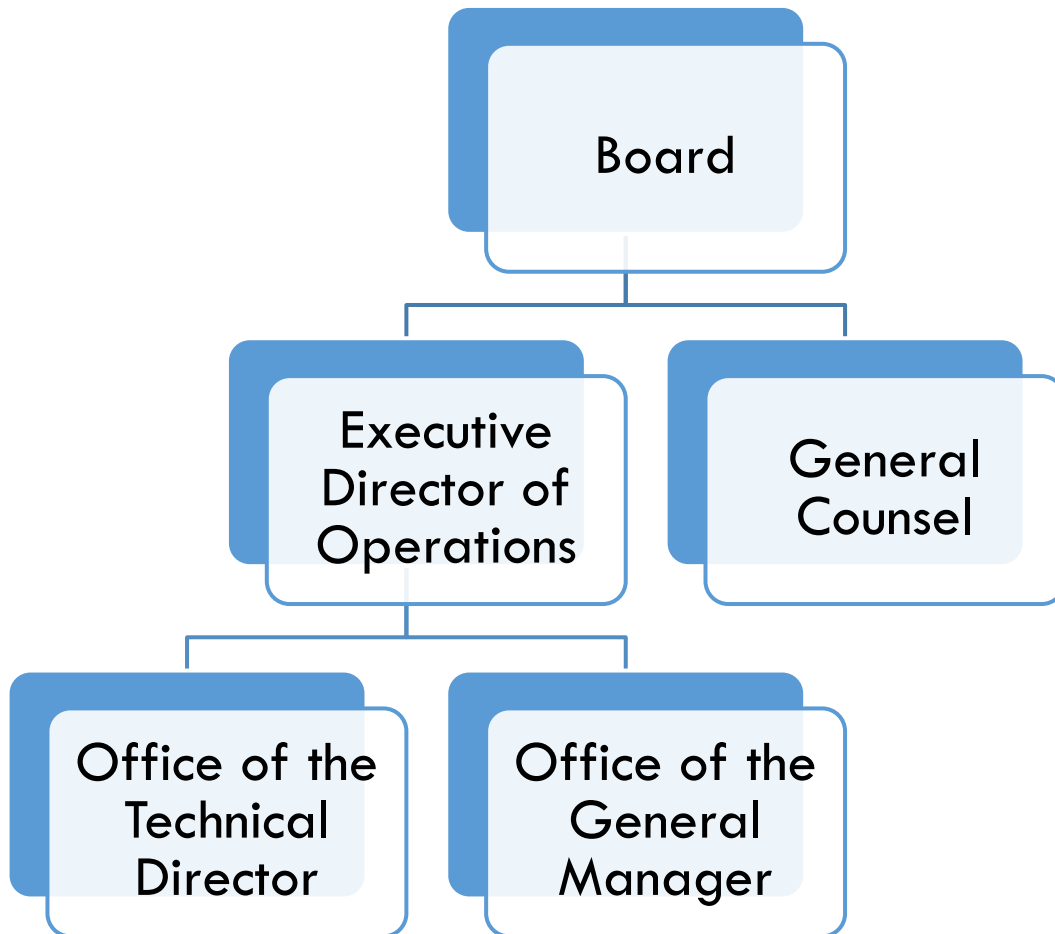
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<sup>1</sup> There are currently two vacancies on the Board.



## Organizational Chart

The Board is statutorily capped at 130 federal FTEs and is currently arranged in three offices under the five-member board. The majority of FTEs are assigned to the Office of the Technical Director (OTD), where they directly carry out the mission of the Board, supported by the Office of the General Manager (OGM) and the Office of the General Counsel (OGC). The National Defense Authorization Act for FY 2020 included direction that the Chairman delegate the administrative functions of the Board, appointment and supervision of employees other than the General Counsel, and other specified business functions to an Executive Director of Operations. The Board intends to fill this executive position during FY 2020.



## FY 2021 BUDGET RESOURCE REQUEST SUMMARY

### Obligations by Fiscal Year

Budget Account -- OC	FY 2019 Actual	FY 2020 Financial Plan	FY 2021 Budget Request
PERSONNEL SALARIES -- (11)	12,537,300	14,786,800	17,048,000
PERSONNEL BENEFITS -- (12)	4,111,600	4,856,700	5,618,800
BENEFITS FOR FORMER PERSONNEL -- (13)	-	-	-
TRAVEL -- (21)	710,900	1,026,000	1,026,000
TRANSPORTATION OF THINGS -- (22)	54,800	54,300	54,300
RENTAL PAYMENTS TO GSA -- (23.1)	2,998,500	3,086,800	3,102,200
COMMUNICATIONS & UTILITIES (23.3)	157,400	347,000	347,000
PRINTING & REPRODUCTION -- (24)	26,800	29,100	29,100
ADVISORY & ASSISTANCE SERVICES -- (25.1)	151,700	495,000	495,000
OTHER SERVICES -- (25.2)	5,464,200	4,297,100	4,507,200
GOVERNMENT SERVICES -- (25.3)	1,054,600	1,392,900	1,453,700
OPERATION & MAINT. OF FACILITIES -- (25.4)	4,100	27,000	27,000
OPERATION & MAINT. OF EQUIPMENT -- (25.7)	22,400	107,400	107,400
SUPPLIES & MATERIALS -- (26)	216,600	323,800	323,800
ACQUISITION OF ASSETS -- (31)	850,600	657,000	366,000
<b>TOTAL OBLIGATIONS</b>	<b>28,361,500</b>	<b>31,486,900</b>	<b>34,505,500</b>
NEW BUDGET AUTHORITY	31,000,000	31,000,000	28,836,000
UNOBLIGATED BALANCE - PREV. FY	5,144,000	8,115,500	8,171,600
RECOVERY OF PRIOR YEAR OBLIGATIONS	333,000	543,000	300,000
<b>TOTAL BUDGETARY RESOURCES</b>	<b>36,477,000</b>	<b>39,658,500</b>	<b>37,307,600</b>
EST. UNOBLIGATED BAL. - CUR. FY	8,115,500	8,171,600	2,802,100
<b>OUTLAYS</b>	<b>26,007,000</b>	<b>29,597,700</b>	<b>32,435,200</b>
STAFF & BOARD MEMBERS (FTE)	87	100	114

## FY 2021 Budget Request Justification Highlights

### Salaries and Benefits (OC 10)

The FY 2021 request includes funding of \$22,666,800 to support the projected salary and benefit costs for 114 FTEs. The funding for salaries and benefits represents 66 percent of the Board's FY 2021 estimated obligations. In calculating the projected salary and benefits needs of the Board, the following federal pay adjustment and benefits factors for executive branch employees are used:

- Civilian pay increase of 1 percent in January 2021
- Employee benefits of 33 percent of salaries

*Note: personnel benefit (OC 12) costs also include other costs (e.g., change of station, public transit subsidies).*

In establishing the Board, Congress sought to bring the best talent available to focus on health and safety oversight associated with the design, construction, operation, and decommissioning of DOE's defense nuclear facilities. The recruitment and retention of scientific and technical staff with outstanding qualifications are the key components in the Board's human capital strategy. The Board has assembled a small and highly talented technical staff with extensive backgrounds in science and engineering disciplines, such as nuclear-chemical processing, conduct of operations, general nuclear safety analysis, conventional and nuclear explosive technology and safety, storage of nuclear materials, nuclear criticality safety, and radioactive waste management. Most of the technical staff have technical master's degrees, and many hold doctoral degrees. Many of the Board's technical staff members possess practical nuclear experience gained from duty in the U.S. Navy's nuclear propulsion program, the nuclear weapons field, or the civilian nuclear power industry. In order to accomplish the Board's highly technical mission, it is of paramount importance that the Board receives funds to meet the salary and benefit requirements of the staff.

The Board maintains a cadre of 10 resident inspectors that provides a cost-effective means for the Board to closely monitor DOE activities and to identify health and safety concerns promptly by conducting first-hand assessments of nuclear safety management at five priority sites. Resident inspectors regularly interact with the public, union members, congressional staff members, and public officials from federal, state, and local agencies. Staff may be temporarily assigned to sites for a period of weeks or months to augment Resident Inspectors and/or as a development tool. The Board has authorized three more resident inspector positions consistent with the Board's nuclear safety oversight priorities at the Savannah River Site, Hanford, and Los Alamos National Laboratory.

### Travel (OC 21)

The Board requests \$1,026,600 to support the official travel of Board members and staff. Extensive travel to the various DOE defense nuclear facilities located throughout the United States is necessary for Board members and staff to conduct first-hand assessments of operations and associated health and safety issues. In order to fulfill its mission, the Board assigns technical staff teams to near-continuous monitoring of major startup, testing, restart, or other activities at various DOE sites.

Travel funds are also used to pay for expenses associated with public hearings and meetings at or near DOE sites, where any interested persons or groups may present comments, technical information, or data concerning health and safety issues under the Board's purview.

### **Transportation of Things (OC 22)**

The Board has included \$54,300 in its FY 2021 Budget Request for the shipment of household goods for employees relocating to/from the Washington, D.C. area and/or becoming Resident Inspectors at DOE facilities.

### **Rental Payments to GSA (OC 23.1)**

The Board requests funds totaling \$3,102,200 to reimburse the U.S. General Services Administration (GSA) for projected office rental costs based on the rent estimate received from GSA. This overhead expense represents approximately 9 percent of the Board's FY 2021 estimated obligations. The Board entered into a 10-year lease in March 2016 for its headquarters in Washington, D.C.

### **Communications and Utilities (OC 23.3)**

The Budget Request includes \$347,000 for projected communications support costs. Funds in this account will be used for voice over internet protocol telephone service, smartphone services, Internet access charges (both at the Board's headquarters and its alternate continuity of operations (COOP) location), postage and overnight delivery costs, and special messenger services. The physical COOP space is located at a DOE facility, and all costs necessary for maintaining the readiness of the alternate location are included under this OC.

### **Printing and Reproduction (OC 24)**

The Budget Request includes \$29,100 for reimbursing the U.S. Government Publishing Office for publication of required legal notices in the Federal Register.

### **Advisory and Assistance Services (OC 25.1)**

The Budget Request includes \$495,000 for training of the Board's engineers and scientists, as well as technical service contracts.

### **Other Services (OC 25.2)**

The Budget Request includes \$4,507,200 to fund a wide range of recurring information technology and administrative support needs of the Board in FY 2021 in such areas as physical and cyber security, information technology, administrative support, recruiting, and training of the Board's professional and administrative staff, including members of the Senior Executive Service.

### **Government Services (OC 25.3)**

The Budget Request includes \$1,453,700 for reimbursable support agreements with other Federal agencies and increases in other government service provider costs. The Board uses cross-servicing arrangements for physical security, accounting and payroll processing services, health unit, employee background investigations for security clearances, and Employee Assistance Program services.

### **Operation and Maintenance of Facilities (OC 25.4)**

The Board requests \$27,000 for maintaining the Board's facilities (e.g., heating, ventilation, and air conditioning maintenance; building alterations; and plumbing repairs outside the scope of the building lease).

**Operation and Maintenance of Equipment (OC 25.7)**

The Board requests \$107,400 for maintaining and repairing Board equipment (e.g., information technology (IT) systems, copier maintenance agreements, repair of office equipment) and for storage of household goods associated with a permanent change of station.

**Supplies and Materials (OC 26)**

The Board requests \$323,800 for continued access to numerous technical standards databases, legal research services, IT system components, and general office supplies and materials.

**Acquisition of Assets (OC 31)**

The Board requests \$366,000 in acquisition of assets, primarily for IT equipment and software supporting the Board's operations, such as investment to enhance secure communications, minor enhancements to existing software systems, and replacement of end-of-life office equipment.

## FY 2019 ANNUAL PERFORMANCE REPORT / FY 2021 ANNUAL PERFORMANCE PLAN

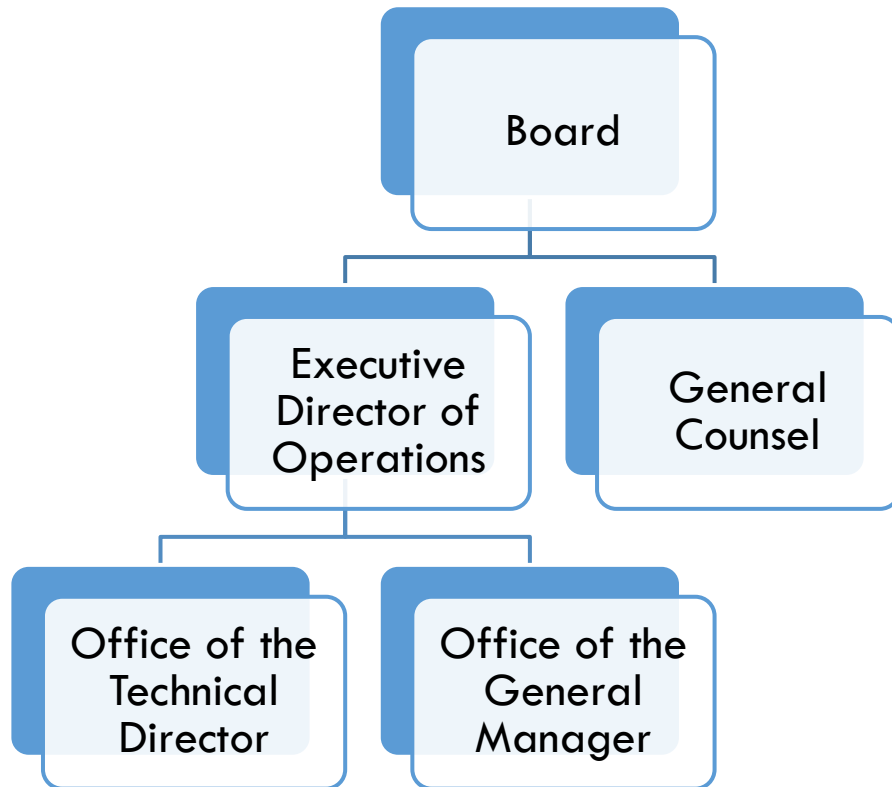
### Overview

The Board published an updated FY 2018–2022 agency Strategic Plan that established revised strategic goals and objectives in December 2019. The Board’s FY 2019 APR is aligned with the goals of the original FY 2018–2022 Strategic Plan in place during FY 2019. The Board’s FY 2020 APP has been updated to align with the goals defined in the Board’s updated Strategic Plan. The Board’s FY 2021 APP was developed to align with the updated Strategic Plan.

### Mission Statement

The mission of the Board shall be to provide independent analysis, advice, and recommendations to the Secretary of Energy to inform the Secretary, in the role of the Secretary as operator and regulator of the defense nuclear facilities of the Department of Energy, in providing adequate protection of public health and safety at such defense nuclear facilities, including with respect to the health and safety of employees and contractors at such facilities.

### Organizational Structure<sup>2</sup>



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<sup>2</sup> The National Defense Authorization Act for FY 2020 included direction that the Chairman delegate the administrative functions of the Board, appointment and supervision of employees other than the General Counsel, and other specified business functions to an Executive Director of Operations. The Board intends to fill this executive position during FY 2020.

## Strategic Goals and Strategic Objectives (FY 2019 APR)

The Board's Strategic Plan for FYs 2018–2022 sets forth a broad vision of how the Board will fulfill its statutory mission to “provide independent analysis, advice, and recommendations to the Secretary of Energy to inform the Secretary, in the role of the Secretary as operator and regulator of the defense nuclear facilities of the Department of Energy, in providing adequate protection of public health and safety at such defense nuclear facilities, including with respect to the health and safety of employees and contractors at such facilities.” The FY 2019 APR is aligned with the strategic goals and objectives defined in the Board's original Strategic Plan for FY 2018–2022:

### GOAL 1

Independent Review of content and implementation of Standards relating to the design, construction, operations, and decommissioning of defense nuclear facilities.

Strategic Objective 1.1—Perform independent oversight of the development of nuclear safety standards by the Secretary of Energy in providing adequate protection of public health and safety at defense nuclear facilities.

Strategic Objective 1.2—Perform independent review of the implementation of DOE regulations, requirements, and guidance for providing adequate protection of public health and safety at defense nuclear facilities through observing, monitoring, and assessing implementation of standards in all phases from design and construction, to operations, to decommissioning of defense nuclear facilities.

Strategic Objective 1.3—Perform cross-cutting analysis of the effectiveness of DOE standards, regulations and guidance across the complex to ensure the adequate protection of public health and safety.

### GOAL 2

Investigation of any event or practice at defense nuclear facilities which adversely affects or may adversely affect public health and safety. The purpose of the Board investigation shall be to:

Strategic Objective 2.1—Ensure adequacy of standards implementation.

Strategic Objective 2.2—Ascertain information concerning circumstances of an event or practice and implications for public health and safety.

Strategic Objective 2.3—Ascertain the extent of events and practices at defense nuclear facilities that could impact health and safety.

### GOAL 3

Systematic analysis of design and operational data.

Strategic Objective 3.1—Independently conduct systematic analysis on design and operational data, including safety analysis reports, from defense nuclear facilities to identify practices and patterns that may indicate designs or operations that, as implemented, may adversely affect public health and safety.

Strategic Objective 3.2—Independently obtain and analyze data related to the safe operations.

### GOAL 4

Timely Review of design of new defense nuclear facilities before construction and periodically, thereafter.

Strategic Objective 4.1—Independently review the design of a new defense nuclear facility before construction begins and recommend, within a reasonable time, such modifications as the Board considers necessary to ensure adequate protection of public health and safety.

Strategic Objective 4.2—Periodically review and monitor the construction of defense nuclear facilities and submit information to the Department of Energy the Board considers necessary for the Department to ensure adequate protection of public health and safety.

#### **GOAL 5**

Proposal of Recommendations to the Secretary of Energy when determined necessary to ensure adequate protection of health and safety.

Strategic Objective 5.1—When determined as necessary to ensure adequate protection, high-quality Recommendations will be prepared that are technically sound with sufficient risk analysis and technical and economic feasibility of implementation provided.

#### **GOAL 6**

Achievement of mission in a manner that is accountable and transparent to the public and achieves the mission efficiently and effectively.

Strategic Objective 6.1—Apply management controls to achieve the Board’s mission efficiently and effectively. Apply them in a manner consistent with the Board’s enabling statute with respect to the duties of the Board as a whole, the Chairman, and individual Board Members. Such duties include maintaining adequate human resources, physical infrastructure, information technology systems, financial management, acquisition procedures, and legal support to advance program mission goals while providing sufficient and effective security for personnel, facilities and information.

Strategic Objective 6.2—Align human capital strategies with agency mission, goals, and objectives through analysis, planning, investment, measurement, and management of human capital programs.

Strategic Objective 6.3—Communicate effectively and transparently with the Board’s stakeholders on Board safety issues in DOE’s defense nuclear complex, on the Board’s operations, and all Board Member views.



**FY 2019 Performance Summary**

<b>Goal 1—Nuclear Safety Standards</b>	<b>FY 2019 Target</b>	<b>FY 2019 Results</b>
Independent reviews of nuclear safety standards.	3	3
Independent reviews of the implementation of nuclear safety standards.	12	19
Cross-cutting analyses.	2	2
<b>Goal 2—Investigations</b>		
Capability to conduct investigations.	1	N/A
Board and technical staff site visits.	80%	84%
<b>Goal 3—Systematic Analysis</b>		
Resident inspectors’ weekly reports and cognizant engineers’ monthly reports.	90%	96%
Independent analyses based on modeling.	2	3
<b>Goal 4—New Facility Design and Construction</b>		
Independent oversight at specified and logical points in the design and construction of new defense nuclear facilities.	1	2
<b>Goal 5—Recommendations</b>		
Timely, high-quality recommendation products provided to the Board.	90%	90%
Timely, high-quality evaluation of implementation plan deliverables.	90%	100%
<b>Goal 6—Achieve Mission (accountable, transparent, efficient, effective)</b>		
Evaluation to simplify and refocus internal procedures.	1	2
Executive Committee on Internal Controls meetings.	3	3
Board budget updates.	6	7
Board approved agency staffing plan.	1	N/A
Board interactions with external stakeholders.	10	13
Board public meetings or hearings.	6	7

## FY 2019 Performance Detail

### GOAL 1

Independent review of content and implementation of standards relating to the design, construction, operations, and decommissioning of defense nuclear facilities.

Fiscal Year	Performance Goal	Target	Result
2019	<p><b>Performance Goal 1.1</b></p> <p>Conduct reviews based on independent evaluation of the content of nuclear safety standards.</p> <p><b>Indicator</b></p> <p>Number of reviews and associated reports completed for nuclear safety standards. Reviews will evaluate whether appropriate nuclear safety requirements are identified in the standard.</p>	FY 2019 Target: 3	Achieved FY 2019 Result: 3

### Discussion

The Board completed the following reviews to meet the above objective of independently evaluating the content of nuclear safety standards. The Board accomplished its FY 2019 goal of completing at least three reviews of nuclear safety standards.

1. DOE regulation 10 C.F.R. Part 830, *Nuclear Safety Management*. On October 5, 2018, the Board transmitted a letter to the Secretary of Energy noting concerns with the proposed revision to the *Nuclear Safety Management Rule*.
2. DOE Standard 1158-2010, *Self-Assessment Standard for DOE Contractor Criticality Safety Programs*. On June 5, 2019, the Board transmitted a letter to the Secretary of Energy on concerns with the cancellation of this standard.
3. Draft DOE Order 452.2x, *Nuclear Explosive Safety*. The Board completed a review of this draft directive in July 2019.

Fiscal Year	Performance Goal	Target	Result
2019	<p><b>Performance Goal 1.2</b></p> <p>Conduct independent reviews that focus on implementation of nuclear safety standards at defense nuclear facilities.</p> <p><b>Indicator</b></p> <p>Number of reports provided to the Board that include evaluation of standards implementation.</p>	FY 2019 Target: 12	<p>Exceeded</p> <p>FY 2019 Result: 19</p>

**Discussion**

The Board completed the following reviews to meet the above objective of evaluating implementation of nuclear safety standards at defense nuclear facilities. The Board’s staff accomplished this FY 2019 goal by providing the Board with at least 12 reports that included evaluation of standards implementation. The FY 2019 target was exceeded by 58 percent.

1. Pantex Plant Special Tooling Program Review, October 2018. On October 17, 2018, the Board transmitted a letter including the results of this review to the Secretary of Energy.
2. Savannah River Site H-Canyon Exhaust Tunnel Fragility Analysis Review, October 2018. On December 7, 2018, the Board transmitted a letter including the results of this review to the Secretary of Energy.
3. U1a Complex Safety Basis Review at the Nevada National Security Site, October, 2018. On December 19, 2018, the Board transmitted a letter including the results of this review to the Secretary of Energy.
4. Federal Readiness Assessment for the Restart of the Annular Core Research Reactor at Sandia National Laboratories, November 2018.
5. Nevada National Security Site Device Assembly Facility Seismic Hazard Review, November 2018. On March 21, 2019, the Board transmitted a letter including the results of this review to the Secretary of Energy.
6. Sludge Transport and Storage Container Loading, Inerting, Shipping, and Handling Operations Review at Hanford, December 2018.
7. Warhead Measurement Campaign Nuclear Explosive Safety Study, January 2019.

8. Cognizant System Engineering and Nuclear Maintenance Program Review at the Pantex Plant, February 2019.
9. Y-12 National Security Complex Criticality Safety Review, February 2019. On July 25, 2019, the Board transmitted a letter including the results of this review to the Secretary of Energy.
10. Pantex Plant Bays and Cells Nuclear Explosive Safety Master Study, February 2019.
11. Review of Hanford Site Electrical Infrastructure, March 2019. On July 2, 2019, the Board transmitted a letter with the results of this review to the Secretary of Energy.
12. Los Alamos National Laboratory Radioassay and Nondestructive Testing Facility Safety Basis Review, April 2019. On May 22, 2019, the Board transmitted a letter to the Secretary of Energy noting that, based on this review, the previous Board issues with the facility's safety basis have been resolved.
13. Waste Treatment and Immobilization Plant High Level Waste Facility Technical Issues, April 2019. On May 9, 2019, the Board transmitted a letter with the results of this review to the Secretary of Energy.
14. Evaluation of Change in Safety Controls Associated with Red Oil Formation in the Secondary Extraction Process at Y-12 National Security Complex, Building 9212, April 2019.
15. Pantex Plant Special Purpose Facilities Nuclear Explosive Safety Master Study, May, 2019.
16. Review of Electrical Infrastructure at Sandia National Laboratories, Technical Area V, May 2019.
17. Review of the Draft Area G Safety Basis, June 2019.
18. Review of the Lawrence Livermore National Laboratory Plutonium Facility, Building 332, Confinement Ventilation System, July 2019.
19. Effectiveness of Actions to Improve Waste Treatment and Immobilization Plant Safety Culture, July 2019.

Fiscal Year	Performance Goal	Target	Result
2019	<p><b>Performance Goal 1.3</b></p> <p>Conduct cross-cutting analyses.</p> <p><b>Indicator</b></p> <p>Number of reports provided to the Board that are supported by multiple reviews.</p>	FY 2019 Target: 2	<p>Achieved</p> <p>FY 2019 Result: 2</p>

**Discussion**

The Board completed the following reviews to meet the above objective to conduct cross-cutting analyses. The Board’s staff accomplished this FY 2019 goal by providing at least two documents to the Board that were supported by analyses at multiple sites.

1. Safety Management of Waste Storage and Processing at Defense Nuclear Facilities. On June 20, 2019, the Board conducted a public hearing on this topic which included analysis of hazards, controls, and DOE oversight of waste storage and processing across multiple sites.
2. Survey of Safety Class Instrumented Systems for Cross Cutting Review of Surveillance Procedures. On September 10, 2019, the Board’s staff provided a report to the Board that analyzed safety bases documents from multiple facilities to identify those facilities that contained elements of safety class instrumentation and control systems.

**GOAL 2**

Investigation of any event or practice at defense nuclear facilities that adversely affects or may adversely affect public health and safety.

Fiscal Year	Performance Goal	Target	Result
2019	<p><b>Performance Goal 2.1</b></p> <p>Demonstrate capability to investigate events or practices at defense nuclear facilities that could adversely affect public health and safety.</p> <p><b>Indicator</b></p> <p>Conduct an investigation directed by the Board or audit of staff capability to conduct an investigation.</p>	FY 2019 Target: 1	FY 2019 Result: N/A

**Discussion**

The Board Members elected to evaluate events and practices at defense nuclear facilities using non-investigatory methods during FY 2019, and did not exercise the staff’s capability to perform an investigation pursuant to the DNFSB regulation on investigations. As a result, the performance target for investigations was not exercised; however, the Board remains prepared to carry out investigations.

Fiscal Year	Performance Goal	Target	Result
<b>2019</b>	<p><b>Performance Goal 2.2</b></p> <p>Maintain Board and management cognizance of potential events or practices at defense nuclear facilities.</p> <p><b>Indicator</b></p> <p>Percentage of sites with defense nuclear facilities that have been visited by a Board Member or manager.</p>	FY 2019 Target: 80%	Exceeded  FY 2019 Result: 84%

**Discussion**

Board Members, technical staff management, and resident inspectors continue to maintain cognizance of potential events or practices at the sites with defense nuclear facilities. The FY 2019 goal was to accomplish Board Member or manager visits for 80 percent of the sites with DOE defense nuclear facilities. This goal was exceeded, with visits by a Board Member or manager accomplished for 84 percent of the sites during FY 2019. The following sites received at least one such visit:

1. Savannah River Site
2. Y-12 National Security Complex
3. Hanford Site
4. Pantex Plant
5. Los Alamos National Laboratory
6. Lawrence Livermore National Laboratory
7. Sandia National Laboratories
8. Nevada National Security Site
9. Idaho National Laboratory

**GOAL 3**

Systematic analysis of design and operational data.

Fiscal Year	Performance Goal	Target	Result
2019	<p><b>Performance Goal 3.1</b></p> <p>Maintain oversight presence and cognizance of potential events or practices at defense nuclear facilities.</p> <p><b>Indicator</b></p> <p>Percentage of completed cognizant engineer monthly reports and resident inspector weekly reports provided to the Board.</p>	FY 2019 Target: 90%	Exceeded FY 2019 Result: 96%

**Discussion**

The Board’s staff continues to produce resident inspector weekly and site monthly reports and provide them to the Board. At the five sites with resident inspectors (Los Alamos National Laboratory, Y-12 National Security Complex/Oak Ridge National Laboratory, Pantex Plant, Hanford Site, and Savannah River Site), resident inspectors provided a report to the Board and posted it to the Board’s public website for most of the weeks in FY 2019. For the five sites without resident inspectors (Idaho National Laboratory, Lawrence Livermore National Laboratory, Nevada National Security Site, Sandia National Laboratories, and the Waste Isolation Pilot Plant), the cognizant engineers provided a report to the Board and posted it to the Board’s public website for each month in FY 2019. In FY 2019, 96 percent of the total number of available resident inspector and cognizant engineer reports were completed and provided to the Board, exceeding the goal of 90 percent.

Fiscal Year	Performance Goal	Target	Result
2019	<p><b>Performance Goal 3.2</b></p> <p>Demonstrate capability to independently analyze nuclear safety information.</p> <p><b>Indicator</b></p> <p>Number of independent analyses based on modeling (e.g., criticality safety, structural, fluid dynamics, and electrical calculations) required to support mission work or evaluate staff capability to conduct independent analyses.</p>	FY 2019 Target: 2	Exceeded FY 2019 Result: 3

**Discussion**

The Board completed the following calculations to meet the above objective. The Board accomplished its FY 2019 goal of completing at least two independent analysis based on modeling. The FY 2019 target was exceeded by 50 percent.

1. Potential for Acute Health Effects from Exposure to Tritiated Water Vapor, December 2018. Scope: Derive and implement a set of equations to convert committed effective dose into its characteristic absorbed-dose rate for human exposure to tritiated water.
2. Los Alamos National Laboratory Area G Mobile Loading Vehicle Impact and Fuel Pool Fire Accident Analysis, November 2018. Scope: Calculate the dose consequences due to a vehicle impact with subsequent fuel pool fire accident during mobile loading operations at Area G.
3. Salt Waste Processing Facility Tank Explosions, January 2019. Scope: Evaluate how higher tank temperatures at the Salt Waste Processing Facility affect the calculated tank explosion dose consequence for workers.

**GOAL 4**

Timely Review of design of new defense nuclear facilities before construction and periodically thereafter.

Fiscal Year	Performance Goal	Target	Result
2019	<p><b>Performance Goal 4.1</b></p> <p>Execute independent oversight by performing reviews with defined scope and durations at specified and logical points in the design and construction of new defense nuclear facilities.</p> <p><b>Indicator</b></p> <p>Number of formal reports to the Board for design and construction of a new facility (e.g., Conceptual Design, Final Design, Construction, and Commissioning of new facilities that are initiated).</p>	FY 2019 Target: 1	<p>Exceeded</p> <p>FY 2019 Result: 2</p>

**Discussion**

The Board completed the following reviews to meet the above objective to execute independent oversight by performing reviews with defined scope and durations at specified and logical points in the design and construction of new defense nuclear facilities. The Board’s staff accomplished this FY 2019 goal by providing at least one formal report to the Board for design and construction of a new facility. The FY 2019 target was exceeded by 50 percent.



1. Oak Ridge National Laboratory Building 2026 Preliminary Documented Safety Analysis, May 2019.
2. Y-12 National Security Complex Electrorefining Final Design Review, January 2019.

**GOAL 5**

Proposal of Recommendations to the Secretary of Energy when determined necessary to ensure adequate protection of health and safety.

Fiscal Year	Performance Goal	Target	Result
2019	<p><b>Performance Goal 5.1</b></p> <p>Communicate to the Secretary of Energy in a timely manner on safety items that the Board determines challenge adequate protection.</p> <p><b>Indicator</b></p> <p>Percentage of timely Recommendation products delivered to the Board. Timeliness targets will be established for specific Recommendation products based on scope and available resources.</p>	FY 2019 Target: 90%	<p>Achieved</p> <p>FY 2019 Result: 90%</p>

**Discussion**

In FY 2019, the Board’s staff provided ten Recommendation products to the Board, which included proposed Recommendation outlines, draft Recommendations, and final Recommendations. Nine of these Recommendation products met the established timeliness target. Therefore, the Board accomplished its FY 2019 goal for timely delivery of Recommendation products.

Fiscal Year	Performance Goal	Target	Result
2019	<p><b>Performance Goal 5.2</b></p> <p>Timely evaluation of the effectiveness of Implementation Plan deliverables in addressing safety objectives identified in Recommendations.</p>	FY 2019 Target: 90%	<p>Exceeded</p> <p>FY 2019 Result: 100%</p>

Fiscal Year	Performance Goal	Target	Result
	<p><b>Indicator</b></p> <p>Percentage of timely effectiveness reports for Implementation Plan deliverables. Timeliness targets will be established for specific Implementation Plan deliverables based on scope and available resources.</p>		

**Discussion**

In FY 2019, the Board reviewed two Implementation Plan deliverables (annual reports delivered in accordance with the implementation plans for Recommendations 2012-1 and 2012-2), both of which met the established timeliness target. Therefore, the Board accomplished its FY 2019 goal for timely evaluation of Implementation Plan deliverables.

**GOAL 6**

Achievement of mission in a manner that is accountable and transparent to the public and achieves the mission efficiently and effectively.

Fiscal Year	Performance Goal	Target	Result
2019	<p><b>Performance Goal 6.1</b></p> <p>Simplify and refocus directives and supplementary documents on necessary requirements and internal controls.</p> <p><b>Indicator</b></p> <p>Have external third-party conduct an effectiveness review, identify corrective actions, and begin implementation of corrective actions focused on improvements to simplify and refocus procedures and improve internal controls.</p>	FY 2019 Target: 1	Exceeded FY 2019 Result: 2

**Discussion**

The agency contracted with two external third-party reviewers to review business-related functions and controls during FY 2019. The independent reviewers evaluated processes for budget formulation and execution in accordance with Office of Management and Budget Circular A-123 and processes for implementation of information security in accordance with the Federal Information Security Modernization Act of 2014. The reviewers found the processes to be in compliance with applicable requirements but identified opportunities for improvement, particularly in process documentation. Efforts to make improvements in accordance with the reviewers' recommendations are well underway.

Fiscal Year	Performance Goal	Target	Result
2019	<p><b>Performance Goal 6.2</b></p> <p>Formal assessment, accountability, and corrective actions for the Board’s significant work processes that are presented at meetings of the Executive Committee on Internal Controls.</p> <p><b>Indicator</b></p> <p>Number of ECIC periodic meetings to evaluate office level assessments and corrective actions.</p>	FY 2019 Target: 3	<p>Achieved</p> <p>FY 2019 Result: 3</p>

**Discussion**

The Executive Committee on Internal Controls achieved this goal by holding three strategic work sessions.

Fiscal Year	Performance Goal	Target	Result
2019	<p><b>Performance Goal 6.3</b></p> <p>Improve the transparency and tracking of the agency budget.</p> <p><b>Indicator</b></p> <p>Number of budget briefings provided to the Board throughout the fiscal year.</p>	FY 2019 Target: 6	<p>Exceeded</p> <p>FY 2019 Result: 7</p>

**Discussion**

This goal was exceeded, with seven briefings to Board Members and senior management on the budget during FY 2019.

Fiscal Year	Performance Goal	Target	Result
2019	<p><b>Performance Goal 6.4</b></p> <p>Board approved agency staffing plan.</p> <p><b>Indicator</b></p> <p>Board approval of an agency staffing plan.</p>	FY 2019 Target: 1	FY 2019 Result: N/A

**Discussion**

In FY 2019, staff leadership prepared an agency staffing plan used as a target for hiring staff, but it was not approved by the Board.

Fiscal Year	Performance Goal	Target	Result
2019	<p><b>Performance Goal 6.5</b></p> <p>Board member interactions with external stakeholders.</p> <p><b>Indicator</b></p> <p>Number of Board level external interactions with stakeholders such as Congress; federal, state, and local agencies; and other organizations.</p>	FY 2019 Target: 10	Exceeded FY 2019 Result: 13

**Discussion**

The Board exceeded this goal by holding 13 interactive sessions with external stakeholders during FY 2019. These sessions provided vital information to the Congress, other Federal agencies, advocacy groups, and the public.

Fiscal Year	Performance Goal	Target	Result
2019	<p><b>Performance Goal 6.6</b></p> <p>Conduct Board public meetings or hearings.</p> <p><b>Indicator</b></p> <p>Number of Board public meetings or hearings.</p>	FY 2019 Target: 6	Exceeded FY 2019 Result: 7

**Discussion**

The Board exceeded this goal by holding three public hearings and four public meetings in FY 2019.

## FY 2021 Performance Plan<sup>3</sup>

### STRATEGIC GOAL 1

Provide proactive and independent safety oversight of the defense nuclear complex.

**Strategic Objective 1.1:** Complete timely, high-quality safety reviews that identify and analyze safety issues and best practices, and search for similar challenges complex-wide.

#### Performance Goals:

**1.1.1:** Prioritize and execute reviews to maximize impact on safety.

**1.1.2:** Conduct cross-cutting as well as site specific reviews, identifying safety concerns and best practices in work products.

#### Performance Measures:

**1.1.1:** Completion of high priority reviews while demonstrating flexibility to address emerging issues.

**1.1.2:** Work products provided to the Board within specified timeliness metric.

**Strategic Objective 1.2:** Develop and issue advice and recommendations designed to ensure safety and employ best practices within the defense nuclear complex.

#### Performance Goals:

**1.2.1:** Provide timely, technically accurate, compelling information to the Secretary of Energy.

**1.2.2:** Ensure the Secretary of Energy has enhanced awareness of complex-wide safety issues.

#### Performance Measures:

**1.2.1:** Identification and inclusion of both site-specific and complex-wide safety concerns and best practices in products developed through routine oversight and reviews.

**1.2.2:** Encouragement provided to the Department of Energy to share best practices as well as safety concerns.

**Strategic Objective 1.3:** Provide robust field oversight of facilities and projects across the defense nuclear complex.

#### Performance Goals:

**1.3.1:** Identify site-specific safety challenges and analyze for commonalities across the complex.

**1.3.2:** Provide timely information to the Board, acting quickly on emerging issues.

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<sup>3</sup> The Board has revised the Performance Goals and Performance Measures for FY 2020 comprehensively to align with the updated FY 2018–2022 Strategic Plan.

**Performance Measures:**

**1.3.1:** Oversight presence sustained at an appropriate level.

**1.3.2:** Internal procedures ensure consistency of field oversight.

**1.3.3:** Field experience is shared throughout the agency.

**STRATEGIC GOAL 2**

Enhance transparency of ongoing Agency initiatives and the state of safety within the defense nuclear complex.

**Strategic Objective 2.1:** Proactively sustain sound working relationships with relevant government and non-governmental entities.

**Performance Goals:**

**2.1.1:** Maintain effective communications with the Department of Energy at all organizational levels.

**2.1.2:** Maintain effective communications with Congress.

**2.1.3:** Maintain effective communications with relevant state, local, and tribal governments.

**2.1.4:** Maintain effective communication with the public, including relevant advocacy groups and organizations.

**Performance Measures:**

**2.1.1:** Periodic engagement at the Board and senior staff level with relevant senior DOE officials.

**2.1.2:** Periodic briefings conducted to relevant Congressional Members and committees.

**2.1.3:** Periodic outreach conducted to relevant state, local, and tribal governments at both Board and staff level.

**2.1.4:** Periodic outreach conducted to the public, including relevant advocacy groups and organizations.

**Strategic Objective 2.2:** Improve timely dissemination of information about the Board priorities and conclusions regarding the state of safety at Defense Nuclear Facilities.

**Performance Goals:**

**2.2.1:** Improve transparency through timely posting of Agency communication and public engagement.

**2.2.2:** Ensure Board work products are made available to Congress through proactive outreach.

**Performance Measures:**

**2.2.1:** Timely publication of weekly/monthly/annual reports.

**2.2.2:** Routine conduct of business meetings, Public Hearings, or Board visits.

**2.2.3:** Timely notification to interested parties of Public Hearings, meetings, reports, and Recommendations.

### **STRATEGIC GOAL 3**

Enhance transparency of ongoing Agency initiatives and the state of safety within the defense nuclear complex.

**Strategic Objective 3.1:** Cultivate an agile workforce with the skills necessary to meet the mission.

#### **Performance Goals:**

**3.1.1:** Establish a multi-year, forward-looking Staffing Plan to inform budget requests.

**3.1.2:** Hire well-qualified, motivated individuals to fill vacant positions and to enable effective succession planning.

**3.1.3:** Ensure redundancy in key functions in order to reduce mission vulnerabilities due to projected staff attrition.

#### **Performance Measures:**

**3.1.1:** Human Capital Plan that includes succession planning, work force development, career pathing and values diverse talents.

**3.1.2:** Key functions requiring redundancy are identified along with requirements and cross-training needs.

**Strategic Objective 3.2:** Use professional development and training to efficiently and effectively accomplish the mission.

#### **Performance Goals:**

**3.2.1:** Establish career path options and encourage professional development tailored to employee goals.

**3.2.2:** Provide new employees at all levels with resources needed to have an impact as soon as practicable upon entering the workforce.

#### **Performance Measures:**

**3.2.1:** Training and development for career pathing options identified and implemented.

**3.2.2:** A comprehensive, Agency-wide onboarding plan is developed and executed.

**3.2.3:** Formal mentoring and coaching for staff.

### **STRATEGIC GOAL 4**

Maximize the DNFSB's performance by pursuing excellence in our Agency culture and operations.

**Strategic Objective 4.1:** Pursue efficiency through continuous improvement of internal policies and procedures through testing and evaluation.

**Performance Goals:**

- 4.1.1: Establish Policy Statements that lead to mission outcomes consistent with Strategic Goals and Objectives.
- 4.1.2: Ensure Board Procedures are consistent with Strategic Goals and Objectives.
- 4.1.3: Ensure internal procedures and processes reflect Policy Statements.

**Performance Measures:**

- 4.1.1: Policy Statements revised to reflect Strategic Plan and Policy Statements for selected management practices developed.
- 4.1.2: Board Procedures reflect Agency personnel and processes.
- 4.1.3: Streamlined internal procedures reflective of Board Policy Statements.
- 4.1.4: Work planning that is informed by annual feedback and lessons learned.

**Strategic Objective 4.2:** Establish and maintain a culture that encourages teamwork and innovation across the Agency in accordance with core values.

**Performance Goals:**

- 4.2.1: Institutionalize core values in all phases of employee experience.
- 4.2.2: Foster open discussions across the agency on important technical and non-technical topics.
- 4.2.3: Maintain a culture respectful of diverse points of view.

**Performance Measures:**

- 4.2.1: Core values are promoted in on-boarding, training and performance processes.
- 4.2.2: An awards program that emphasize agency values.
- 4.2.3: Periodic open forums to discuss Agency and related issues that may impact mission or staff.

**Strategic Objective 4.3:** Strengthen operational performance by modernizing Agency processes and associated infrastructure.

**Performance Goals:**

- 4.3.1: Improve efficiency through increased information accessibility and common platforms, where possible.
- 4.3.2: Be responsive to user needs and/or support requests across all agency functions.



**Performance Measures:**

- 4.3.1:** Up-to-date platforms, systems, and software with interoperability, where possible.
- 4.3.2:** Knowledge transfer programs and information management that support archiving and retrieving information essential to mission and mission support.
- 4.3.3:** Updated employee guidance on processes and infrastructure that enables them to access systems and people needed to accomplish the mission and mission support across all agency functions.

## Other information

### Major Management Priorities and Challenges

The Board is continuing to pursue several agency-wide initiatives in FY 2020 and FY 2021 to address identified challenges and efficiently carryout its mission. These initiatives include pursuing the goals and objectives of the updated agency FY 2018–2022 Strategic Plan in order to improve the agency’s internal processes and procedures, strategically align resources, and effectively manage change, both internal and as a result of changes in the DOE nuclear complex. The agency is also expected to fill several vacant staff positions to mitigate the impact of a loss of institutional knowledge and skills due to retirements and personnel transfers, as well as anticipating changes to DOE’s activities. Preserving the Board’s access to information, facilities, and personnel at DOE’s defense nuclear facilities will remain an area of emphasis during FY 2020 and 2021.

### Evidence Building/Data Validation and Verification

As a small agency in the executive branch, the Board does not maintain organizational components dedicated to research or evaluation. The Board tracks progress toward meeting its technical performance goals on a quarterly basis by evaluating its progress toward the target for each goal. The Board’s staff compiles the records of accomplishment, compares the information in the records of accomplishment to the established target metrics, and develops a report for the Board’s management to provide the status of meeting performance goals.

To complete the records of accomplishment, Associate Technical Directors use data sources that include publicly available reports and correspondence as well as internally available papers such as staff reports and group progress reports; these reports and papers document the activities performed by the Board’s staff throughout the year. The Board makes all these documents readily available to its staff, and the Board employs a robust review process, including factual accuracy checks, for its public reports and internal papers. Therefore, the review process ensures the accuracy of the data.

The Board formally assesses significant work processes each year and presents results to the Executive Committee on Internal Controls. In determining what significant work processes to assess, the Executive Committee on Internal Controls uses the following factors considered cumulatively: work processes that have a higher risk of impact to mission or for fraud and abuse; the frequency of assessment of the work processes; results of previous internal control reviews; results of external audits (i.e., Office of the Inspector General and Government Accountability Office); and cost of the assessment versus the benefit gained. The Executive Committee on Internal Controls ensures the Board assesses internal work processes and communicates any deficiencies noted with those work processes.