

**FY 2019  
BUDGET REQUEST  
TO THE CONGRESS**



**Defense Nuclear  
Facilities Safety Board**

**February 28, 2018**

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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) 2014-2018 and FYs 2018-2022 are available on the Internet at [www.dnfsb.gov](http://www.dnfsb.gov). In addition, agencies are required to develop an Annual Performance Plan (APP) covering a two-year period with performance goals that contribute towards achieving the strategic plan's goals and objectives, and an Annual Performance Report (APR) comparing actual performance achieved with the performance goal established. At time of publication, the Board had not approved the APP covering FYs 2018 and 2019 due to lack of a quorum. When the Board approves FY 2018 and 2019 performance goals, they will be published. The Board's APR for FYs 2014-2017 is included in this Budget Request in accordance with the requirements of OMB Circular A-11.

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

### FY 2019 BUDGET REQUEST TO THE CONGRESS

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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, \$31,243,000, to remain available until September 30, 2020.

### FY 2019 REQUEST SUMMARY

The Board requests \$31,243,000 and 117 full-time equivalents (FTEs) to carry out its mission in FY 2019. The Board’s funding request reflects a pay freeze for civilian employees in 2019.

The Board is projecting to decrease its prior year carryover balances by the end of FY 2019 with a focus on quality recruitments and strategic hires with the intention to execute a 117 FTE usage level. The Board’s foundation is built on the expertise of its Board Members and its staff in support of the Board’s mission. Over two-thirds of the Board’s annual budget is dedicated to salaries and benefits for its staff and Board Members, and the FY 2019 personnel costs are projected to remain relatively flat due to a pay freeze for civilian employees in FY 2019. The Board’s FY 2019 request also includes a focused investment in enhancing cybersecurity and physical security, modernizing top-priority IT infrastructure systems, and enhancing the Board’s public-facing website. These support functions enable the staff to do mission-critical work while protecting sensitive information and providing appropriate transparency. In addition, the Board will maintain a number of technical support contracts to promote core-mission functions.

### Operating Expense Summary

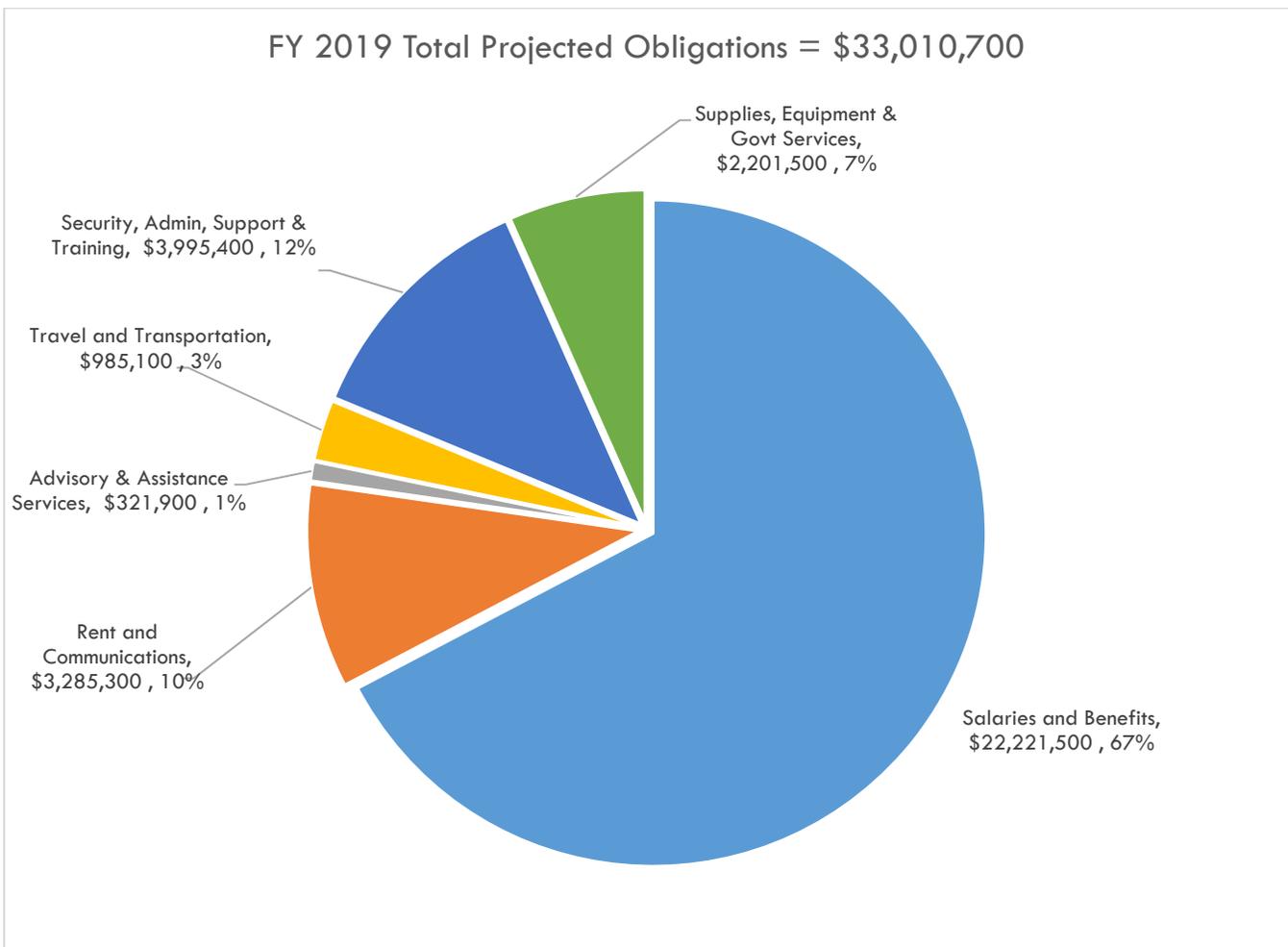
	<b>FY 2017 Actual</b>	<b>FY 2018 Plan</b>	<b>FY 2019 Request</b>
<b>Budget Authority</b>	30,872	30,600	31,243
<b>Obligations</b>	30,835	32,661	33,011
<b>Outlays</b>	30,626	31,215	31,669

*Numbers in thousands*

**Personnel Summary**

	FY 2017 Actual	FY 2018 Plan	FY 2019 Request
<b>Statutory Personnel (FTE) Ceiling</b>	130	130	130
<b>FTE Usage</b>	115	117	117
<b>Total Projected On-Board at end of FY</b>	114	117	117

**FY 2019 Projected Obligations by Major Category**



## THE MISSION

### Mission Statement

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*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.*

*42 U.S.C. § 2286a(a)*

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### 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

### Principles

- Efficiently and effectively accomplish independent investigative and oversight functions as described in the enabling statute;
- Conduct operations in a manner that is accountable, fostering an organizational culture that relies on high standards of integrity, fiscal responsibility, and operational proficiency;
- Develop and sustain the respect and confidence of the public through expertise and execution of the mission.

### Goal 1

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

### Goal 2

Investigation of any event or practice at defense nuclear facilities, which the Board determines adversely affects or may adversely affect public health and safety.

### Goal 3

Systematic analysis of design and operational data.

### Goal 4

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

### Goal 5

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

### Goal 6

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

## ORGANIZATIONAL STRUCTURE

### Board Members

The Board members lead the agency in accomplishing its mission and determine actions regarding the safety aspects of the design, construction, operation, and decommissioning of DOE's defense nuclear facilities.



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### ACTING CHAIRMAN

Mr. Bruce Hamilton<sup>1</sup>



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### Board Member

Ms. Jessie Hill Roberson



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### Board Member

Mr. Daniel J. Santos



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### Board Member

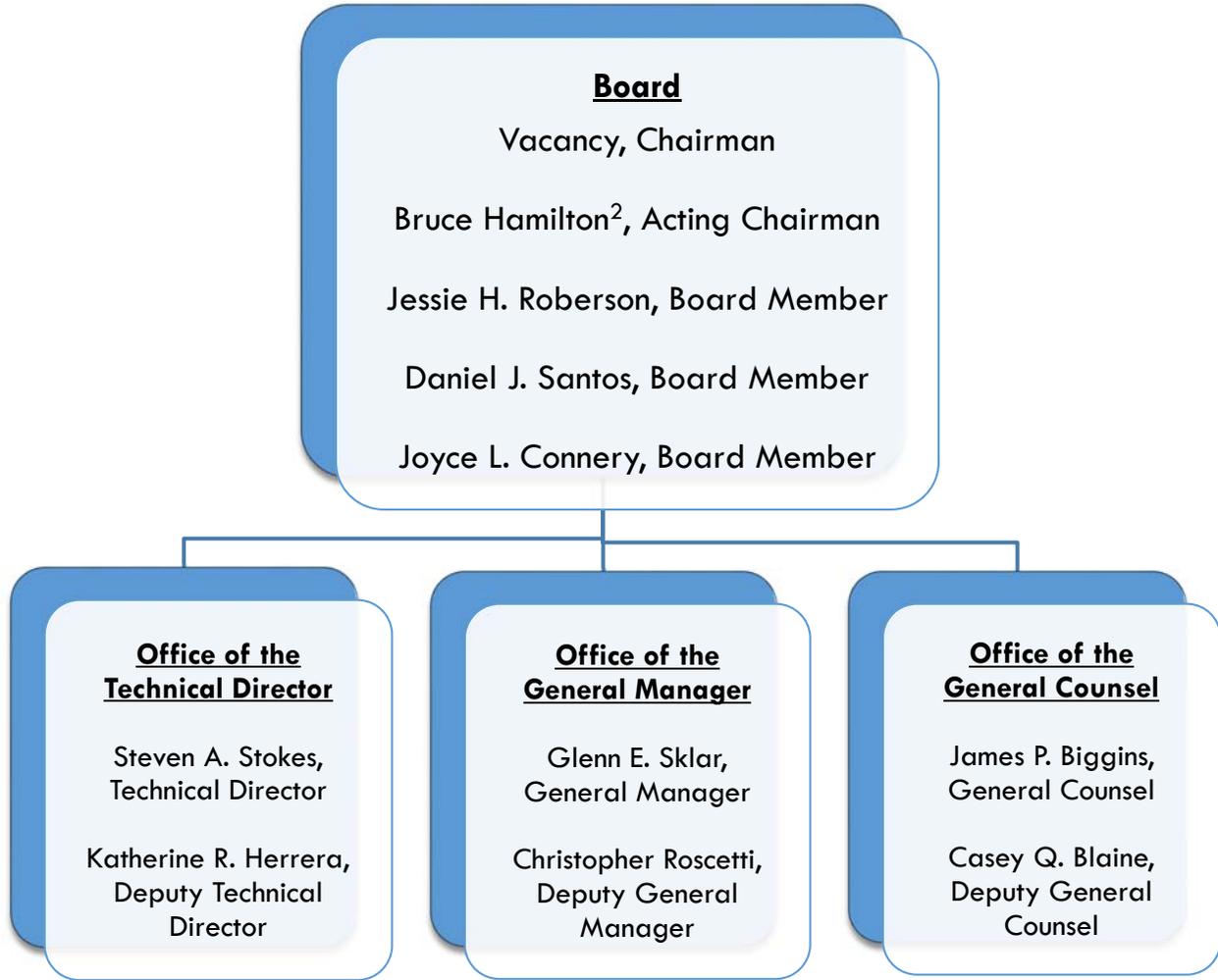
Ms. Joyce L. Connery

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<sup>1</sup> Mr. Bruce Hamilton was appointed Vice Chairman on January 23, 2017. Per the Board's enabling legislation, the Vice Chairman shall act as Chairman in the event of a vacancy in the office of Chairman. Mr. Hamilton is serving as Acting Chairman effective February 2, 2018.

## Organizational Chart

The Board is composed of 117 budgeted federal FTEs arranged in three offices. More than 80 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).



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<sup>2</sup> Mr. Bruce Hamilton was appointed Vice Chairman on January 23, 2017. Per the Board's enabling legislation, the Vice Chairman shall act as Chairman in the event of a vacancy in the office of Chairman. Mr. Hamilton is serving as Acting Chairman effective February 2, 2018.

## FY 2019 BUDGET RESOURCE REQUEST SUMMARY

### Obligations by Fiscal Year

<b>Budget Account -- OC</b>	<b>FY 2017 Actual</b>	<b>FY 2018 Financial Plan</b>	<b>FY 2019 Budget Request</b>
PERSONNEL SALARIES -- (11)	16,213,753	16,730,700	16,780,700
PERSONNEL BENEFITS -- (12)	5,145,891	5,424,600	5,440,800
BENEFITS FOR FORMER PERSONNEL -- (13)	18,932	-	-
TRAVEL -- (21)	816,921	948,400	948,400
TRANSPORTATION OF THINGS -- (22)	15,678	36,700	36,700
RENTAL PAYMENTS TO GSA -- (23.1)	2,985,226	2,986,200	2,999,700
COMMUNICATIONS & UTILITIES (23.3)	345,023	285,600	285,600
PRINTING & REPRODUCTION -- (24)	11,464	9,100	9,100
ADVISORY & ASSISTANCE SERVICES -- (25.1)	182,167	232,000	321,900
OTHER SERVICES -- (25.2)	3,416,994	3,784,500	3,884,500
GOVERNMENT SERVICES -- (25.3)	1,007,930	1,085,600	1,157,300
OPERATION & MAINT.OF FACILITIES -- (25.4)	23,780	63,300	63,300
OPERATION & MAINT.OF EQUIPMENT -- (25.7)	19,864	38,500	38,500
SUPPLIES & MATERIALS -- (26)	160,459	228,200	228,200
ACQUISITION OF ASSETS -- (31)	471,265	808,000	816,000
<b>TOTAL OBLIGATIONS</b>	<b>30,835,347</b>	<b>32,661,400</b>	<b>33,010,700</b>
NEW BUDGET AUTHORITY	30,872,000	30,600,000	31,243,000
UNOBLIGATED BALANCE - PREV. FY	2,814,476	3,576,200	2,347,300
RECOVERY OF PRIOR YEAR OBLIGATIONS	725,031	832,500	761,600
<b>TOTAL BUDGETARY RESOURCES</b>	<b>34,411,507</b>	<b>35,008,700</b>	<b>34,351,900</b>
EST. UNOBLIGATED BAL. - CUR. FY	3,576,160	2,347,300	1,341,200
<b>OUTLAYS</b>	<b>30,626,000</b>	<b>31,215,000</b>	<b>31,669,300</b>
<b>TOTAL FTE LEVEL</b>	<b>115</b>	<b>117</b>	<b>117</b>

## FY 2019 Budget Request Justification Highlights

The following provides detail supporting the FY 2019 amounts, and describe further how the Board proposes to use the budget resources requested.

### Salaries and Benefits (OC 10)

The FY 2019 request includes funding of \$22,221,500 to support the projected salary and benefit costs for 117 FTEs. The funding for salaries and benefits represents 67 percent of the Board's FY 2019 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 freeze in January 2019.
- Employee benefits of 32 percent of salaries, or approximately \$47,000 per FTE in FY 2019.

*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 Department of Energy (DOE) 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. Virtually all of the technical staff has technical master's degrees, and more than 20 percent 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 sufficient funds to meet the salary and benefit requirements of the staff.

The Board enhances its on-site safety oversight of defense nuclear facilities by assigning experienced technical staff members to full-time duty at priority DOE sites. Resident inspectors<sup>3</sup> provide 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 the priority sites. Resident inspectors regularly interact with the public, union members, congressional staff members, and public officials from federal, state, and local agencies.

### Travel (OC 21)

The Board requests \$948,400 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.

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<sup>3</sup> On October 17, 2016, the Board voted to change the "site representative" title to "resident inspector" in conformance with its enabling legislation. That change was fully implemented by February 24, 2017.

The Board also stations staff members at DOE sites or facilities to assist in carrying out its functions. The Board has assigned 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 \$36,700 in its FY 2019 Budget Request for the shipment of household goods for employees relocating to the Washington, DC, area and/or becoming resident inspectors at DOE facilities.

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

The Board requests funds totaling \$2,999,700 to reimburse the Government Services Administration (GSA) for projected office rental costs based on the rent estimate received from GSA. This overhead expense represents approximately nine percent of the Board's FY 2019 estimated obligations. The Board entered into a 10-year lease in March 2016.

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

The Budget Request includes \$285,600 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 \$9,100 for reimbursing the U.S. Government Printing Office for publication of required legal notices in the Federal Register. Routine printing and copying charges for Budget Requests, the Board's Annual Report to Congress, and technical reports, are also included in this account.

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

To maintain the Board's highly skilled staff, the FY 2019 Budget Request includes \$321,900 for training of the Board's engineers and scientists, as well as technical service contracts.

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

The Budget Request includes \$3,884,500 to fund a wide range of recurring information technology and administrative support needs of the Board in FY 2019 in such areas as physical and cyber security, information technology, court reporting, drug-free workplace testing, and training of the Board's professional and administrative staff, including Professional Development Program participants.

**Government Services (OC 25.3)**

The Budget Request includes \$1,157,300 for reimbursable support agreements with other Federal agencies, and increases in other government service provider costs. Most significantly, there is an anticipated increase of \$51,700 to cover the contract for physical security through DHS in FY 2019. The Board uses cross-service providers for accounting and payroll processing services consistent with government-wide lines of business objectives, and also uses cross-servicing arrangements for services such as physical security, health unit, employee background investigations for security clearances, and Employee Assistance Program services.

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

The Board requests \$63,300 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 \$38,500 for maintaining and repairing Board equipment (e.g., copier maintenance agreements, repair of office equipment), and for storage of household goods for relocated personnel.

**Supplies and Materials (OC 26)**

The Board requests \$228,200 for continued access to numerous technical standards databases, legal research services, maintenance of the technical reference information for its library, and for general office supplies and materials.

**Acquisition of Assets (OC 31)**

The Board requests \$816,000 in acquisition of assets, which is in line with historical spending for recurring software licenses/maintenance agreements supporting the Board's operations; replacement of outdated office equipment, such as printers and copiers; and minor enhancements to existing software systems. In addition to on-going operational expenses, the Board's requests includes \$50,000 for enhancements to the public-facing website, and \$100,000 for replacement servers to enhance the Board's virtual environment.

## ANNUAL PERFORMANCE PLAN

### Overview

The APP aligns with the FY 2019 Budget and with the new strategic goals and strategic objectives with the updated *Defense Nuclear Facilities Safety Board Strategic Plan, FY 2018–2022*.

### Strategic Goals and Strategic Objectives

#### 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.

### **Performance Goals**

At time of publication, the Board had not approved FY 2018 and 2019 performance goals due to lack of a quorum. When the Board approves FY 2018 and 2019 performance goals, they will be published.

## Other information

### **Major Management Priorities and Challenges**

The Board is pursuing several agency-wide initiatives in FY 2019 to address identified challenges and efficiently carry out its mission. These initiatives include continually improving the agency's internal processes and procedures, strategically aligning resources, and effectively managing change, both internal and as a result of changes in the DOE nuclear complex. The agency is also expected to increase hiring to mitigate the impact of a loss of institutional knowledge and skills due to multiple expected retirements and personnel transfers, as well as anticipating changes to DOE's activities.

### **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 Engineering Performance Group 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 correspondence and staff issue reports and internally available information papers and group progress reports; these reports and papers document the activities performed by the Board's staff throughout the year. The Board makes its correspondence, staff issue reports, information papers, and group progress reports 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.

By tracking its progress toward meeting its performance goals on a quarterly basis, the Board is able to adjust its priorities and resources to meet performance goals. In addition, 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.

## ANNUAL PERFORMANCE REPORT

### Overview

The APR is provided in a format consistent with the previous years' performance reports to highlight the FYs 2014 – 2017 accomplishments that align with the FY 2014 - 2018 Strategic Plan goals:

Strategic Goal 1 – Improve Safety of Operations

Strategic Goal 2 – Strengthen Safety Standards

Strategic Goal 3 – Strengthen Safety in Design

Strategic Goal 4 – Achieve Excellence in Management and Communication with Stakeholders

Performance accomplishments for FY 2017 are discussed in detail, including an explanation whenever a target was not met. Actual results for FY 2014 through FY 2016 are also shown, with a brief discussion of the results. A more detailed discussion on FY 2014 through FY 2016 accomplishments, including an explanation of unmet targets, can be found in the APR sections of the FY 2016, FY 2017, and FY 2018 Budget Requests to Congress, respectively, posted on the Board's website.

Starting next year, the Board will align its APR to a format that aligns to the new strategic goals and strategic objectives in the updated *Defense Nuclear Facilities Safety Board Strategic Plan, FY 2018–2022*.

**Strategic Goal 1 - Improve Safety of Operations**

Perform independent oversight of operational safety of DOE’s defense nuclear facilities to develop analysis, advice, and recommendations that will inform the Secretary of Energy in providing adequate protection of public health and safety at such defense nuclear facilities.

**Strategic Objective 1.1**

Accomplish independent and timely oversight to strengthen safety of operations involved in the maintenance of the nuclear weapons stockpile and in weapons-related research, development, and testing.

**Performance Goal 1.1.1**

<b>Fiscal Year</b>	<b>Goal Statement and Target</b>	<b>Target Measure, Milestone, or Deliverable</b>	<b>Result</b>
2017	Conduct effective oversight through formal, well-planned safety reviews of the NNSA defense nuclear facilities engaged in maintenance of the nuclear weapons stockpile and in weapons-related research, development, and testing.  Target: Number of reviews completed that comply with the Board’s new Technical Staff Instructions, Operating Procedures, and Internal Controls	Complete 10 reviews	Achieved  > 10 Reviews
<b>Actual Results for Preceding Fiscal Years</b>			
2016	Conduct effective oversight through formal, well-planned safety reviews of the NNSA defense nuclear facilities engaged in maintenance of the nuclear weapons stockpile and in weapons-related research, development, and testing.	Complete 10 reviews	Achieved  > 10 Reviews

2015	Conduct effective oversight through formal, well-planned safety reviews of the NNSA defense nuclear facilities engaged in maintenance of the nuclear weapons stockpile and in weapons-related research, development, and testing.	Complete 10 reviews	Achieved > 10 Reviews
2014	Conduct effective oversight through formal, well-planned safety reviews of the NNSA defense nuclear facilities engaged in maintenance of the nuclear weapons stockpile and in weapons-related research, development, and testing.	Complete 8 reviews	Achieved > 8 Reviews

**Discussion**

The Board completed the following reviews to meet the above objective of conducting effective oversight of NNSA defense nuclear facilities engaged in the maintenance of the nuclear weapons stockpile and in weapons-related research, development, and testing. The FY 2017 goal was to complete a minimum of ten safety oversight reviews. That goal was accomplished.

1. Potential Hazards Associated with Contaminated Cheesecloth Exposed to Nitric Acid Solutions, October 2016. Scope: Review the hazards posed by, and the National TRU (transuranic) Program's position on, waste containing cheesecloth exposed to nitric acid solution and whether this waste complies with the Waste Isolation Pilot Plant's waste acceptance criteria. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
2. Los Alamos National Laboratory's Software Quality Assurance Review, October 2016. Scope: Review the implementation of the material at risk (MAR) tracking software used for Area G, Technical Area 55, and the Weapons Engineering Tritium Facility (WETF). No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
3. Pantex Plant (Pantex) Safety Culture Improvement Review, November 2016. Scope: Review contractor efforts to implement safety culture improvements at Pantex as a follow-up to the Board's public hearing in March 2013. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
4. Conduct of Operations and Maintenance Review at Sandia National Laboratories (SNL), December 2016. Scope: Review and evaluate the adequacy of the conduct of operations and maintenance programs. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.

5. Device Assembly Facility (DAF) Functional Exercise Review, December 2016. Scope: Evaluate the effectiveness of the Nevada National Security Site's emergency plans, procedures, and response at DAF. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
6. Review of the Safety Basis Strategy for the Extended Life Program at the Y-12 National Security Complex (Y-12), February 2017. Scope: Review the scope, priority, and actions required to execute the proposed risk reduction strategy and resolve any gaps in meeting applicable DOE requirements for the 9215 Complex and Building 9204-2E at Y-12. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
7. Review of the Operational Drill Program and Abnormal Operating Procedures for Lawrence Livermore National Laboratory (LLNL), July 2017. Scope: Evaluate performance and development of abnormal operating procedures, alarm response procedures, and the operational drill program at LLNL. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
8. Review of LANL Pyrochemistry Federal Readiness Assessment (FRA), June 2017. Scope: Evaluate the DOE's FRA for resumption of pyrochemistry operations after the laboratory's pause in operations of June of 2013. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
9. Review of Inappropriately Remediated Nitrate Salt-Bearing (RNS) Waste at LANL, February 2017. Scope: Assess the effectiveness of selected controls to mitigate the accident consequences while RNS waste is stored within the Area G containment enclosure. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
10. Operational Readiness Review at the U1a Complex at NNSS, August 2017. Scope: Evaluate the Contractor Operational Readiness Review (CORR) and review the CORR team's final report. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.

Additionally, the following staff reviews were completed during FY 2017:

***LANL***

1. Operational Drill Program and Abnormal Operating Procedures Review. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
2. LANL RNS Waste Treatment Readiness Activities Review. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
3. LANL RNS Waste Treatment Safety Basis Review. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.

4. Scoping Review of the Safety Basis for the Plutonium Facility at LANL. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
5. Nuclear Criticality Safety Program Review. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.

***Pantex Plant***

1. W78 Special Tooling Upgrades Review. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
2. Fire Protection Systems Reliability Follow-up Review. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
3. Structural Infrastructure Follow-up Review. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
4. W84 Nuclear Explosive Operations Restart Review. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
5. Software Quality Assurance Implementation Weapon Response Code Review. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
6. W80 ALT 369 Readiness Activities Review. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.

***Sandia National Laboratory (SNL)***

1. Pipe Overpack Container Testing Review. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
2. Mixed Waste Landfill Evaluation. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
3. Assessment of Chief of Defense Nuclear Safety's Biennial Review. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.

***Lawrence Livermore National Laboratory (LLNL)***

1. Seismic Safety Review. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.

***Nevada Nuclear Security Site (NNSS)***

1. National Criticality Experiments Research Center Instrumentation and Control Follow-up Review. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
2. Review of the In-Service Inspection for DAF Gravel Gerties. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.

3. U1a Complex Hazard Category 2 Operational Readiness Reviews. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
4. U1a Fire Protection and Life Safety Improvements for FY 2017 Review. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
5. DAF FSS Improvements Review. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.

***Y-12 National Security Site (Y-12)***

1. Unresolved Safety Question Procedure Merger and Technical Safety Requirement Improvement Plan Review. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
2. Nuclear Facilities Electrical Modernization Review. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.

In FY 2016, the Board completed more than ten reviews to meet performance goal 1.1.1. The technical staff conducted reviews at all NNSA sites. Specific reviews included reviews in the LANL Plutonium Facility (multiple nuclear operations restarts), Pantex (software quality assurance implementation), Y-12 Building 9212 (confinement ventilation), the NNSS National Criticality Experiments Research Center (instrumentation and controls), and LLNL (probabilistic seismic hazard analysis).

In FY 2015, the Board completed more than ten reviews to meet performance goal 1.1.1. The technical staff conducted reviews at all NNSA sites including LANL Area G (Inappropriately Remediated Nitrate Salt-Bearing Waste Storage), LLNL (Conduct of Operations and Maintenance), Pantex (Emergency Management Program), and Y-12 National Security Complex (Highly Enriched Uranium Materials Facility DSA).

In FY 2014, the Board completed more than eight reviews to meet performance goal 1.1.1. The technical staff conducted reviews at all NNSA sites including LANL Area G (Basis for Interim Operation), NNSS (Conduct of Operations and Maintenance), Pantex (Electrical Distribution System and Electrical Safety Program), and Y-12 National Security Complex (Criticality Safety).

**Performance Goal 1.1.2**

<b>Fiscal Year</b>	<b>Goal Statement and Target</b>	<b>Target Measure, Milestone, or Deliverable</b>	<b>Result</b>
2017	<p>Conduct effective oversight through formal, well-planned reviews of NNSA’s nuclear explosive safety activities.</p> <p>Target: Number of reviews completed that comply with the Board’s new Technical Staff Instructions, Operating Procedures, and Internal Controls</p>	Complete 3 reviews	Achieved  > 3 Reviews
<b>Actual Results for Preceding Fiscal Years</b>			
2016	Conduct effective oversight through formal, well-planned reviews of NNSA’s nuclear explosive safety activities.	Complete 3 reviews	Achieved  3 Reviews
2015	Conduct effective oversight through formal, well-planned reviews of NNSA’s nuclear explosive safety activities.	Complete 3 reviews	Achieved  3 Reviews
2014	Conduct effective oversight through formal, well-planned reviews of NNSA’s nuclear explosive safety activities.	Complete 3 reviews	Achieved  3 Reviews

**Discussion**

The Board completed the following reviews to meet the above objective of effective oversight of NNSA’s nuclear explosive safety (NES) activities. The FY 2017 goal was to complete a minimum of three safety oversight reviews. That goal was accomplished.

1. W78 Repair Unit NES Study, September 2017. Scope: Observed the subject NES Study Group including the demonstrations and deliberations. The staff reviewed all input documents for the subject NES Study, the study report, the presentation of the study report to NNSA management, the NNSA management disposition of all NES inadequacies identified, final closure of the NES Study and authorization of nuclear explosive operations. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
2. B83 Disassembly and Inspection Operational Safety Review, May 2017. Scope: Observed the subject NES Study Group demonstrations and deliberations. Reviewed all input documents for the subject NES Study, the study report, the presentation of the study report

to NNSA management, the NNSA management disposition of all NES inadequacies identified, final closure of the NES Study and the continued authorization of nuclear explosive operations. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.

3. W80 NES Study, September 2017. Scope: Observed the subject NES Study Group including the demonstrations and deliberations. Reviewed all input documents for the subject NES Study, the study report, the presentation of the study report to NNSA management, the NNSA management disposition of all NES inadequacies identified, final closure of the NES Study and authorization of nuclear explosive operations. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.

Additionally, the following staff reviews were completed during FY 2017:

1. W76 NES Study, September 2017. Scope: Observed the meeting of the subject NES Study Group including the demonstrations and deliberations. Additionally, reviewed all input documents for the subject NES Study, the study report, the presentation of the study report to NNSA management, the NNSA management disposition of all NES inadequacies identified, final closure of the NES Study and authorization of nuclear explosive operations. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.

In FY 2016, the Board completed three reviews to meet the above objective of effective oversight of NNSA's nuclear explosive safety activities. The technical staff observed a W78 Special Tooling NCE, a W87 NES Study, and a PT-3854 Electrical Tester Study.

In FY 2015, the Board completed three reviews to meet the above objective of effective oversight of NNSA's nuclear explosive safety activities. The technical staff observed a W80 and B61 A/N Can Electrostatic Discharge NCE, a W87 Tester and W76 Isolator NCE, and UV/IR System Upgrade NCE.

In FY 2014, the Board completed three reviews to meet the above objective of effective oversight of NNSA's nuclear explosive safety activities. The technical staff observed an Onsite Transportation and Staging NES Master Study review, a review of the W88 NES Operational Safety Review, and an Approved Equipment Program NES Master Study Module II (Special Tooling) review.

**Performance Goal 1.1.3**

Fiscal Year	Goal Statement and Target	Target Measure, Milestone, or Deliverable	Result
2017	<p>Notify NNSA of potential safety issues at NNSA defense nuclear facilities and in nuclear weapons operations.</p> <p>Target: Percentage of Board letters regarding potential safety deficiencies sent to NNSA (for which the Board receives a response in the target year) that result in an NNSA assessment of the safety issues.</p>	90% (measured collectively with goals 1.2.2, 2.2.2, 3.2.2)	<p>Collective Result: Not applicable.</p> <p>There was no Board correspondence to NNSA regarding potential new safety issues in FY 2017.</p> <p>Goal 1.1.3 Result: Not applicable, the correspondence to NNSA focused on management of previously accepted safety deficiencies.</p>
<b>Actual Results for Preceding Fiscal Years</b>			
2016	<p>Notify NNSA of potential safety issues at NNSA defense nuclear facilities and in nuclear weapons operations.</p>	90% (measured collectively with goals 1.2.2, 2.2.2, 3.2.2)	<p>Achieved</p> <p>100% of letters resulted in DOE/NNSA assessment of the safety issue</p>
2015	<p>Notify NNSA of potential safety issues at NNSA defense nuclear facilities and in nuclear weapons operations.</p>	85% of letters result in positive NNSA response	<p>Achieved</p> <p>100% of letters resulted in positive NNSA response</p>

2014	Notify NNSA of potential safety issues at NNSA defense nuclear facilities and in nuclear weapons operations.	80% of letters result in positive NNSA response	Achieved  100% of letters resulted in positive NNSA response
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**Discussion**

The metric used to evaluate this goal is limited to reviews that resulted in official Board correspondence to DOE/NNSA. This goal focuses on those issues that were evaluated as significant enough to merit correspondence. Board correspondence can be in the form of a letter that does not request a written response from DOE/NNSA, or in the form of a letter with a reporting requirement or a Board recommendation, both of which require a written response. The correspondence from FY 2017 issued to NNSA focused on the management and follow-up of previously identified safety deficiencies at NNSA defense nuclear facilities and in nuclear weapons operations. There was no correspondence with NNSA regarding potential new safety concerns in FY 2017. Those correspondences that were submitted are listed below:

1. Invitation to Public Hearing Regarding Emergency Preparedness and Response. Board correspondence date: July 27, 2017. DOE/NNSA response date: The hearing was accepted and the Board subsequently changed the hearing to a meeting. DOE/NNSA completed assessment of the safety issue: None required.
2. Assessment of the Progress of Recommendation 2015-1. Board correspondence date: July 25, 2017. DOE/NNSA response date: None required. DOE/NNSA completed assessment of the safety issue: None required.
3. Determination to Forego the Submission of Draft Recommendation 2017-1. Board correspondence date: July 13, 2017. DOE/NNSA response date: The Board letter was solely for the Secretary’s information, and therefore did not require a response date from DOE/NNSA. DOE/NNSA completed assessment of the safety issue: The Board letter intended solely for the Secretary’s information, and therefore did not require an assessment of a safety issue.
4. Termination of Annual Reporting Requirements Regarding the Safety of the 9212 Complex at Y-12. Board correspondence date: May 11, 2017. DOE/NNSA response date: None required. This letter informed DOE/NNSA of the Board’s decision to terminate the reporting requirements regarding the safety of the 9212 Complex, which had been established by a reporting requirement levied March 13, 2007. The site’s extended life program was determined to be an adequate substitute. DOE/NNSA completed assessment of the safety issue: None required.
5. Closure of Recommendation 2009-2. Board correspondence date: January 3, 2017. DOE/NNSA response date: None required. DOE/NNSA completed assessment of the safety issue: None required.

6. Report No Issues with CD 2/3 Milestones of Phase 1 of the Plutonium Equipment Installation Subproject at LANL. Board correspondence date: November 18, 2016. DOE/NNSA response date: None required. DOE/NNSA completed assessment of the safety issue: None required.

In FY 2016, FY 2015 and FY 2014, this performance goal was used to track NNSA positive response to Board correspondence. In each year, the correspondence issued to NNSA on potential safety issues at NNSA defense nuclear facilities and in nuclear weapons operations included four, five, and five specific items of correspondence, respectively. The determined positive response rate from NNSA was 100 percent in FY 2016 and 80 percent in both FY 2015 and FY 2014. Note that in FY 2016, the Board changed the target measure for this performance goal to a collective percentage with additional Board performance goals.

**Performance Goal 1.1.4**

<b>Fiscal Year</b>	<b>Goal Statement and Target</b>	<b>Target Measure, Milestone, or Deliverable</b>	<b>Result</b>
2017	Maintain a near-continuous oversight presence at each of the following sites: LANL, Y-12, and Pantex.  Target: Number of days per year that a resident inspector or a member of the Board’s technical staff conducts safety oversight at each site (LANL, Y-12, and Pantex).	220 days	Achieved  Coverage exceeded the target of 220 days
<b>Actual Results for Preceding Fiscal Years</b>			
2016	Maintain a near-continuous oversight presence at each of the following sites: LANL, Y-12, and Pantex.	220 days	Achieved  Coverage exceeded the target of 220 days
2015	Maintain a near-continuous oversight presence at each of the following sites: LANL, Y-12, and Pantex.	220 days	Not Achieved  Coverage at Pantex less than 220 days
2014	Maintain a near-continuous oversight presence at each of the following sites: LANL, Y-12, and Pantex.	220 days	Achieved  Coverage exceeded the target of 220 days

**Discussion**

The Board’s resident inspectors and technical staff members conducted safety oversight and maintained a near-continuous oversight presence at LANL, Y-12, and Pantex during FY 2017.

- At LANL, the Board’s resident inspectors and technical staff members conducted 226 days of safety oversight, which exceeds the performance goal of 220 days.
- At Y-12, the Board’s resident inspectors and technical staff members conducted 236 days of safety oversight, which exceeds the performance goal of 220 days.
- At Pantex, the Board’s resident inspector and technical staff members conducted 235 days of safety oversight, which exceeds the performance goal of 220 days.

In FY 2016, the Board’s resident inspectors and technical staff members conducted safety oversight and maintained a near-continuous oversight presence in excess of 220 days at each LANL, Y-12, and Pantex.

In FY 2015, coverage at LANL and Y-12 exceeded 220 days, but only 218 days of coverage was conducted at Pantex due to the unexpected departure of a Board's resident inspector stationed at that site. In FY 2014, coverage at all three site exceeded 220 days.

**Strategic Objective 1.2**

Accomplish independent and timely oversight to strengthen safety of operations in cleanup of legacy defense nuclear wastes and facilities.

**Performance Goal 1.2.1**

Fiscal Year	Goal Statement and Target	Target Measure, Milestone, or Deliverable	Result
2017	<p>Conduct effective oversight through formal, well-planned safety reviews at DOE-EM operating defense nuclear facilities and facilities undergoing decommissioning and decontamination.</p> <p>Target: Number of reviews completed that comply with the Board’s new Technical Staff Instructions, Operating Procedures, and Internal Control.</p>	Complete 10 reviews	Achieved  > 10 Reviews
<b>Actual Results for Preceding Fiscal Years</b>			
2016	<p>Conduct effective oversight through formal, well-planned safety reviews at DOE-EM operating defense nuclear facilities and facilities undergoing decommissioning and decontamination.</p>	Complete 10 reviews	Achieved  > 10 Reviews
2015	<p>Conduct effective oversight through formal, well-planned safety reviews at DOE-EM operating defense nuclear facilities and facilities undergoing decommissioning and decontamination.</p>	Complete 10 reviews	Achieved  > 10 Reviews
2014	<p>Conduct effective oversight through formal, well-planned safety reviews at DOE-EM operating defense nuclear facilities and facilities undergoing decommissioning and decontamination.</p>	Complete 8 reviews	Achieved  8 Reviews

## Discussion

The Board completed the following reviews to meet the above objective of conducting effective oversight of DOE-Office of Environmental Management (EM) facilities. The FY 2017 goal was to complete a minimum of ten oversight reviews. That goal was accomplished.

1. Waste Isolation Pilot Plant (WIPP) – Maintenance Program, October 2016. Scope: Review changes made to the WIPP maintenance program in response to 2014 events. Lines of inquiry focused on the maintenance backlog and prioritization, tracking and trending of maintenance and equipment, and the development and execution of work control documents and procedures. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
2. WIPP – Contractor Operational Readiness Review, October 2016. Scope: Review contractor operational readiness review (ORR)'s criteria review and approach documents (CRAD) to assess the adequacy of the scope of the ORR. Additionally, observe the execution of the ORR to assess the ability of WIPP to safely re-start disposal operations. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
3. WIPP – Fire Protection Program, November 2016. Scope: Review revised WIPP Fire Protection Program, including both contractor and DOE oversight components, as implemented in response to corrective actions from the DOE Accident Evaluation Board reports. Additionally, evaluate the program for consistency with the revision to the WIPP documented safety analysis (DSA). No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
4. WIPP – Corrective Action Plan Review, November 2016. Scope: Analyze evidence packages for the corrections actions taken by Nuclear Waste Partnership, LLC, the DOE's Carlsbad Field Office and DOE Headquarters in response to the three Accident Investigation Board reports written following the fire and radiological release events in February 2014. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
5. Idaho National Laboratory (INL) – Radioactive Waste Management Complex (RWMC) Safety Basis Review, December 2016. Scope: Review safety basis of the RWMC at INL and focused on assumptions used in the material at risk (MAR) statistical analysis, the safety basis methodology, criticality safety, and document configuration control. The Idaho Cleanup Project contractor, Fluor Idaho, LLC (Fluor) declared a Potential Inadequacy in the Safety Analysis for RWMC and two other Idaho Cleanup Project facilities as a result of the staff's questions regarding the MAR statistical analysis. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
6. WIPP – DOE ORR, April 2017. Scope: Observe conduct of DOE's ORR for restart of transuranic waste disposal operations at WIPP. Additionally, review and assess the adequacy of closure packages for select DOE ORR team pre- and post-start findings. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.

7. Hanford – Hanford Tanks Farm’s Cognizant System Engineer and Maintenance Program Review, June 2017. Scope: Review effectiveness of the Hanford Tank Farm’s maintenance and engineering programs to ensure that credited safety-related structures, systems, and components (SSC) will function when needed and as designed. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
8. Savannah River Site (SRS) – Savannah River National Lab (SRNL) Safety Basis Review, June 2017. Scope: Review actions that Savannah River Nuclear Solutions, LLC (SRNS) took to address concerns raised during a prior Board’s staff review of a proposed major revision to the SRNL DSA. Focus on accident scenarios with high mitigated radiological consequences, the designation of specific administrative controls, and the downgrade of replacement fire water tanks and pumps. New potential safety issue(s) was identified by this review that resulted in Board communication to the Department of Energy in FY 2017. The Board communicated on September 13, 2017, regarding the designation of specific administrative controls (SACs) at the Savannah River Site (SRS) for DOE’s use as appropriate.
9. SRS – F-Area Complex Emergency Preparedness Exercise, June 2017. Scope: Observe the F-Area Complex emergency preparedness exercise. Observations focused on the facility and emergency response personnel at the scene of the incident, the Incident Command Post, the SRS Operations Center and the Technical Support Room to assess the performance of personnel, recovery planning, and control of the exercise. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
10. WIPP – Potential Inadequacy in the Safety Analysis Determination (PISDA) for a Large Roof Fall, June 2017. Scope: Review documented PISDA for a roof fall that is larger than the one assumed in the WIPP DSA. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.

Additionally, the following staff reviews were completed during FY 2017:

1. SRS – K-Area Complex (KAC) Plutonium Down Blend Review, August 2017. Scope: Review changes to the KAC DSA in support of the new plutonium oxide down blend mission. Focus on the consideration and justification for acceptance of risk in the approved DSA, the reliability of administrative controls following a seismic event, and the protection of nuclear criticality safety evaluation assumptions.
2. Oak Ridge National Laboratory (ORNL) – Transuranic Waste Processing Center (TWPC) DSA Review, August 2017. Scope: Review TWPC DSA, with a focus on evaluating the hazard analysis, associated accident scenarios and controls selections. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
3. Hanford – Hanford Tank Farms Wireless Safety Instrumented System Upgrades Review, August 2017. Scope: Review recent upgrades on instrumentation and controls at Hanford Tank Farms to incorporate the use of wireless communications to transmit safety significant process

parameters to a centralized location. Focus on ensuring the upgrades were designed and installed in accordance with applicable requirements for safety-related SSCs. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.

In FY 2016, the Board completed fourteen reviews to meet the above objective of conducting effective oversight of DOE-EM facilities. The technical staff conducted reviews at the Hanford site (5), SRS (3), INL (2), ORNL (1), and WIPP (3). In FY 2015, the Board completed twenty reviews to meet the above objective of conducting effective oversight of DOE-EM facilities. The technical staff conducted reviews at the Hanford site (6), SRS (3), INL (5), and WIPP (6). In FY 2014, the Board completed eight reviews to meet the above objective of conducting effective oversight of DOE-EM facilities. The technical staff conducted reviews at the Hanford site (3), SRS (3), INL (1), and WIPP (1).

**Performance Goal 1.2.2**

Fiscal Year	Goal Statement and Target	Target Measure, Milestone, or Deliverable	Result
2017	<p>Notify DOE of potential safety issues at DOE defense nuclear facilities and in nuclear waste remediation operations.</p> <p>Target: Percentage of Board letters regarding potential safety deficiencies sent to DOE (for which the Board receives a positive response in the target year) that result in a DOE assessment of the safety issue.</p>	90% (measured collectively with goals 1.1.3, 2.2.2, 3.2.2)	<p>Collective Result: Not applicable.</p> <p>There was one Board letter notifying DOE of a potential new safety issue in FY 2017. The letter was provided for DOE’s use as appropriate.</p> <p>Goal 1.2.2 Result: Not applicable; there have been no responses received from DOE on letters sent in FY 2017.</p>
<b>Actual Results for Preceding Fiscal Years</b>			
2016	<p>Notify DOE of potential safety issues at DOE defense nuclear facilities and in nuclear waste remediation operations.</p>	90% (measured collectively with goals 1.1.3, 2.2.2, 3.2.2)	<p>Achieved</p> <p>100% of letters resulted in DOE/NNSA assessment of the safety issue</p>
2015	<p>Notify DOE of potential safety issues at DOE defense nuclear facilities and in nuclear waste remediation operations.</p>	85% of letters result in positive DOE response	<p>Achieved</p> <p>100% of letters resulted in positive DOE response</p>
2014	<p>Notify DOE of potential safety issues at DOE defense nuclear facilities and in nuclear waste remediation operations.</p>	80% of letters result in positive DOE response	<p>Achieved</p> <p>100% of letters resulted in positive DOE response</p>

**Discussion**

The metric used to evaluate this goal is limited to reviews that resulted in official Board correspondence to DOE. This goal focuses on those issues that were evaluated as significant enough to merit correspondence. Board correspondence can be in the form of a letter that does not request a written response from DOE, or in the form of a letter with a reporting requirement or a Board recommendation, both of which require a written response. The Board sent one letter to DOE on September 13, 2017 regarding the designation and use of specific administrative controls at the SRS, for DOE's use and information, and did not request a response. Therefore, the performance goal was not applicable in FY 2017, as the Board requested no responses for correspondence issued to DOE.

In FY 2016, FY 2015 and FY 2014, this performance goal was used to track DOE positive response to Board correspondence. The Board issued DOE three pieces of correspondence on potential safety issues at DOE defense nuclear facilities and in nuclear waste remediation operations during FY 2016, four during FY 2015 and four during FY 2014. All eleven pieces of correspondence were assessed to result in a positive response. Note that in FY 2016, the Board changed the target measure for this performance goal to a collective percentage with additional Board performance goals.

**Performance Goal 1.2.3**

<b>Fiscal Year</b>	<b>Goal Statement and Target</b>	<b>Target Measure, Milestone, or Deliverable</b>	<b>Result</b>
2017	Maintain a near-continuous oversight presence at the Hanford Site and SRS.  Target: Number of days per year that a resident inspector or a member of the Board’s technical staff conducts safety oversight at each site (Hanford Site and SRS).	220 days	Achieved  Coverage met or exceeded the target of 220 days.
<b>Actual Results for Preceding Fiscal Years</b>			
2016	Maintain a near-continuous oversight presence at the Hanford Site and SRS.	220 days	Achieved  Coverage exceeded the target of 220 days
2015	Maintain a near-continuous oversight presence at the Hanford Site and SRS.	220 days	Achieved  Coverage exceeded the target of 220 days
2014	Maintain a near-continuous oversight presence at the Hanford Site and SRS.	220 days	Achieved  Coverage exceeded the target of 220 days

**Discussion**

The Board’s resident inspectors and technical staff members conducted safety oversight and maintained a near-continuous oversight presence at Hanford and SRS during FY 2017.

- At Hanford, the Board’s resident inspectors and technical staff members conducted 241 days of safety oversight at the end of FY 2017, which exceeded the performance goal of 220 days.
- At SRS, the Board’s resident inspectors and technical staff members conducted 220 days of safety oversight at the end of FY 2017, which met the performance goal of 220 days.

In FY 2016, FY 2015 and FY 2014, coverage at each site exceeded the target of 220 days.

**Strategic Goal 2 - Strengthen Safety Standards**

Recommend and promote effective safety standards for the Secretary of Energy to apply in providing adequate protection of public health and safety at such defense nuclear facilities.

**Strategic Objective 2.1**

Accomplish independent oversight to strengthen the development, implementation, and maintenance of DOE regulations, requirements, and guidance for providing adequate protection of public health and safety at defense nuclear facilities.

**Performance Goal 2.1.1**

<b>Fiscal Year</b>	<b>Goal Statement and Target</b>	<b>Target Measure, Milestone, or Deliverable</b>	<b>Result</b>
2017	<p>Strengthen DOE’s Directives by providing timely oversight and comments to improve revised and newly issued DOE Directives (as noted on the list of “Directives of Interest to the Board”).</p> <p>Target: Percentage of DOE Directives entering the review-comment period for which the Board provides comments on or before the Review Date Deadline.</p>	95%	Achieved  100%
<b>Actual Results for Preceding Fiscal Years</b>			
2016	<p>Strengthen DOE’s Directives by providing timely oversight and comments to improve revised and newly issued DOE Directives (as noted on the list of “Directives of Interest to the Board”).</p>	95%	Achieved  100%
2015	<p>Strengthen DOE’s Directives by providing timely oversight and comments to improve revised and newly issued DOE Directives (as noted on the list of “Orders of Interest to the Board”).</p>	95%	Achieved  100%

2014	Strengthen DOE’s Directives by providing timely oversight and comments to improve revised and newly issued DOE Directives (as noted on the list of “Orders of Interest to the Board”).	90%	Not Achieved  74%
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**Discussion**

During FY 2017, the Board completed 27 reviews of 25 DOE directives with all of the reviews completed by the Review Date Deadline.

During FY 2016, the Board completed 52 reviews of 59 DOE directives with all of the reviews completed by the Review Date Deadline.

During FY 2015, the Board completed 39 reviews of 35 DOE directives with all of the reviews completed by the Review Date Deadline.

During FY 2014, the Board completed reviews of 27 DOE directives, with 20 of the reviews (74 percent) completed by the Review Date Deadline. The timeliness of Board reviews of DOE Standards improved significantly after the implementation of new internal control processes at mid-year. During the 3<sup>rd</sup> and 4<sup>th</sup> quarters of the fiscal year, the timeliness response rate to DOE from the Board was nearly 100 percent.

**Performance Goal 2.1.2**

<b>Fiscal Year</b>	<b>Goal Statement and Target</b>	<b>Target Measure, Milestone, or Deliverable</b>	<b>Result</b>
2017	<p>Conduct effective oversight of the implementation of DOE Directives (as noted on the list of “Directives of Interest to the Board”) through formal, well-planned safety reviews of DOE defense nuclear facilities.</p> <p>Target: Number of reviews of the implementation of DOE Directives completed that comply with the new Technical Staff Instructions, Operating Procedures, and Internal Controls.</p>	Complete 3 reviews	<p>Achieved</p> <p>&gt; 3 Reviews</p>
<b>Actual Results for Preceding Fiscal Years</b>			
2016	<p>Conduct effective oversight of the implementation of DOE Directives (as noted on the list of “Directives of Interest to the Board”) through formal, well-planned safety reviews of DOE defense nuclear facilities.</p>	Complete 3 reviews	<p>Achieved</p> <p>&gt; 3 Reviews</p>
2015	<p>Conduct effective oversight of the implementation of DOE Directives (as noted on the list of “Directives of Interest to the Board”) through formal, well-planned safety reviews of DOE defense nuclear facilities.</p>	Complete 3 reviews	<p>Achieved</p> <p>3 Reviews</p>
2014	<p>Conduct effective oversight of the implementation of DOE Directives (as noted on the list of “Orders of Interest to the Board”) through formal, well-planned safety reviews at DOE defense nuclear facilities.</p>	Complete 2 reviews	<p>Achieved</p> <p>2 Reviews</p>

## Discussion

In FY 2017, three reviews were completed to provide independent oversight to strengthen the development, implementation, and maintenance of DOE regulations, requirements, and guidance for providing adequate protection of public health and safety at defense nuclear facilities. These reviews covered the following topics:

1. Pantex Plant February 2017 Site-wide, Full-Scale Emergency Exercise, April 20, 2017. Scope: Review of Pantex Plant accident scenarios, exercise execution and control, emergency communications, and facility response. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
2. NNSS May 2017 Site-wide, Full-Participation Emergency Exercise, June 9, 2017. Scope: Review of NNSS accident scenarios, exercise execution and control, emergency communications, and facility response. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
3. Annual Emergency Exercise Review at LLNL, June 19, 2017. Scope: Review of LLNL accident scenarios, exercise execution and control, emergency communications, and facility response. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.

Additionally, the following staff reviews were completed during FY 2017:

1. Oak Ridge Reservation Multi-site Exercise, July 11, 2017. Scope: Review of accident scenarios, exercise execution and control, emergency communications, and facility response at the Oak Ridge Reservation. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
2. DOE Order 232.2A, Occurrence Reporting and Processing of Operations Information, May 10, 2017. Scope: Review of the deletion of certain safety-related occurrence reporting requirements from DOE Order 232.2A. New potential safety issue(s) was identified by this review that resulted in Board communication to the Department of Energy in FY 2017. May 10, 2017, Board letter establishing a reporting requirement for DOE to provide a report regarding any supplemental actions planned by line management to ensure safety oversight is not degraded at defense nuclear facilities prior to implementing DOE Order 232.2A, Occurrence Reporting and Processing of Operations Information.

In FY 2016, five such reviews were completed covering the following topics: 1) NNSS Quality Assurance (QA); 2) Emergency Exercise Observation at LANL; 3) Emergency Exercise Observations at INL; 4) Additional Emergency Exercise Observations at LANL; and 5) Emergency Exercise Observation at Hanford.

In FY 2015, three such reviews were completed covering the following topics: 1) Review of the SQA in a Packaging and Transportation Computer Code; 2) Emergent Review of the RadCalc 4.1.1 Safety Calculation Advisory; and 3) SQA Audit of Boston Government Services.

In FY 2014, two such reviews were completed covering the following topics: SNL Conduct of Operations and Maintenance, and SRS SWPF Quality Assurance Program.

**Strategic Objective 2.2**

Accomplish independent oversight to improve the establishment and implementation of safety programs at defense nuclear facilities.

**Performance Goal 2.2.1**

<b>Fiscal Year</b>	<b>Goal Statement and Target</b>	<b>Target Measure, Milestone, or Deliverable</b>	<b>Result</b>
2017	<p>Conduct effective oversight through formal, well-planned reviews of DOE’s establishment and implementation of safety programs at defense nuclear facilities.</p> <p>Target: Number of reviews completed that comply with the Board’s new Technical Staff Instructions, Operating Procedures, and Internal Controls.</p>	Complete 4 reviews	<p>Achieved</p> <p>4 Reviews</p>
<b>Actual Results for Preceding Fiscal Years</b>			
2016	<p>Conduct effective oversight through formal, well-planned reviews of DOE’s establishment and implementation of safety programs at defense nuclear facilities.</p>	Complete 4 reviews	<p>Achieved</p> <p>4 Reviews</p>
2015	<p>Conduct effective oversight through formal, well-planned reviews of DOE’s establishment and implementation of safety programs at defense nuclear facilities.</p>	Complete 4 reviews	<p>Achieved</p> <p>4 Reviews</p>
2014	<p>Conduct effective oversight through formal, well-planned reviews of DOE’s establishment and implementation of safety programs at defense nuclear facilities.</p>	Complete 3 reviews	<p>Achieved</p> <p>3 Reviews</p>

## Discussion

In FY 2017, four reviews were completed to evaluate the establishment and implementation of safety programs at defense nuclear facilities. These reviews covered the following topics:

1. DOE Response to Annual Criticality Safety Briefing Agenda, October 6, 2016. Scope: Review DOE's response to the Board's questions on ten nuclear criticality safety topics that span the DOE complex. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
2. Annual Nuclear Criticality Safety Program Report for the Defense Nuclear Facilities, May 4, 2017. Scope: Review DOE's annual nuclear criticality safety metrics for FY 2016. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
3. Radiation Protection Program Review at the DOE's Waste Isolation Pilot Plant, June 19, 2017. Scope: Review radiation protection program implementation at WIPP to support the restart of waste handling and emplacement operations. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
4. Complex Wide Review of Transportation Safety Documents, July 21, 2017. Scope: Review and compare transportation safety documents at LANL, ORNL, Hanford Site, LLNL, and NNS. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.

In FY 2016, four such reviews were completed covering the following topics: 1) Safety Culture Improvement Action at the Hanford WTP; 2) 2015 Annual Site Emergency Exercise SNL; 3) LANL Emergency Preparedness and Response Program; and 4) Emergency Exercise Observations at Y-12 National Security Complex.

In FY 2015, four such reviews were completed covering the following topics: 1) Follow-on Review of LANL Work Planning and Control; 2) Review actions associated with safety culture assessments at WTP in Hanford, Washington; 3) Emergency Preparedness and Response at the Pantex Plant; and 4) DOE's Deliverables on Sustainment Tools for Recommendation 2011-1.

In FY 2014, three such reviews were completed covering the following topics: 1) Hanford Plutonium Finishing Plant Activity-Level Work Planning and Control; 2) Savannah River Nuclear Solutions Activity-Level Work Planning and Control; and 3) DOE Headquarters Emergency Response Function.

**Performance Goal 2.2.2**

Fiscal Year	Goal Statement and Target	Target Measure, Milestone, or Deliverable	Result
2017	<p>Notify DOE of potential actions to improve establishment and implementation of safety programs at DOE defense nuclear facilities.</p> <p>Target: Percentage of Board letters regarding potential safety deficiencies sent to DOE (for which the Board receives a response in the target year) that result in a DOE assessment of the safety issues.</p>	90% (measured collectively with goals 1.1.3, 1.2.2, 3.2.2)	<p>Collective Result: Not applicable.</p> <p>There was no Board correspondence to DOE regarding potential new issues with safety programs in FY 2017.</p> <p>Goal 2.2.2 Result: Not applicable; no responses received from DOE on letters sent in FY 2017.</p>
<b>Actual Results for Preceding Fiscal Years</b>			
2016	<p>Notify DOE of potential actions to improve establishment and implementation of safety programs at DOE defense nuclear facilities.</p>	90% (measured collectively with goals 1.1.3, 1.2.2, 3.2.2)	<p>Achieved</p> <p>100% of letters resulted in DOE/NNSA assessment of the safety issue</p>
2015	<p>Notify DOE of potential actions to improve establishment and implementation of safety programs at DOE defense nuclear facilities.</p>	85% of letters result in positive DOE response	<p>Achieved</p> <p>100% of letters resulted in positive DOE response</p>
2014	<p>Notify DOE of potential actions to improve establishment and implementation of safety programs at DOE defense nuclear facilities.</p>	80% of letters result in positive DOE response	<p>Achieved</p> <p>100% of letters resulted in positive DOE response.</p>

**Discussion**

The metric used to evaluate this goal is limited to reviews that resulted in official Board correspondence to DOE. This goal focuses on those issues that were evaluated as significant enough to merit correspondence. Board correspondence can be in the form of a letter that does not request a written

response from DOE, or in the form of a letter with a reporting requirement or a Board recommendation, both of which require a written response. There were no responses from DOE during FY 2017 for correspondence issued to DOE regarding actions to improve establishment and implementation of safety programs. However, there was one Board letter notifying DOE of potential new safety issues in FY 2017 associated with occurrence reporting and processing of operations information at defense nuclear facilities. The letter established a reporting requirement for DOE to provide a report regarding any supplemental actions planned by line management to ensure safety oversight is not degraded at defense nuclear facilities prior to implementing DOE Order 232.2A, Occurrence Reporting and Processing of Operations Information.

In FY 2016, FY 2015 and FY 2014, this performance goal was used to track DOE positive response to Board correspondence. The Board issued DOE two pieces of correspondence regarding actions to improve establishment and implementation of safety programs during FY 2016, four during FY 2015, and three during FY 2014. All nine pieces of correspondence were assessed to result in a positive response. Note that in FY 2016, the Board changed the target measure for this performance goal to a collective percentage with additional Board performance goals.

**Strategic Goal 3 - Strengthen Safety in Design**

Recommend and promote safety in design for new and modified defense nuclear facilities.

**Strategic Objective 3.1**

Accomplish independent oversight to strengthen the use of approved nuclear standards in the design and construction of defense nuclear facilities and major modifications to existing facilities.

**Performance Goal 3.1.1**

Fiscal Year	Goal Statement and Target	Target Measure, Milestone, or Deliverable	Result
2017	<p>Promote and strengthen the early integration of safety into the design and construction of DOE’s defense nuclear facilities by reviewing the adequacy of safety design basis documents at major project Critical Decision milestones.</p> <p>Target: Percentage of significant Hazard Category 2 projects achieving a Critical Decision milestone (CD-1, 2, 3, 4) for which the Board’s technical staff completes and documents in a staff report a review of the associated safety design basis document.</p>	100%	<p>Achieved</p> <p>100% Complete</p>
<b>Actual Results for Preceding Fiscal Years</b>			
2016	<p>Promote and strengthen the early integration of safety into the design and construction of DOE’s defense nuclear facilities by reviewing the adequacy of safety design basis documents at major project Critical Decision milestones.</p>	100%	<p>Achieved</p> <p>100% Complete</p>
2015	<p>Promote and strengthen the early integration of safety into the design and construction of DOE’s defense nuclear facilities by reviewing the adequacy of safety design basis documents at major project Critical Decision milestones.</p>	100%	<p>Achieved</p> <p>100% Complete</p>

2014	Promote and strengthen the early integration of safety into the design and construction of DOE’s defense nuclear facilities by reviewing the adequacy of safety design basis documents at major project Critical Decision milestones.	100%	Achieved  100% Complete
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**Discussion**

In FY 2017, two reviews of the safety design basis documents for significant Hazard Category 2 projects that were approaching a Critical Decision (CD) milestone were completed. This corresponds to an actual result of 100 percent. These project reviews covered the following:

1. LANL Plutonium Facility-4 Equipment Installation Phase 1 (PEI1) Subproject [DOE Project # 04-D-125-05] achieved CD-2/3 milestone in October 2016. The Board issued a Project Letter on this project in November 2016.
2. Y-12 Uranium Processing Facility [DOE Project # 06-D-141] expects to achieve CD-2/3 approval during fiscal year 2018. The Board issued a Project Letter on this project in June 2017.

During FY 2016, the Board completed and documented reviews of the safety design basis documents for four significant Hazard Category 2 projects that were approaching a CD milestone. This corresponded to an actual result of 100%. These projects include one that achieved CD-1 preliminary design milestone in December 2015 (WIPP Underground Ventilation System [DOE Project # 15-D-411] and one that (at the time) expected to achieve CD-2/3 approval date during fiscal year 2017 (LANL Plutonium Facility-4 Equipment Installation Phase 1 (PEI1) Subproject [DOE Project # 04-D-125-05]). There were also two projects within the LANL complex that completed reviews on safety design basis documents in anticipation of the CD-4 project completion milestone for each. The projects with their corresponding documents were as follows: Transuranic Waste Facility (DOE Project # 12-D-301-02) DSA review and the Transuranic Liquid Waste Treatment Facility (DOE Project # 07-D-220-03) PSDR review.

During FY 2015, the Board completed and documented reviews of the safety design basis document for three significant Hazard Category 2 projects that were approaching a CD milestone which corresponded to an actual result of 100%. These projects include two that achieved the CD-1 preliminary design milestone: Low Activity Waste Pretreatment System and the Electrorefining piece of the Y-12 Metal Purification Process, a major modification to an existing Hazard Category 2 defense nuclear facility. There were two projects that achieved the CD-4 project completion milestone: the Waste Solidification Building and the SRS Purification Area Vault Project. In the case of the Waste Solidification Building, an oversight review was not necessary as this project immediately entered cold standby and DOE did not produce an approved DSA.

During FY 2014, the Board completed and documented reviews of the safety design basis document for three significant Hazard Category 2 projects that were approaching a CD milestone which corresponded to an actual result of 100%. These projects included one that achieved the CD-1 preliminary design milestone in October 2014 (Sludge Processing Facility Buildouts), and two that achieved the CD-3 final design milestone during FY 2014 (Transuranic Waste Facility and KW Basin Sludge Removal Project).

**Performance Goal 3.1.2**

Fiscal Year	Goal Statement and Target	Target Measure, Milestone, or Deliverable	Result
2017	<p>Provide early notification to DOE of safety issues at DOE design and construction projects by issuing project letters within 60 days of major Critical Decision milestones to document the Board’s assessment of the project’s safety strategy and readiness to proceed with the next project stage.</p> <p>Target: The average number of days for the Board to issue a project letter to DOE for Hazard Category 2 projects achieving a Critical Decision milestone (CD-1, 2, 3, 4).</p>	Within 60 days	<p>Achieved</p> <p>Average of &lt;60 days (one letter issued at 18 days and one letter significantly ahead of the CD milestone approval)</p>
<b>Actual Results for Preceding Fiscal Years</b>			
2016	<p>Provide early notification to DOE of safety issues at DOE design and construction projects by issuing project letters within 60 days of major Critical Decision milestones to document the Board’s assessment of the project’s safety strategy and readiness to proceed with the next project stage.</p>	Within 60 days	<p>Achieved</p> <p>Average of 57 days.</p>
2015	<p>Provide early notification to DOE of safety issues at DOE design and construction projects by issuing project letters within 60 days of major Critical Decision milestones to document the Board’s assessment of the project’s safety strategy and readiness to proceed with the next project stage.</p>	100%	<p>Not Achieved</p> <p>66% Complete</p>
2014	<p>Provide early notification to DOE of safety issues at DOE design and construction projects by issuing project letters in advance of major Critical Decision milestones to document the Board’s assessment of the project’s safety strategy and readiness to proceed with the next project stage.</p>	100%	<p>Not Achieved</p> <p>33% Complete</p>

## **Discussion**

During FY 2017, the Board issued project letters for two significant Hazard Category 2 projects that were approaching a CD Milestone (CD-1, 2, 3, or 4). The LANL Plutonium Facility-4 Equipment Installation Phase 1 (PEI1) Subproject [DOE Project #04-D-125-05] achieved CD-2/3 in October 2016. The Board issued a project letter 18 days following the CD approval. The Board issued a project letter in June 2017, which is significantly ahead of the CD-2/3 approval for these Hazard Category 2 subprojects. Therefore, the Board's goal of issuing project letters within an average of 60 days of a CD approval milestone for Hazard Category 2 facilities was met.

During FY 2016, the Board issued project letters for two significant Hazard Category 2 projects that were approaching a CD milestone. These projects include one that achieved the CD-1 preliminary design milestone: WIPP Underground Ventilation System (DOE Project #15-D-411). Another project letter was written for a project that received a CD-1/3A milestone approval in September of FY 2015: Metal Purification Project Major Modification at Y-12. In both cases, the project letters were completed within 60 days (average of 57 days). A project letter was drafted and sent prior to CD approval date in FY 2017.

During FY 2015, the Board issued project letters for three significant Hazard Category 2 projects that were approaching a CD milestone. These projects include one that achieved the CD-1 preliminary design milestone: Low Activity Waste Pretreatment System. There were two projects that achieved the CD-4 project completion milestone during FY 2015: the Waste Solidification Building and the SRS Purification Area Vault Project. Two of the project letters were issued within 60 days of the CD milestone. This corresponded to a success rate of 66 percent for this performance goal.

During FY 2014, the Board issued project letters for three significant Hazard Category 2 projects that were approaching a CD milestone. These projects included one that achieved the CD-1 preliminary design milestone, Sludge Processing Facility Buildouts, and two that achieved the CD-3 final design milestone, Transuranic (TRU) Waste Facility and KW Basin Sludge Removal Project. One of the project letters was issued in advance of the CD milestone (the FY 2014 target measure), which corresponded to a success rate of 33 percent.

**Strategic Objective 3.2**

Accomplish independent safety oversight to enhance the clear and deliberate implementation of the principles and core functions of integrated safety management in the design, construction, and upkeep of safety systems in defense nuclear facilities.

**Performance Goal 3.2.1**

<b>Fiscal Year</b>	<b>Goal Statement and Target</b>	<b>Target Measure, Milestone, or Deliverable</b>	<b>Result</b>
2017	<p>Conduct effective oversight through formal, well-planned reviews of the design, construction, and upkeep of safety systems at DOE’s defense nuclear facilities.</p> <p>Target: Number of reviews completed of safety systems that comply with the Board’s new Technical Staff Instructions, Operating Procedures, and Internal Controls.</p>	Complete 10 reviews	Achieved > 10 Reviews
<b>Actual Results for Preceding Fiscal Years</b>			
2016	Conduct effective oversight through formal, well-planned reviews of the design, construction, and upkeep of safety systems at DOE’s defense nuclear facilities.	Complete 10 reviews	Achieved > 10 Reviews
2015	Conduct effective oversight through formal, well-planned reviews of the design, construction, and upkeep of safety systems at DOE’s defense nuclear facilities.	Complete 10 reviews	Achieved 10 Reviews
2014	Conduct effective oversight through formal, well-planned reviews of the design, construction, and upkeep of safety systems at DOE’s defense nuclear facilities.	Complete 6 reviews	Achieved 6 Reviews

**Discussion**

In FY 2017, the Board completed the 23 reviews listed below.

1. Design Review of the Permanent Ventilation System for the Waste Isolation Pilot Plant, completed October 2016. Scope: Review safety basis documents for the 30 percent design package. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.

2. Preliminary Fire Hazards Analysis Review at the Uranium Processing Facility, completed February 2017. Scope: Review fire protection systems, calculations, and analysis. New potential safety issue(s) was identified by this review that resulted in Board communication to the Department of Energy in FY 2017. June 26, 2017, Board project letter for the Uranium Processing Facility (UPF) describing opportunities for improvement related to the UPF safety strategy for fire protection.
3. Testing Review of the Salt Waste Processing Facility Safety Instrumented System, completed March 2017. Scope: Review test procedures and observe safety system testing. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
4. Review of Hydrogen Flammability Hazards in Waste Treatment and Immobilization Plant Vessels, completed March 2017. Scope: Review design proposals for safety systems that prevent or mitigate flammability hazards in vessels. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
5. Review of Hydrogen Flammability Hazards in Waste Treatment and Immobilization Piping Systems, completed March 2017. Scope: Review design proposals for safety systems that prevent or mitigate flammability hazards in piping. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
6. Review of Criticality Hazards at the Waste Treatment and Immobilization Plant, completed in March 2017. Scope: Review design proposals for safety systems that prevent criticality. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
7. Probabilistic Seismic Hazard Analysis at the Uranium Processing Facility, completed April 2017. Scope: Review documentation for the Probabilistic Seismic Hazard Analysis used to establish safety control designs. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
8. Design Review of the Permanent Ventilation System for the Waste Isolation Pilot Plant, completed April 2017. Scope: Review of the safety basis documents for the 60% design package. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
9. Testing Review of the Salt Waste Processing Facility Sludge Solids Receipt and Wash Water Hold system, completed June 2017. Scope: Review the testing procedures and observe the safety system testing. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
10. Review of LANL Plutonium Infrastructure, completed July 2017. Scope: Review Safety system background information related to Plutonium infrastructure. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.

Additionally, the following staff reviews were completed during FY 2017:

### ***LANL***

1. Commercial grade dedication of safety systems at the Transuranic Waste Facility. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
2. PF-4 column testing and nonlinear analysis statement of work. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
3. PF-4 alternate seismic analysis statement of work. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
4. Transuranic Waste Facility safety control set as defined in the Documented Safety Analysis. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
5. Plutonium infrastructure. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.

### ***Hanford***

1. Design requirements for the safety instrumented system at the Low-Activity Waste Pretreatment System. New potential safety issue(s) was identified by this review that resulted in Board communication to the Department of Energy in FY 2017. August 7, 2017, Board letter transmitting the DNFSB Staff Issue Report, Alternative Methodology for Safety Integrity Level Determination of Instrumented Systems at the Low-Activity Waste Pretreatment System, for DOE's information and use.
2. Electrical safety systems at the Waste Treatment and Immobilization Plant. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
3. Heat transfer modeling of Waste Treatment and Immobilization Plant vessels. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
4. Melter off-gas system at the Waste Treatment and immobilization Plant. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.
5. Safety system design calculations for spray leak accidents at the Waste Treatment and Immobilization Plant. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.

### ***Savannah River Site (SRS)***

1. Safety system testing on the Barium Decay and Salt Solution Feed systems at the Salt Waste Processing Facility. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.

### ***Y-12***

1. Geotechnical/Structural Construction of the Uranium Processing Facility. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.

***Waste Isolation Pilot Plant (WIPP)***

1. WIPP Permanent Ventilation System 90 percent Design Review. No new safety issues were identified by this review that resulted in Board communication to the Department of Energy in FY 2017.

In FY 2016, the Board completed sixteen reviews of safety systems that comply with the Board's Technical Staff Instructions, Operating Procedures, and Internal Controls. These reviews covered major projects including WTP, UPF, WIPP Permanent Ventilation System, and SWPF. Further, the technical staff completed reviews regarding Software Quality Assurance for the Analysis of Soil-Structure Interaction Calculation, Probabilistic Seismic Hazard Analyses, and Extended Life Programs.

In FY 2015, ten reviews of safety systems were completed. These reviews covered topics including Safety Instrumented Systems at SWPF, Confinement Ventilation at the Uranium Processing Facility, and a Nuclear Safety Initiatives Review for the Sludge Treatment Project. There were a total of six reviews performed at WTP. These review topics included Melter Accidents and Hazard Analysis, Seismic Classification of the Confinement Boundary, Hydrogen Control Strategy, and Sampling for Waste Feed Delivery.

In FY 2014, six reviews of safety systems were completed. These reviews covered topics including Probabilistic Seismic Hazard Analysis at INL and the Hanford Site, aging management of waste transfer lines at SRS, ammonia hazards at Hanford's WTP, and Safety Design Strategy for the High Level Waste Facility at WTP.

**Performance Goal 3.2.2**

Fiscal Year	Goal Statement and Target	Target Measure, Milestone, or Deliverable	Result
2017	<p>Notify DOE of potential safety issues regarding design and construction projects at defense nuclear facilities.</p> <p>Target: Percentage of Board letters regarding potential safety deficiencies sent to DOE (for which the Board receives a response in the target year) that result in a DOE assessment of the safety issues.</p>	90% (measured collectively with goals 1.1.3, 1.2.2, 2.2.2)	<p>Collective Result: Not applicable.</p> <p>There were two Board letters notifying DOE of potential new safety issues in FY 2017. One letter was communicated as an opportunity for improvement. The other was provided to DOE for information and use.</p> <p>Goal 3.2.2 Result: Not applicable, no responses received from DOE on letters sent in FY 2017.</p>
<b>Actual Results for Preceding Fiscal Years</b>			
2016	Notify DOE of potential safety issues regarding design and construction projects at defense nuclear facilities.	90% (measured collectively with goals 1.1.3, 1.2.2, 2.2.2)	<p>Achieved</p> <p>100% of letters resulted in DOE/NNSA assessment of the safety issue.</p>
2015	Notify DOE of potential safety issues regarding design and construction projects at defense nuclear facilities.	85% of letters result in positive DOE response	<p>Achieved</p> <p>100% of letters resulted in positive DOE response.</p>
2014	Notify DOE of potential safety issues regarding design and construction projects at defense nuclear facilities.	80% of letters result in positive DOE response	<p>Achieved</p> <p>100% of letters resulted in positive DOE response.</p>

## **Discussion**

The metric used to evaluate this goal is applied to reviews that resulted in official Board correspondence to DOE. This goal focuses on those issues that were evaluated as significant enough to merit correspondence. Board correspondence can be in the form of a letter that does not request a written response from DOE, or in the form of a letter with a reporting requirement or a Board recommendation, both of which require a written response.

During FY 2017, the Board issued two Project letters at CD milestones. These letters included a June 2017 correspondence on the Uranium Processing Facility (DOE Project #06-D-141) that listed opportunities for improvement related to the Uranium Processing Facility's safety strategy for fire protection. Neither of these letters had a reporting requirement. Consequently, there has been no response from DOE during FY 2017 regarding potential safety issues at defense nuclear facilities in design and construction.

In FY 2016, there was one Board letter produced for design and construction projects that applies to the performance goal. In this case, DOE assessed the issue and gave enough information to warrant a positive response. Note that in FY 2016, the Board changed the target measure for this performance goal to a collective percentage with additional Board performance goals. With the addition of the other applicable Board Letters and because this performance goal is measured collectively with performance goals 1.1.3, 1.2.2, and 2.2.2, this metric can be measured at 100 percent for FY 2016. The correspondence issued to DOE on potential safety issues regarding design and construction projects at DOE defense nuclear facilities, and the response by DOE received during FY 2016, was a Board letter establishing a 45 day reporting requirement for a letter regarding DOE's position on controlling river access and protecting public receptors from accidents during Sludge Treatment Project (STP) slurry transfers. The Board letter was issued on August 21, 2015, and the DOE response date was November 18, 2015. In their response, DOE/NNSA completed an assessment of the safety issue.

In FY 2015 and FY 2014, this performance goal was used to track DOE positive response to Board correspondence. The Board issued correspondence to DOE on potential safety issues regarding design and construction projects at defense nuclear facilities in eleven different instances during FY 2015. In all letters that required a DOE response, it was determined that the assessment was positive. In FY 2014, the Board issued correspondence to DOE on potential safety issues at DOE defense nuclear facilities and in nuclear waste remediation operations in two instances: the Transuranic Waste Processing Center Sludge Processing Facility Buildouts Project at ORNL, and the Transuranic Waste Facility Project at LANL. In both instances the response was assessed to be positive.

**Strategic Goal 4 - Achieve Excellence in Management and Communication with Stakeholders**

Operate in a manner that is accountable to the public and achieves the mission efficiently and effectively

**Strategic Objective 4.1**

Improve internal management controls to achieve the Board’s mission efficiently and effectively.

**Performance Goal 4.1.1**

<b>Fiscal Year</b>	<b>Goal Statement and Target</b>	<b>Target Measure, Milestone, or Deliverable</b>	<b>Result</b>
2017	<p>Within OTD, develop, implement, and maintain formal procedures and Internal Controls prescribing effective and efficient safety oversight of DOE defense nuclear facilities.</p> <p>Target: Percentage reviewing and revising procedures prior to each procedure’s Review date.</p>	Maintain 100% of existing internal procedures by reviewing and revising internal procedures prior to each procedure’s Review date.	<p>Not Achieved</p> <p>7% Complete revision prior to procedure’s Review date</p> <p>41% Review procedure and extend Review date prior to the procedure’s Review date</p>
<b>Actual Results for Preceding Fiscal Years</b>			
2016	<p>Within OTD, develop and implement formal procedures and Internal Controls prescribing effective and efficient safety oversight of DOE defense nuclear facilities.</p>	100% complete for Phase 2 procedures	<p>Not Achieved</p> <p>80% Complete for Phase 2 procedures</p>
2015	<p>Within OTD, develop and implement formal procedures and Internal Controls prescribing effective and efficient safety oversight of DOE defense nuclear facilities.</p>	<p>100% complete for Phase 1 procedures</p> <p>50% complete for Phase 2 procedures</p>	<p>Achieved</p> <p>100% Complete for Phase 1 procedures</p> <p>50% complete for Phase 2 procedures</p>
2014	<p>Within OTD, develop and implement formal procedures and Internal Controls prescribing effective and efficient safety oversight of DOE defense nuclear facilities.</p>	100% complete for Phase 1 procedures	<p>Not Achieved</p> <p>48% Complete</p>

### **Discussion**

In FY 2017, the Office of the Technical Director completed revision for four of 27 internal procedures that were due for review and revision, of which two were completed prior to the procedure's review date and two were not. The Office of the Technical Director reviewed the remaining 23 internal procedures, and determined that the procedure's review date could be extended. Eleven of these procedures were extended before they were due for review and revision. Of the 23 extended procedures, three procedures were revised and eleven procedures were recertified in FY 2017. Revision of the remaining internal procedures are anticipated in FY 2018.

In FY 2016, the Board completed implementation of four out of the five remaining Phase 2 procedures. The Board did not complete an update to technical staff procedure OP-542.1-6, *Developing Board Recommendations*, as planned. In FY 2015, the Board completed implementation of Phase 1 documents after completing 48 percent in FY 2014.

### **Information on Unmet Target in FY 2017**

The Office of the Technical Director created its first technical staff procedures in FY 2014. At that time, the Technical Director established a requirement to review or recertify all operating procedures every three years. As a result, the majority of the Office of the Technical Director's operating procedures required review or recertification in FY 2017. However, during FY 2017, the Office of the Technical Director prioritized mission work over revising its internal procedures. The Office of the Technical Director has established a schedule to review, recertify, and revise overdue procedures in FY 2018.

**Performance Goal 4.1.2**

<b>Fiscal Year</b>	<b>Goal Statement and Target</b>	<b>Target Measure, Milestone, or Deliverable</b>	<b>Result</b>
2017	<p>Within OGM, develop and implement formal procedures and Internal Controls prescribing effective and efficient support of the Board’s mission.</p> <p>Target: Percentage completion of significant OGM work processes with effective procedures.</p>	96% Complete	<p>Not Achieved</p> <p>60% Complete</p>
<b>Actual Results for Preceding Fiscal Years</b>			
2016	<p>Within OGM, develop and implement formal procedures and Internal Controls prescribing effective and efficient support of the Board’s mission.</p>	75% Complete	<p>Achieved</p> <p>77% Complete</p>
2015	<p>Within OGM, develop and implement formal procedures and Internal Controls prescribing effective and efficient support of the Board’s mission.</p>	50% Complete	<p>Achieved</p> <p>60% Complete</p>
2014	<p>Within OGM, develop and implement formal procedures and Internal Controls prescribing effective and efficient support of the Board’s mission.</p>	33% Complete	<p>Not Achieved</p> <p>32% Complete</p>

**Discussion**

In FY 2014, OGM embarked on a multi-year goal to assess its operating procedures for significant work processes. The Board’s Internal Control Program Operating Procedures identified 25 significant work processes within OGM. Ten work processes received internal control assessments in FY 2014 and were reviewed by the Board’s ECIC. Of those, eight of 25 (or 32 percent) were assessed by the ECIC as having effective internal controls. In FY 2015, 13 work processes were assessed for a cumulative total over both years of 16 (seven work processes were assessed both years). Of the 16, 15 out of 25 (or 60 percent) were assessed by the ECIC as having effective internal controls. An additional OGM work process was added in 2016 to bring the total to 26. In FY 2016, 12 of the 26 work processes (3 of which were repeat assessments) were assessed for a cumulative total over all three years of 25. Of the 26, 20 out of 26 (or 77 percent) were assessed as having effective internal controls. In FY 2017, 10 of the 26 OGM work processes were assessed (one was a repeat assessment). Six of the 10 work processes were assessed as having effective internal controls.

**Information on Unmet Target**

Four of the 10 work processes were assessed as not having effective internal controls due to lack of written procedures. Corrective action plans are in process for these work processes with the goal of developing operating procedures in FY 2018.

**Performance Goal 4.1.3**

<b>Fiscal Year</b>	<b>Goal Statement and Target</b>	<b>Target Measure, Milestone, or Deliverable</b>	<b>Result</b>
2017	<p>Within OGC, develop and implement formal procedures and Internal Controls prescribing effective and efficient support of the Board’s mission.</p> <p>Target: Percentage completion of newly developed procedures. This indicator does not include other OGC tasks or completed work.</p>	75% Complete	<p>Achieved</p> <p>75% Complete</p>
<b>Actual Results for Preceding Fiscal Years</b>			
2016	<p>Within OGC, develop and implement formal procedures and Internal Controls prescribing effective and efficient support of the Board’s mission.</p>	50% Complete	<p>Achieved</p> <p>50% Complete</p>
2015	<p>Within OGC, develop and implement formal procedures and Internal Controls prescribing effective and efficient support of the Board’s mission.</p>	33% Complete	<p>Achieved</p> <p>36% Complete</p>
2014	<p>Within OGC, develop and implement formal procedures and Internal Controls prescribing effective and efficient support of the Board’s mission.</p>	40% Complete	<p>Not Achieved</p> <p>21% Complete</p>

**Discussion**

Continued staffing shortfalls and emerging work hampered OGC efforts to develop and implement formal procedures and Internal Controls prescribing effective and efficient support of the Board’s mission. OGC developed and implemented the Hatch Act program directive, provided agency-wide Hatch Act training in conjunction with its annual ethics training, and provided Hatch Act reminders during the election season. Completion of implementation of this procedure is assessed at 100 percent. Procedures for receipt and processing of safety allegations and for alternative dispute resolution are in final coordination. Completion of development, but not implementation, of these two procedures is assessed at 90 percent, with the total of the three procedures assessed at 75 percent of the target measure of completion of the newly developed procedures.

**Strategic Objective 4.2**

Improve the alignment of human capital strategies with agency mission, goals, and objectives through analysis, planning, investment, measurement, and management of human capital programs.

**Performance Goal 4.2.1**

<b>Fiscal Year</b>	<b>Goal Statement</b>	<b>Target Measure, Milestone, or Deliverable</b>	<b>Result</b>
2017	Achieve a more results-oriented performance culture.  Target: Number of employees operating under a performance-based appraisal system.	To ensure the continued success of the Board’s results-oriented performance culture, develop and implement annual professional development and training opportunities in the areas of performance management and achieving organizational results.	Achieved
<b>Actual Results for Preceding Fiscal Years</b>			
2016	Achieve a more results-oriented performance culture.	Develop and implement electronic DN, General Schedule (GS) and Senior Executive Service (SES) performance appraisal systems by August 31, 2016.	Not Achieved

2015	Achieve a more results-oriented performance culture.	(1) Implement a Senior Executive Service (SES) performance appraisal system that achieves certification by the Office of Personnel Management (OPM) by September 30, 2015; (2) Implement a revised General Schedule (GS) performance management system that supports a results-oriented performance culture at the Board.	Not Achieved
2014	Achieve a more results-oriented performance culture.	Develop a revised GS performance management system to ensure higher standards and employee accountability by August 31, 2014.	Ongoing

**Discussion**

The Board implemented a more results-oriented performance-based appraisal system for its excepted service staff (engineers and scientists) in FY 2012, and planned to implement a more results-oriented performance appraisal system for its GS staff in FY 2015, along with achieving a certified SES appraisal system. Those goals were achieved in FY 2016. The Board completed development of a new SES performance appraisal system along with the supporting documentation necessary for OPM review (e.g., a new policy on SES pay). OPM approved system certification in August, 2016 for immediate implementation. The Board also developed a new results-oriented GS performance management system that was approved by OPM in May 2016. In FY 2017 the Board provided training in performance management for both employees and supervisors. The training focused on the importance of tying performance management to the strategic goals of the agency.

**Performance Goal 4.2.2**

Fiscal Year	Goal Statement	Target Measure, Milestone, or Deliverable	Result
2017	<p>Address human capital gaps identified in critical mission functions.</p> <p>Target: Number of unfulfilled critical mission functions.</p>	<p>To ensure identified human capital gaps continue to be addressed, develop and implement a structured training and professional development program based on occupation.</p>	Achieved
<b>Actual Results for Preceding Fiscal Years</b>			
2016	<p>Address human capital gaps identified in critical mission functions.</p>	<p>Develop a useful and flexible workforce management plan to address human capital gaps identified by the Board's Office Directors for the entire Board and execute the plan by January 1, 2016.</p>	Achieved
2015	<p>Address human capital gaps identified in critical mission functions.</p> <p>Target: Number of unfulfilled critical mission functions.</p>	<p>Develop a useful and flexible workforce management plan to address human capital gaps in the mission critical positions identified by Board's Office Directors for FY 2015 execution.</p>	Achieved
2014	<p>Address human capital gaps identified in critical mission functions.</p> <p>Target: Number of unfulfilled critical mission functions.</p>	<p>Critical mission functions are defined within each position (entry-, mid-, and senior-career level) by June 30, 2014.</p>	Achieved

## **Discussion**

In FY 2017, the largest identified human capital gap was in the area of leadership. As a result the Board developed and implemented a new program; the Full-time External Professional Development Opportunities program (Program). The Program supports and encourages employees at all levels of the organization to pursue external opportunities for broadened leadership development. The program has been well-received and well used with 3 employees taking advantage of external opportunities never before offered to Board employees.

In FY 2016, the agency planned and executed its most comprehensive and diverse recruitment effort to fill identified mission-critical positions in agency history. Based on identified gaps in the workforce, recruitments and selections for all mission-critical DN positions were performed by the end of the fiscal year. Additionally, based on identified gaps in the OGM workforce, additional resources were requested, justified, and approved in the areas of information technology and security. As a result of agency-wide efforts to recruit and fill mission-critical positions the agency is on target to meet its full-time equivalent budget request of 120 in FY 2017.

In FY 2015, a workforce management plan to address the need to hire for mission critical positions was developed and implemented. The plan was a useful and flexible tool that allowed the use of recruitment resources for targeted positions (e.g., Engineers, IT Security Specialist) and as a result, the Board was able to hire nine new employees in mission-critical positions and make offers of employment to an additional five engineers with diverse levels of education and experience. In terms of mission-critical positions, FY 2015 was the agency's most successful recruiting year to that date, and much of that success was the result of implementing the workforce management plan that identified the Board's human capital gaps and recommended strategies to address them.

In FY 2014, Human Resources, with input from OTD and OGC, defined the mission-critical functions within each of the Board offices. Additionally, generic core competencies were developed for entry-level, mid-career, and senior-level positions.

**Strategic Objective 4.3**

Improve and sustain effective, transparent two-way communications between the Board and its stakeholders on safety issues in DOE’s defense nuclear complex and on the Board’s operations.

**Performance Goal 4.3.1**

<b>Fiscal Year</b>	<b>Goal Statement and Target</b>	<b>Target Measure, Milestone, or Deliverable</b>	<b>Result</b>
2017	<p>Provide timely communications of safety observations obtained through direct oversight and maintaining cognizance of nuclear facilities at DOE’s nuclear weapons sites.</p> <p>Target: Percentage of resident inspector weekly and site monthly reports documenting direct oversight requiring no more than 21 calendar days of processing time by Board’s staff from the date of the report to post to the Board’s public website (assumes posting within 35 calendar days of the date of the report based on more than 14 calendar days of DOE classification review).</p>	100%	<p>Not Achieved</p> <p>Approximately 93% of reports required no more than 21 calendar day based on data available.</p>
<b>Actual Results for Preceding Fiscal Years</b>			
2016	<p>Provide timely communications of safety observations obtained through direct oversight and maintaining cognizance of nuclear facilities at DOE’s nuclear weapons sites.</p>	95%	<p>Not Achieved</p> <p>Approximately 66% of reports required no more than 21 calendar day based on data available.</p>
2015	<p>Provide timely communications of safety observations obtained through direct oversight and maintaining cognizance of nuclear facilities at DOE’s nuclear weapons sites.</p>	85%	<p>Achieved</p> <p>88.5% posted within 35 days</p>

2014	Provide timely communications of safety observations obtained through direct oversight and maintaining cognizance of nuclear facilities at DOE’s nuclear weapons sites.	80%	Achieved  89% posted within 35 days
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**Discussion**

During FY 2017, the Board continued to produce and post resident inspector weekly and site monthly reports on the Board’s public website. While all of these reports are posted, the Board did not achieve the timeliness metric identified for FY 2017 based on the data that is available. The Board implemented a new process for completing timely internal staff review and external DOE classification and sensitivity reviews in FY 2017. The revised process will ensure reports are posted promptly after security reviews are completed.

During FY 2016, the Board was impacted by turnover in security staff and DOE required changes to the work processes involved in this metric. The process for completing timely internal staff review along with external DOE classification and sensitivity reviews has been revised.

In FY 2015, the Board provided timely communications of safety observations obtained through direct oversight and maintaining cognizance of nuclear facilities at DOE’s nuclear weapons sites by posting its resident inspector weekly reports to the Board’s public webpage within 35 days of the date of the report. Of the 260 resident inspector weekly reports, the Board posted 230 to its public webpage within 35 days of the date of the report for an overall percentage of 88.5 percent. In FY 2014, the Board posted 229 of 260 resident inspector weekly reports to its public website within 35 days of the date of the report.

**Information on Unmet Target**

As noted above, this performance goal was not met for FY 2017. The Board implemented a new process for completing timely internal staff review and external DOE classification and sensitivity reviews. The revised process did result in improvement from FY 2016. Additionally, improvement was made quarter by quarter during FY 2017. First quarter FY 2016 resulted in 88 percent of weekly reports posted within 35 days, second quarter resulted in 90 percent, third quarter 98 percent, and fourth quarter of FY 2017 has achieved 100 percent to date.

**Performance Goal 4.3.2**

<b>Fiscal Year</b>	<b>Goal Statement and Target</b>	<b>Target Measure, Milestone, or Deliverable</b>	<b>Result</b>
2017	<p>Inform the Congress and other stakeholders of potential safety issues early in the design and construction phases of DOE defense nuclear facilities.</p> <p>Target: Number of <i>Reports to Congress on the Status of Significant Unresolved Issues with DOE's Design and Construction Projects</i> published and submitted to Congress. Inclusion within the Board's Annual Report to Congress of a separate section bearing this title shall count as a report meeting this goal.</p>	1 report	<p>Achieved</p> <p>1 report submitted to Congress (Included within the Board's Annual Report to Congress)</p>
<b>Actual Results for Preceding Fiscal Years</b>			
2016	<p>Inform the Congress and other stakeholders of potential safety issues early in the design and construction phases of DOE defense nuclear facilities.</p>	1 report	<p>Achieved</p> <p>1 report submitted to Congress</p>
2015	<p>Inform the Congress and other stakeholders of potential safety issues early in the design and construction phases of DOE defense nuclear facilities.</p>	1 report	<p>Achieved</p> <p>1 report submitted to Congress</p>
2014	<p>Inform the Congress and other stakeholders of potential safety issues early in the design and construction phases of DOE defense nuclear facilities.</p>	3 reports	<p>Achieved</p> <p>3 reports submitted to Congress</p>
2013 <sup>4</sup>		N/A	2
2012		N/A	2

<sup>4</sup> Although this performance goal was established in FY 2014, the Board has been tracking this measure for multiple years, and thus actual results for FY 2013 and FY 2012 are also included for this goal.

**Discussion**

On April 27, 2017, the Board published its 27<sup>th</sup> Annual Report to Congress. Similar to the Board's 26<sup>th</sup> Annual Report to Congress (published on March 30, 2016), the latest report included a section titled, Status of Significant Unresolved Issues with DOE's Design and Construction Projects, which satisfied the performance goal.

In FY 2015, the Board published its 25<sup>th</sup> Annual Report to Congress on March 11, 2015, which also included a section titled, Status of Significant Unresolved Issues with DOE's Design and Construction Projects, which satisfied the FY 2015 performance goal. The Board published three Reports to Congress on the Status of Significant Unresolved Technical Differences between the Board and DOE on Issues Concerning the Design and Construction of DOE's Defense Nuclear Facilities during FY 2014 and submitted them to Congress in December 2013, May 2014, and September 2014.

**Performance Goal 4.3.3**

<b>Fiscal Year</b>	<b>Goal Statement and Target</b>	<b>Target Measure, Milestone, or Deliverable</b>	<b>Result</b>
2017	Effectively communicate safety issues by conducting public hearings in communities near DOE defense nuclear facilities and in Washington, DC.  Target: Number of public hearings.	3 public hearings	Not Achieved  1 public hearing
<b>Actual Results for Preceding Fiscal Years</b>			
2016	Effectively communicate safety issues by conducting public hearings in communities near DOE defense nuclear facilities and in Washington, DC.	3 public hearings	Not Achieved  1 public hearing
2015	Effectively communicate safety issues by conducting public hearings in communities near DOE defense nuclear facilities and in Washington, DC.	3 public hearings	Achieved  3 public hearings
2014	Effectively communicate safety issues by conducting public hearings in communities near DOE defense nuclear facilities and in Washington, DC.	3 public hearings	Achieved  3 public hearings
2013		N/A	2
2012		N/A	3

**Discussion**

The Board did not satisfy this performance goal in FY 2017. The Board held a public hearing on the topic of the safety posture of the Plutonium Facility at LANL, on June 7, 2017, in Santa Fe, New Mexico. The purpose was to gather information regarding the risk associated with current and future Plutonium Facility inventory levels, actions taken by NNSA and LANL to address opportunities identified by the Board to minimize material-at-risk, actions to reduce facility risk for long-term operations, and the adequacy and status of safety systems to support current and long-term operations.

On September 26, 2017, the Board held a public meeting to discuss oversight of emergency preparedness and response, with a special emphasis on open Board Recommendation 2014-1, *Emergency Preparedness and Response*. The purpose of this meeting was for the Board to obtain testimony from the DNFSB staff on their completed and documented efforts to date regarding these topics. The Board deliberated and voted to close Recommendation 2014-1.

In addition to these public hearings, the Board held the following:

- A Business Meeting on February 21, 2017, to discuss the conduct of periodic Board business meetings, and to explore improved efficiency and effectiveness of Board interactions
- A closed meeting on March 23, 2017
- A Business Meeting on May 11, 2017 to discuss a staff effort to develop a potential scorecard regarding safety oversight of Defense Nuclear Facilities
- A closed meeting on July 18, 2017
- A Business Meeting on September 28, 2017, to discuss (1) a new Strategic Plan, (2) a work plan for the Office of the Technical Director for Fiscal Year 2018, (3) a work plan for the Office of the General Manager for Fiscal Year 2018, (4) a work plan for the Office of the General Counsel for Fiscal Year 2018, and (5) a staffing plan for Fiscal Year 2018

The Board did not satisfy this performance goal in FY 2016. The Board held one public hearing on the topic of LANL Transuranic (TRU) Waste Management, on March 22, 2016, in Santa Fe, New Mexico. In addition to the public hearing, the Board held a public business meeting, and four closed meeting in FY 2016.

The Board satisfied its performance goal in FY 2015 by holding three public hearings. These included public hearings on 1) *Safety Culture and Board Recommendation 2011-1*; 2) *WIPP Safety during Recovery and Resumption of Operations*; 3) *Improving Safety culture at the Waste Treatment and Immobilization Plant*.

The Board satisfied its performance goal in FY 2014 by holding three public meetings. These included public hearings and meetings on 1) *Safety in Design, Operations, and Emergency Preparedness at the Y-12 National Security Complex*; 2) *Safety Culture and Board Recommendation 2011-1*; and 3) *Safety Culture and Board Recommendation 2011-1*.

#### **Information on Unmet Target in FY 2017**

Although the Board did not conduct three public hearings, the Board increased its efforts to engage in other activities that inform the public and other stakeholders about safety issues. These activities included public Board business meetings, briefings to DOE and NNSA leadership, engagement with key Congressional Committees and Member offices, and meetings with state and local officials.