

FY 2012 PERFORMANCE AND ACCOUNTABILITY REPORT

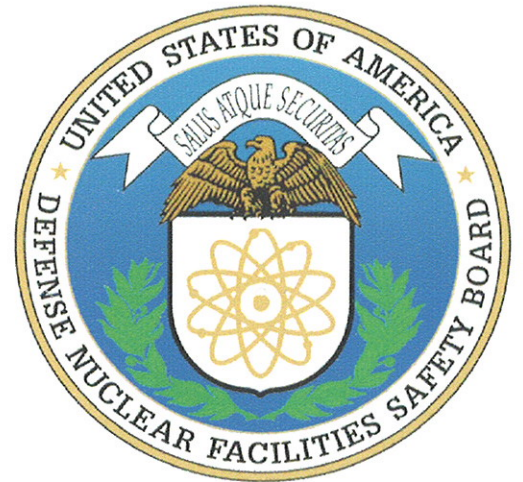
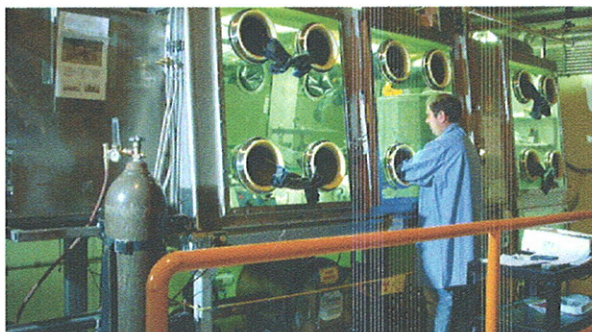
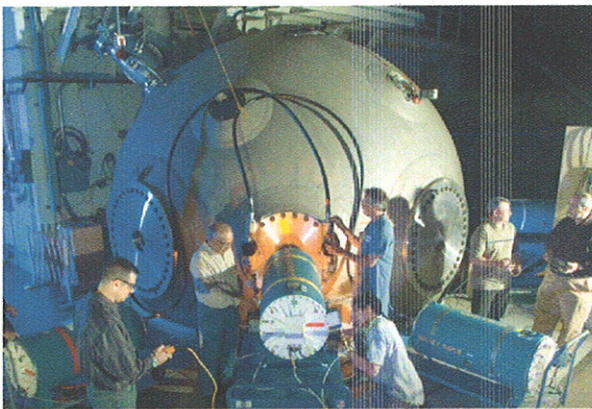
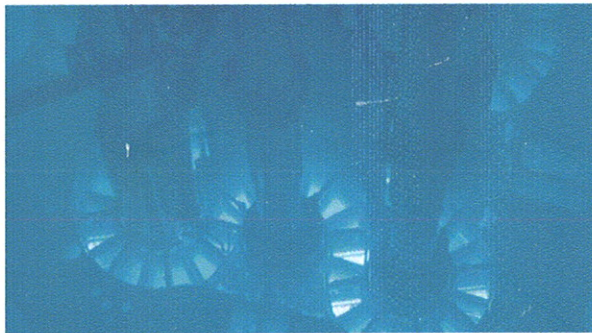
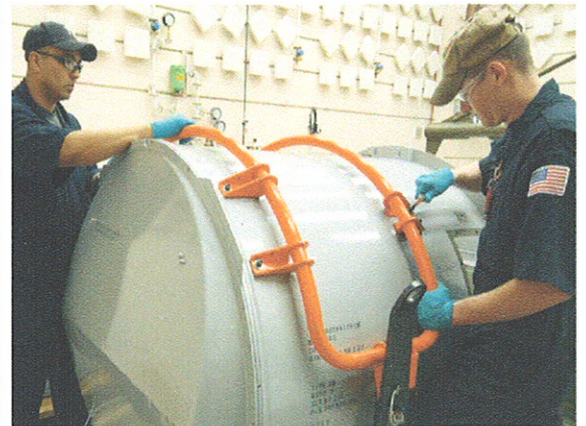
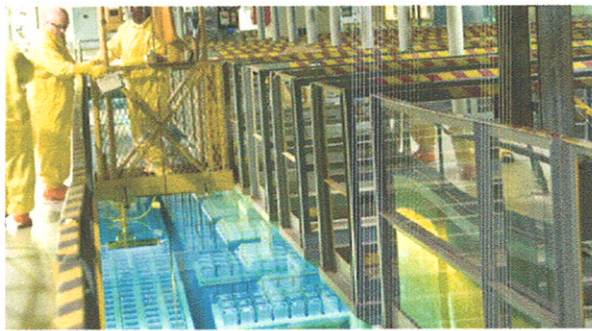


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Chairman's Message

On behalf of the Members and staff of the Defense Nuclear Facilities Safety Board (Board), I am pleased to submit our Performance and Accountability Report (PAR) for FY 2012.

The primary purpose of the Board is to ensure adequate protection of public health and safety by strengthening safety standards and their implementation in Department of Energy (DOE) defense nuclear facilities and operations. In addition to conducting safety oversight on hundreds of existing hazardous nuclear operations, the Board is obligated by law to conduct in-depth reviews of new defense nuclear facilities during both design and construction. Currently, DOE and the National Nuclear Security Administration (NNSA) are pursuing about a dozen new defense nuclear projects with an estimated value of more than \$20 billion, including \$12.3 billion for the Hanford Waste Treatment and Immobilization Plant (WTP). The design, construction, and initial startup of these new facilities typically require more than 12 years. The design and construction reviews conducted by the Board on DOE facilities are resource intensive and time consuming, but necessary as these time-sensitive safety reviews are key to preventing safety flaws in design and construction that could render a newly constructed facility unusable. The Board is committed to early integration of safety into design.

The Board also provides a key component of the oversight that prevents an accidental detonation of a nuclear weapon during the evaluation, maintenance, or dismantlement process. Such an accident could result in catastrophic impacts on lives and property, as well as cripple our Nation's nuclear deterrent capability. The Board's oversight is critical in preventing serious safety vulnerabilities and tragic accidents from occurring in very complex and dangerous DOE defense nuclear facilities.

During FY 2012, the Board continued to make significant progress in ensuring the safety of the public and the workers at or near DOE defense nuclear facilities. For example, the Board continued to apply extensive effort to achieving resolution of safety issues regarding the multi-billion dollar WTP design and construction project. The Board held three separate public meeting and hearing sessions concerning WTP on March 22, 2012, and May 22, 2012. The sessions addressed unresolved technical issues with pulse jet mixing in WTP vessels, erosion and corrosion of process component materials, misalignments between the design and safety bases, and resolution of concerns with safety culture related to DOE's implementation plan for the Board's Recommendation 2011-1, *Safety Culture at the Waste Treatment and Immobilization Plant*. The Board also sent letters to DOE 1) identifying safety issues with DOE's approach to resolving issues related to wear allowances for erosion/corrosion of piping and vessels at WTP; 2) identifying safety issues with DOE's effort to verify and validate the FLUENT computational fluid dynamics model that will be used for mixing system design confirmation; and 3) identifying safety issues with the design and construction of the electrical distribution system for WTP. Additionally, on November 17, 2011, the Board held a public hearing in Santa Fe on Seismic Safety of the Plutonium Facility at the Los Alamos National Laboratory during which the Board identified concerns with the quality and timeliness of the

safety basis update process across the laboratory. Based on reviews of updates to the Plutonium Facility Documented Safety Basis the Board issued a letter June 18, 2012, outlining its concerns with the safety basis for the Plutonium Facility. DOE is working to address the deficiencies identified by the Board.

The Board is committed to ensuring that public resources in our trust are used wisely. Office of Management and Budget Circular A-136 requires an assessment of the completeness and reliability of the program performance and financial data contained in this report. I conclude that the financial data is complete and reliable. I also conclude that the program performance data is complete and provides accurate information. In addition, the Circular requires an assessment of internal controls with a separate assessment required for internal controls related to the Federal Managers' Financial Integrity Act (FMFIA).

The Board is committed to the continual pursuit of excellence in its operations. The Board understands that in order to best effectuate its vital health and safety mission, it must constantly evaluate and improve the quality of its internal controls. To this end, the Board hired an advisory and assistance contractor, Mosley & Associates, with specialized experience in auditing internal government controls to prepare a Risk Assessment and proposed FY 2013 Audit Plan of the Board's operations. The Board received their finalized report on November 8, 2012.

The results of the assessment were generally very positive. For example, the report found that both the Office of the General Counsel and Office of the General Manager have "...well-thought out policies and procedures in place for a number of activities to help them achieve their [respective] goals and objectives." Moreover, the assessment stressed that the technical reports generated by the Office of the Technical Director (OTD) are "highly-regarded" by DOE. Regardless, the report identified a number of opportunities for improvement. Specifically, "DNFSB/OTD needs to better document its assessment of technical mission activities in its annual review of internal controls under A-123." Additionally, the report suggested that the Board enhance its performance planning and measurement process. The Board values these remarks as constructive and beneficial for the continual improvement of the agency, and intends to fully evaluate the proffered recommendations and implement them where appropriate.

I am very pleased to report that FY 2012 marked the fifth consecutive year that the Board's unqualified opinion on its financial statements was coupled with no instances of non-compliance with laws and regulations and no material internal control weaknesses.

The future holds many managerial challenges for the Board, both in terms of technically complex health and safety issues involving the disassembly, refurbishing, reassembly, and re-certifying of nuclear weapons and components, the stabilization and clean-up work at many defense nuclear sites, and high-visibility decommissioning activities; as well the review of new DOE defense nuclear facilities in the critical design and construction phases.

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The Board remains committed to improving DOE's management of safety at our country's most sensitive defense nuclear facilities where our nuclear arsenal is maintained and where hazardous nuclear materials and components must be stored in secure and stable configurations. Our standard of excellence in carrying out this important mission will mirror the best of American excellence, values, and ideals. Our nation deserves nothing less.

Peter S. Winokur, Ph.D.
Chairman
November 16, 2012

Chapter 1
Management's Discussion and Analysis

INTRODUCTION

This Performance and Accountability Report (PAR) summarizes the Defense Nuclear Facilities Safety Board's (Board) oversight activities and associated resource expenditures for the period from October 1, 2011 through September 30, 2012 (FY 2012). This report was prepared pursuant to the requirements of the Accountability of Tax Dollars Act of 2002 and Office of Management and Budget (OMB) Circular A-136, which provides instructions on the preparation of a PAR. Fiscal year 2012 is the ninth year that the Board has prepared and published a PAR.

The Government Performance and Results Act of 1993 (GPRA) and the GPRA Modernization Act of 2010 require each agency to prepare and submit a strategic plan establishing long-term programmatic, policy, and management goals. The Board's *Strategic Plan for FY 2011-2016* is available on the Internet at www.dnfsb.gov. Agencies are also required to develop a performance budget with annual performance objectives that indicate the progress toward achievement of the strategic plan's goals and objectives. The Board also published its "*Twenty-Second Annual Report to Congress*" on February 17, 2012 which highlighted achievements of the Board from Calendar Year 2011; and periodic reports to Congress on March 7, 2012 and June 25, 2012 regarding the "*Status of Significant Unresolved Issues with the Department of Energy's Design and Construction Projects*." The Board's performance objectives for FY 2013 and FY 2014, as well as representative accomplishments for FY 2009 through 2012, will be included in its *FY 2014 Budget Request to the Congress* in accordance with the requirements of OMB Circular A-11. For FY 2012, the GPRA requirement to submit an annual performance report is satisfied by this PAR.

Chapter 1, *Management Discussion and Analysis*, provides an overview of Board operations, and is divided into five sections: *About the Board* describes the agency's mission, organizational structure, and the five major performance goals of the Board; *Future Challenges* includes a review of upcoming issues; *Program Performance Overview* discusses the Board's success in accomplishing its performance goals; *Financial Performance Overview* provides highlights of the Board's financial position and audit results; and *Systems, Controls, and Legal Compliance* describes the agency's compliance with key legal requirements such as the Federal Information Security Management Act (FISMA), internal controls, and the Inspector General Act of 1978.

ABOUT THE DEFENSE NUCLEAR FACILITIES SAFETY BOARD

The Board, an independent executive branch agency, is charged with providing technical safety oversight of the Department of Energy's (DOE) defense nuclear facilities and activities in order to provide adequate protection for the health and safety of the public and workers. Congress

established the Board in September 1988 in response to growing concerns about the level of health and safety protection that DOE was providing the public and workers at defense nuclear facilities. Congress sought to provide the public with added assurance that the defense nuclear facilities required to maintain the nation's nuclear weapons stockpile are being safely designed, constructed, operated, and decommissioned. The Board commenced operations in October 1989 with the Senate confirmation of the first five Board Members.

Organization

The Board is composed of five full-time Board Members who, by statute, must be respected experts in the field of nuclear safety with demonstrated competence and knowledge relative to independent investigations and oversight. Two members of the Board are designated by the President to serve as Chairman and Vice Chairman. Each Board Member is appointed by the President, with the advice and consent of the Senate, and serves a term of five years. The Chairman serves as the Chief Executive Officer of the Board.

The Board's headquarters facility is located in downtown Washington, D.C., in proximity to the DOE headquarters facility. Our headquarters location was selected to facilitate the interface between Board and DOE management officials and staff, and has proven to be beneficial for the timely exchange of information as the Board conducts its independent oversight mission.

The Board maintains on-site safety oversight of defense nuclear facilities by assigning experienced technical staff members to full-time duty at priority DOE defense nuclear sites. As of September 30, 2012, nine full-time site representatives were stationed at the following DOE sites:

- Hanford Site (2)
- Lawrence Livermore National Laboratory (LLNL) (1)
- Los Alamos National Laboratory (LANL) (2)
- Pantex Plant (1)
- Savannah River Site (SRS) (2)
- Y-12 National Security Complex (1)

The Site Representative Program provides a cost-effective means for the Board to closely monitor DOE activities, and to identify health and safety concerns promptly by having on-site staff conducting firsthand assessments of nuclear safety management at the priority sites to which they have been assigned. Site representatives regularly interact with the public, union members, congressional staff members, and public officials from federal, state, local, and tribal governments.

The Board's new (net) budget authority for FY 2012 was \$29.130 million and its total budgetary resources were \$29.615 million (as shown on the Statement of Budgetary Resources, page 65), supporting 109 full-time equivalent staff. At the end of Fiscal Year 2012, the Board had increased its on-board staffing level to 116. Total obligations were \$28.690 million, leaving an unobligated balance of less than \$1 million. The technical staff comprises approximately 80 percent of the Board's total workforce and funding, with the remainder comprised of administrative and legal staff. The Board's health and safety oversight activities are funded exclusively from a direct appropriation included in the annual Energy and Water Development Appropriations Act.

Safety Oversight Responsibilities

The Board's specific duties and responsibilities to protect the health and safety of the public and the workers at DOE's defense nuclear facilities are delineated in its enabling statute, 42 U.S.C. § 2286, *et seq.*, which states:

- 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 is needed.
- The Board shall investigate any event or practice at a Department of Energy defense nuclear facility which 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 the technical and economic feasibility of implementing the recommended measures.

In support of this mission, the Board has identified the following four interdependent, strategic areas of concentration and has organized its technical staff according to these strategic areas:

AREA 1. SAFE NUCLEAR WEAPONS OPERATIONS: DOE operations that directly support the nuclear stockpile and defense nuclear research.

AREA 2. SAFE PROCESSING AND STABILIZATION OF NUCLEAR MATERIALS: The processing, stabilization, and disposition of DOE defense nuclear materials and facilities.

AREA 3. SAFETY IN NUCLEAR FACILITIES DESIGN AND INFRASTRUCTURE: The design and construction of new DOE defense nuclear facilities, and major modifications to existing facilities.

AREA 4. EFFECTIVE NUCLEAR SAFETY PROGRAMS AND ANALYSIS: The development, implementation, and maintenance of DOE regulations, requirements, and guidance affecting public or worker health and safety; and the establishment and implementation of safety programs at DOE defense nuclear facilities.

A fifth area of concentration necessary to properly support and manage the technical nuclear safety oversight mission is Management Excellence. The Board added this Strategic Area of concentration in the strategic plan published in March 2011.

AREA 5. MANAGEMENT EXCELLENCE: The Board will strive for management excellence throughout its technical, legal and administrative staffs.

The FY 2012 performance goals and accomplishments associated with each of these areas of concentration will be discussed further in Chapter 2 of this report.

FUTURE CHALLENGES

The Board is facing a number of significant challenges that impact the accomplishment of its independent health and safety oversight mission. In addition to conducting nuclear safety oversight of hundreds of existing defense nuclear operations, the Board is obligated by law to conduct in-depth reviews of new defense nuclear facilities during design and construction. DOE has about a dozen major design and construction projects currently underway or planned for the near future at an estimated value of more than \$20 billion.

Second, many aging DOE facilities are unsound and the transition to new facilities is decades long. For example, the Chemical and Metallurgy Research Facility at Los Alamos National Laboratory and the 9212 Complex at the Y-12 National Security Complex are of particular concern because of their deficient structures and advanced age. The Board will need to carefully evaluate the rigor and maintenance of a robust safety posture in such facilities while replacement facilities are being constructed, and inform the Secretary of potential threats to public health and safety.

Third, DOE is reducing federal oversight and continues to move toward heavy reliance on its contractor's assurance systems as part of its self-regulatory model. This is embodied in changes in governance, directives, and contracts. DOE continues to reissue all directives containing safety requirements under the 2010 Safety and Security Reform Plan outlined in the Deputy Secretary of Energy's memorandum of March 16, 2010, and is proceeding to implement the revised directives. Most recently, on July 9, 2012, the Secretary of Energy issued a memorandum entitled *Enterprise Risk Management (ERM) Framework for Directives*, announcing a new framework for development, revision, and review of all DOE directives. Under this initiative, each new or revised DOE directive will be reviewed to determine the likelihood, magnitude, and potential costs of the risks it seeks to mitigate; whether any external requirements or standards are available to address the risks; whether other DOE directives address the risks; and lastly, whether to accept the remaining risks or to include controls in the directive to mitigate them. Ensuring that DOE preserves the nuclear safety requirements that have been painstakingly developed in the course of more than 60 years of nuclear operating experience will continue to be a resource-intensive and time-consuming task for the Board.

Fourth, reduction in federal oversight and changes in governance models are coupled with significant organizational changes within DOE. However, DOE has no formal process to ensure safety-related roles and responsibilities of key federal staff are preserved and safety-related functions remain viable. As a result, DOE's safety philosophy is not consistently applied and DOE's ability to implement, oversee, and enforce its safety requirements is uncertain. The Board will need to closely monitor DOE to ensure DOE's safety program remains viable and adequately protective of public health and safety. This will continue to stretch the Board's resources.

Fifth, the National Nuclear Security Administration (NNSA) has developed a plan for maintaining and evolving the nuclear weapons stockpile and infrastructure including a series of life extension activities that will enhance stockpile safety, security, and effectiveness without additional underground nuclear tests. This initiative requires a commensurate degree of safety oversight by the Board, especially in light of the production pressures associated with life extension programs.

Sixth, in addition to the focus on specific DOE activities as noted above, the Board needs to continue its oversight of operations throughout the DOE defense nuclear complex to ensure continued safe operations. These operations include assembly and disassembly of nuclear weapons, fabrication of plutonium pits and weapon secondaries, production and recycling of tritium, criticality experiments, subcritical experiments, and a host of activities to address the radioactive legacy of nearly 70 years of these operations. Continued effective oversight is the only way the Board can identify potential safety problems early and advise the Secretary of Energy in order to ensure adequate protection of public and worker safety at DOE's defense nuclear facilities.

A seventh challenge is maintaining a focused and well-executed human capital program within the Board. Because the Board's health and safety recommendations and other advisories to the Secretary of Energy are based on in-depth technical information and detailed safety analyses, the recruitment and retention of scientific and technical staff members with outstanding qualifications continue to be critical to the successful accomplishment of the Board's mission. The loss of technical competence due to retirements and other reasons must be countered with an aggressive recruiting campaign for new engineering talent at all levels including entry level engineers.

Oversight of New DOE Design and Construction Projects

The Board is required by law to review design and construction projects to ensure the safety of the public and workers is addressed early in the design process. The Board will continue to expend considerable resources to review the ongoing design effort as well as the construction activities at new DOE defense nuclear facilities.

DOE has about a dozen major design and construction projects currently underway at an estimated value of more than \$20 billion. The Board plans to concentrate its oversight attention on the projects with high risk, significance, and complexity.

One prominent example of a high-risk, new facility undergoing both design and construction is the multi-billion dollar Waste Treatment and Immobilization Plant (WTP) in Richland, Washington. The WTP project consists of three major nuclear facilities to pretreat and vitrify high-level waste stored in underground tanks at Hanford. The WTP is a complex, high-risk program that has changing design and construction parameters, that will take until 2019 to complete and will operate for decades. The design and construction reviews conducted by the

Board on WTP and other new DOE facilities are resource intensive and time consuming, but are key to preventing safety flaws in design and construction that could render a newly constructed facility unusable.

Expedited DOE Safety and Security Reform Initiatives

DOE Order 251.1C, *Departmental Directives Program*, was approved in January 2009. This directive codifies a set of principles for the DOE directives system intended to simplify and clarify requirements, reduce redundancy and unnecessary burden, and support improved management and mission accomplishment as outlined in a memorandum issued by the Secretary of Energy on September 10, 2007. Because DOE Order 251.1C establishes the framework for the entire directives system, it affects all DOE safety directives.

In 2010, the directives improvement effort was redirected by the Deputy Secretary of Energy's announcement of a *2010 Safety and Security Reform Plan* that would, among other things, eliminate half of the DOE's Office of Health, Safety and Security (HSS) directives in a six-month period. This led to an exchange of correspondence between the Board and DOE, and was discussed at public meetings held by the Board on May 12, 2010, and May 25, 2011. DOE has revised its reform plan and brought a parallel effort by the National Nuclear Security Administration into compliance with the reform plan, satisfactorily addressing the Board's concerns about the need for a rigorous and comprehensive approach for revising safety directives.

DOE's directives revision effort continues to occupy a significant portion of the Board's resources. As DOE reissues its directives to comply with the new program, the Board is reviewing all of them to ensure health and safety requirements are properly included. The Board has viewed this initiative as an opportunity to maintain and *strengthen* directives important to safety at DOE's defense nuclear facilities. DOE is also beginning to implement many of the directives at its field locations. The Board expects to continue expending considerable effort ensuring that implementation of the revised safety directives does not reduce the level of safety provided at DOE's defense nuclear facilities.

Human Capital - The Board's Greatest Asset

Sixty-seven percent of the Board's FY 2012 obligations were dedicated to salaries and benefits for its staff and Board Members. The Board must function as an oversight organization comprising leading technical experts who quickly recognize problems in the hundreds of hazardous operations conducted daily throughout the DOE defense nuclear complex. The Board relies on a focused and well-executed human capital program that uses all available tools to attract and retain the technical talent necessary to accomplish the Board's mission. The Board has determined that its technical staff requires scientists and engineers with extensive backgrounds in technical disciplines such as nuclear-chemical processing; conduct of operations; facility safety analysis; conventional and nuclear explosive technology and safety; nuclear

weapons safety; storage of nuclear materials; nuclear criticality safety; and waste management. Virtually all of the technical staff personnel have technical master's degrees or are actively pursuing graduate degrees. Approximately 23 percent of the technical staff members have doctoral degrees.

Because the Board's health and safety Recommendations and other advisories to the Secretary of Energy are based on in-depth technical information and detailed safety analyses, recruitment and retention of scientific and technical staff members with outstanding qualifications continues to be critical to successful accomplishment of the Board's mission.

During FY 2012, the Board increased its personnel from 111 to 116, despite losing eight employees to retirement and other attrition, and plans to reach its goal of 120 personnel in early FY 2013. Keeping mindful of the past hiring success of entry level, mid-career, and senior level engineers, the Board will continue an effective approach to maintain its workforce at 120; recruiting to replace employees upon separation due to resignation, transfer, or retirement. The combination of an aging workforce and high demand for experienced scientists and engineers by other organizations will remain a challenge for the Board. Approximately 16 percent of the Board's technical staff is eligible for regular retirement today. Competition for scientists and engineers with the Board's required expertise continues to be very stiff due to the need for increased technical expertise by the Nuclear Regulatory Commission, the Department of Defense's emphasis on combating weapons of mass destruction, and DOE's nuclear weapons complex activities. Consequently, the Board expects the need to spend more resources on recruiting highly qualified technical personnel in a highly competitive job market.

In addition to maintaining an experienced scientific and engineering staff, as well as filling vacancies as they occur, the Board will continue to focus on attracting the next generation of scientists and engineers. The Board continued its highly competitive three-year Professional Development Program (PDP), which brings entry-level technical talent into professional positions within the Board straight from college. Through a technical mentor, individuals are provided a series of individually tailored developmental assignments, formal academic schooling, and a one-year, hands-on field assignment. The Board met its goal of recruiting two people into the program in FY 2012, and now has a total of nine in the program at various stages of development.

PROGRAM PERFORMANCE OVERVIEW

In establishing the Board, Congress chose to establish an independent external oversight organization composed of technical experts in the field of nuclear health and safety. Therefore, the Board was given specific oversight and advisory powers, as opposed to being an independent regulator of the DOE defense nuclear complex. In view of the Board's enabling legislation and specific mission, the Board must focus its expertise and resources on one goal:

Ensure adequate protection of public health and safety at the Department of Energy's defense nuclear facilities.

To achieve this general goal, the Board has identified the following strategic areas of concentration and has developed performance goals and outcome objectives for each:

AREA 1. SAFE NUCLEAR WEAPONS OPERATIONS

Stockpile management is the term used to describe the industrial aspects of maintaining the U.S. nuclear weapon stockpile and complex. The Board's oversight activities for this strategic area focus on assuring that current and planned operations at the Pantex Plant in Texas, the Y-12 National Security Complex in Tennessee, and tritium operations at the Savannah River Site in South Carolina, are accomplished safely according to approved standards.

Also included in this strategic area is DOE's stockpile stewardship program, which refers to activities carried out by DOE to ensure confidence in the safety, security, and reliability of nuclear weapons in the stockpile, in the absence of underground nuclear weapons testing. The Board's oversight of the stockpile stewardship program is centered on assuring the safety of the research, development, manufacturing, and testing activities conducted at the Los Alamos National Laboratory in New Mexico, the Lawrence Livermore National Laboratory in California, the Nevada National Security Site, and Sandia National Laboratories in New Mexico and California.

Objective: DOE operations that directly support the nuclear stockpile and defense nuclear research are conducted in a manner that ensures adequate protection of the health and safety of the public, the workers, and the environment.

Performance Goal: The Board will promote DOE actions to effectively implement Integrated Safety Management (ISM) at the National Nuclear Security Administration's (NNSA) defense nuclear facilities. The Board will ensure that DOE adopts credible health and safety standards at NNSA's defense nuclear facilities, and properly implements them, with particular emphasis on formal conduct of operations, safety start-up/restart of facilities or activities, and nuclear explosive safety. The Board will assist DOE to improve the quality and implementation of Documented Safety Analyses at NNSA's defense nuclear facilities, including addressing such complex issues as specific administrative controls, electrostatic discharge hazards, and nuclear material packaging.

Outcome: DOE will have acknowledged, acted upon, and/or resolved the health and safety issues raised by the Board, and will operate its defense nuclear facilities to approved safety standards, rules, orders, and directives. Follow-up technical evaluations of DOE's nuclear stockpile activities will verify necessary improvements in safety.

AREA 2. SAFE PROCESSING AND STABILIZATION OF NUCLEAR MATERIALS

With the shutdown of major weapon production activities at defense nuclear facilities in the early 1990s, substantial quantities of plutonium, uranium, transuranic isotopes, irradiated fuel, and radioactive and hazardous fission products have remained in storage for extended periods under potentially unsafe and deteriorating conditions.

The Board's focus in this strategic area is to aid DOE in identifying these excess materials and in reviewing DOE's plans/programs to stabilize the materials and place them in a safe configuration for storage pending future programmatic use or disposition.

Board oversight in this area will include the stabilization of spent nuclear fuel at the Savannah River Site in South Carolina; the cleanup of the sludge from corroded spent nuclear fuel at the Hanford Site in Washington; and the conduct of the nuclear waste storage and remediation programs at both of these sites plus the Idaho National Laboratory, and the Waste Isolation Pilot Plant (WIPP) in New Mexico. The Board will also provide health and safety oversight of DOE programs to safely deactivate and decommission facilities at the Hanford and Savannah River Sites, the Y-12 National Security Complex in Tennessee, and the Los Alamos and Lawrence Livermore National Laboratories in New Mexico and California.

Objective: The processing, stabilization, and disposition of DOE defense nuclear materials and facilities are performed in a manner that ensures adequate protection of the health and safety of the public, the workers, and the environment.

Performance Goal: The Board will promote DOE actions to effectively implement ISM at DOE's defense nuclear facilities. The Board will ensure that DOE adopts credible health and safety standards at DOE's defense nuclear facilities, and properly implements them, with particular emphasis on formal conduct of operations, and safety start-up/restart of facilities of activities. The Board will assist DOE to improve the quality and implementation of Documented Safety Analyses at DOE's defense nuclear facilities, including addressing such complex issues as specific administrative controls, Justifications for Continued Operation, and nuclear material packaging. The Board will encourage DOE to develop technically robust plans for the safe retrieval, handling, and stabilization of remnant nuclear material; the consolidation and disposition of plutonium; the management of high-level waste; and treatment of sludge from spent nuclear fuel.

Outcome: DOE will have acknowledged, acted upon, and/or resolved the health and safety issues raised by the Board. Follow-up technical evaluations of DOE's nuclear materials management and facility disposition activities will verify necessary improvements in safety, as DOE meets its commitments to the Board to stabilize and dispose of hazardous nuclear materials.

AREA 3. SAFETY IN NUCLEAR FACILITIES DESIGN AND INFRASTRUCTURE

To ensure that safety is addressed early in the process, the Board reviews the design and construction of DOE's new defense nuclear facilities. These facilities must be designed and constructed in a manner that will support safe and efficient operations for 20 to 50 years. This requires a robust design process that will ensure appropriate safety controls are identified and properly implemented early in the process. The Board's expectation is that the design and construction phases of defense nuclear facilities will be accomplished using approved nuclear codes and standards, and demonstrate clear and deliberate implementation of ISM principles and core functions.

The Board's reviews of the design and construction of major facilities and projects in this strategic area are resource intensive and time consuming, but they result in significant safety improvements. In recent years, there has been an increase in the number of new DOE projects, with 20-30 projects in the design and construction phase.

The Board has initiated a process for the early identification of safety issues during design and their early resolution. The Board is further strengthening this initiative based on its experience to date. This initiative also reduces the likelihood of cost and schedule difficulties in new projects due to safety driven retrofits.

Objective: DOE's new defense nuclear facilities and major modifications to existing facilities are designed and constructed in a manner that ensures adequate protection of the health and safety of the public, the workers, and the environment.

Performance Goal: The Board will assist DOE to address safety reviews early in the design process for its defense nuclear facilities and monitor to ensure implementation during the construction phase of each facility. The Board will ensure that DOE develops facility designs that are robust, with appropriate safety controls that comply with approved nuclear codes and standards.

Outcome: DOE will have acknowledged, acted upon, and/or resolved the health and safety issues raised by the Board. Follow-up technical evaluations will verify necessary improvements in the design and construction of DOE's new nuclear facilities and major modifications to existing facilities. New nuclear facilities will meet acceptable safety standards.

AREA 4. EFFECTIVE NUCLEAR SAFETY PROGRAMS AND ANALYSIS

The Board's oversight effort in this area focuses on issues where a complex-wide perspective on health and safety issues across the DOE complex is required to identify and correct generic health and safety problems. Under the aegis of ISM, significant resources are applied to areas such as the technical competence of DOE's Federal

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Performance and Accountability Report

workforce, the efficiency of DOE's line management and safety oversight, and the development and implementation of ISM systems with particular focus on safety analyses and controls. Key supporting functional areas are also reviewed, such as quality assurance, nuclear criticality safety, and training and qualifications.

The Board's reviews in this strategic area often build on data collected at the field level in the other strategic areas of concentration, integrating and analyzing the results to feedback key information that can be used to direct safety program improvement across multiple management lines. For example, at the Board's urging, DOE issued a quality assurance improvement plan to strengthen the implementation of existing quality requirements for safety-related components and systems. Similarly, the Board continues its efforts to ensure that DOE maintains a vigorous nuclear criticality safety infrastructure to support nuclear operations. The Board has been instrumental in driving recent DOE efforts to verify that vital safety systems have been identified throughout the defense nuclear complex and that their condition is understood and controlled.

Objective: DOE regulations, requirements, and guidance are developed, implemented, and maintained; and safety programs at defense nuclear facilities are established and implemented as necessary to adequately protect the health and safety of the public, the workers, and the environment.

Performance Goal: The Board will ensure that DOE maintains a credible suite of nuclear safety requirements in its directive system. The Board will encourage DOE line management to improve oversight of safety operations. The Board will assist DOE in improving the technical competence of its Federal workforce. The Board will require that DOE reinvigorate the development and implementation of ISM systems with particular focus on quality assurance, nuclear criticality safety, and training and qualification. The Board will encourage DOE's nuclear safety programs be founded on solid research by ensuring the continued integration and support of research, analysis, and testing to understand the effect(s) of off-normal conditions on nuclear safety technologies.

Outcome: DOE will have acknowledged, acted upon, and/or resolved the health and safety issues raised by the Board. In addition, follow-up technical evaluation of DOE's safety programs at defense nuclear facilities will verify necessary improvements in safety.

AREA 5. MANAGEMENT EXCELLENCE

The Board's effort in this area focuses on providing effective and transparent administrative services that support the accomplishment of the four previous goals.

Management techniques are employed that keep the support staff small, while maximizing the Board's technical staff. The Board relies on management guidance from OMB, the Office of Personnel Management (OPM), and other Executive Branch

agencies, especially guidance that applies to small agencies, in developing and assessing its internal policies and procedures. The Board uses cost-effective external service providers rather than maintaining a large government or on-site contractor staff. A small government staff, augmented by contractors, performs the functions of human resources management, financial management, acquisition management, information technology management, logistics management, security management, travel management, and other administrative matters. The Board utilizes organizations such as the Small Agency Council as forums to address common management issues and seek best business practices from other small agencies. The Board keeps the DOE Office of the Departmental Representative to the Defense Nuclear Facilities Safety Board informed of its activities and coordinates activities between the two agencies with that office to ensure DOE senior management is fully informed of the Board's safety concerns. The Board ensures the public has access to its work to the maximum extent possible in order to provide visibility into DOE activities to help maintain and restore, as needed, public confidence that the defense nuclear facilities are being operated safely and that the Board's oversight is a positive influence on the safe execution of these activities. The Board documents its activities and makes correspondence available to the Congress and the public in order to ensure there is no ambiguity concerning the Board's position on a particular matter. The Board maintains a public website and conducts public hearings, as appropriate. Reports to Congress include annual reports detailing new health and safety issues. The Board provides informal briefings to Congressional committees and testifies before Congress, as required. The Board and DOE provide joint reports on appropriate topics. The Board's official reports are posted on its public website at www.dnfsb.gov.

Objective: The Board will strive for management excellence throughout its technical, legal, and administrative staffs.

Performance Goal: The Board has seven subordinate goals in this performance area.

- The Board will keep Congress informed on current health and safety issues at DOE's defense nuclear facilities and the status of progress toward issue resolution as required by the Board's statute and other legislation.
- The Board will inform the public of issues related to health and safety at defense nuclear facilities.
- The Board will adopt and execute processes and procedures with DOE that are compatible with the Board's enabling legislation and further the Board's mission.
- The Board will implement internal process and procedures that effectively support the Board's oversight operations and responsibilities as a Federal agency using OMB and OPM management guidance applicable to small agencies to gauge Board performance.
- Appropriate technical and professional expertise will be recruited and further developed by the Board to accomplish the mission.

- The Board will effectively manage the appropriated financial resources, exercise responsible stewardship over its resource to meet its need to accomplish the mission, and achieve a “clean” annual audit opinion on its financial statements.
- The Board will assign staff to be in residence at selected sites.

Outcome: There will be public confidence that DOE’s defense nuclear facilities are being operated safely and that the Board’s oversight is a positive influence on the safe execution of these activities. The Board will meet its responsibilities as a federal executive branch agency.

Interdependency of the Four Technical Performance Goals

The interdependence of these four strategic areas of concentration must be understood to appreciate the efficiency of the Board’s operating plan and corresponding organizational alignment. The “lessons learned” from the Board’s health and safety oversight activities cut across each of these four areas. Health and safety hazards identified in Nuclear Material Processing and Stabilization (Area 2) must be transferred to the Nuclear Weapon Operations (Area 1) to avoid or mitigate new or existing remediation issues. Likewise, the lessons learned from Nuclear Facilities Design and Infrastructure (Area 3) must be shared with managers responsible for preparing and enforcing health and safety-related guidance, requirements, and regulations in Nuclear Safety Programs and Analysis (Area 4).

For example, in order to oversee safety at the Y-12 National Security Complex, the Board must assess the safety of hazardous activities that support the nuclear weapons stockpile (Area 1). To accomplish its general goal, the Board must also assess processing and stabilization of nuclear materials to support facility deactivation, such as Building 9206 (Area 2), construction of new defense nuclear facilities such as the Uranium Processing Facility (Area 3), and implementation of important safety programs such as nuclear criticality safety (Area 4).

Another example of the interdependence of the four strategic areas of concentration is the safety oversight of the Savannah River Site. At this site, the Board must evaluate not only the safety of nuclear material processing and stabilization activities such as disposing of high-level waste (Area 2), but also the safety of nuclear weapon support activities involving tritium operations (Area 1), the construction of new defense nuclear facilities such as the Salt Waste Processing Facility (Area 3), and nuclear safety programs such as high-level waste tank integrity inspections (Area 4).

As discussed in Strategic Area 3 above, DOE is designing and constructing many new defense nuclear facilities that will be used to support the nuclear weapon operations and/or nuclear material processing and stabilization. To ensure that DOE protects the health and safety of the public and the workers, the Board must pay close attention to the design, construction, start-up and operation of these facilities, as well as major modifications to existing facilities, including the selection of governing safety standards and requirements. Equally important, the Board

evaluates the directives, standards, and programs governing DOE's safe performance of its hazardous defense nuclear activities. The Board's first three strategic areas of concentration heavily rely upon the implementation of specific DOE rules and directives. The Board's integrated, comprehensive oversight of the safety of DOE's defense nuclear facilities requires that the Board carefully evaluate these safety programs.

The synergy gained from constant information sharing among the Board's matrixed staff, which supports all four strategic areas of concentration, is key to achieving the Board's general goal. The Board's technical staff has been organized specifically to achieve the agency's performance goals and to execute its Strategic Plan and Annual Performance Plans. Using a matrix form of organization, the Board gains management flexibility and avoids the need to establish layers of middle management that divert staff resources from performing health and safety reviews. Four interdependent technical groups, staffed with technical specialists having both the education and work experience commensurate with the designated oversight assignments, have been created, each with direct responsibility for achieving one of the four strategic performance goals described in this plan. Depending on the urgency of the issue, the Board may reassign resources among these groups as necessary.

FINANCIAL PERFORMANCE OVERVIEW

As of September 30, 2012, the Board had adequate internal controls to conduct its health and safety oversight mission and to ensure that obligations did not exceed its total budget authority. As with many small agencies, the Board has adopted the "economies of scale" philosophy for obtaining needed administrative support services. For financial support, the Board has negotiated interagency agreements with the Bureau of the Public Debt and the National Finance Center for personnel/payroll services, and the General Services Administration (GSA) for accounting services on a fee-for-service basis. The Board's financial statements were prepared in accordance with the accounting standards codified in the Statements of Federal Financial Accounting Standards (SFFAS) and OMB Circular A-136, *Financial Reporting Requirements*.

Sources of Funds

The Board receives an annual appropriation, for Salaries and Expenses, with the funds made available for two years. The sources of funds available for obligation in FY 2012 and FY 2011 are listed as follows:

	<u>FY 2012</u>	<u>FY 2011</u>
New Budget Authority	\$29,130,000	\$23,203,500
Prior Year Unobligated Balance	366,386	3,844,724
Recovery of Prior Year Obligations & Offsetting Collections	118,765	472,737
Total Budgetary Resources	\$29,615,151	\$27,520,961

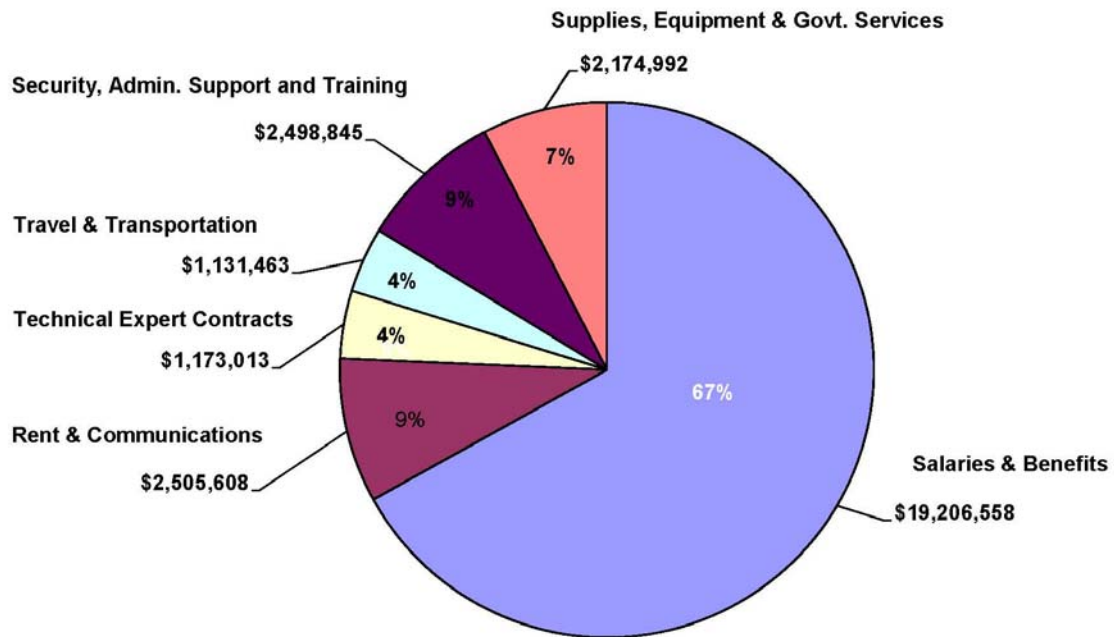
The significant buildup in total budgetary resources of \$2,094,190 (7.6%) from FY 2011 was due to a \$5,926,500 (25%) increase in new budget authority, offset by a \$3,832,310 reduction in prior year unobligated balance and recoveries.

Uses of Funds by Function

The Board incurred obligations of \$28,690,479 in FY 2012. As shown below, the FY 2012 budget was used primarily to pay the salaries and benefits of our employees, with most of the remaining resources dedicated to rent and the logistical support of the Board Members and employees as they conducted oversight operations.

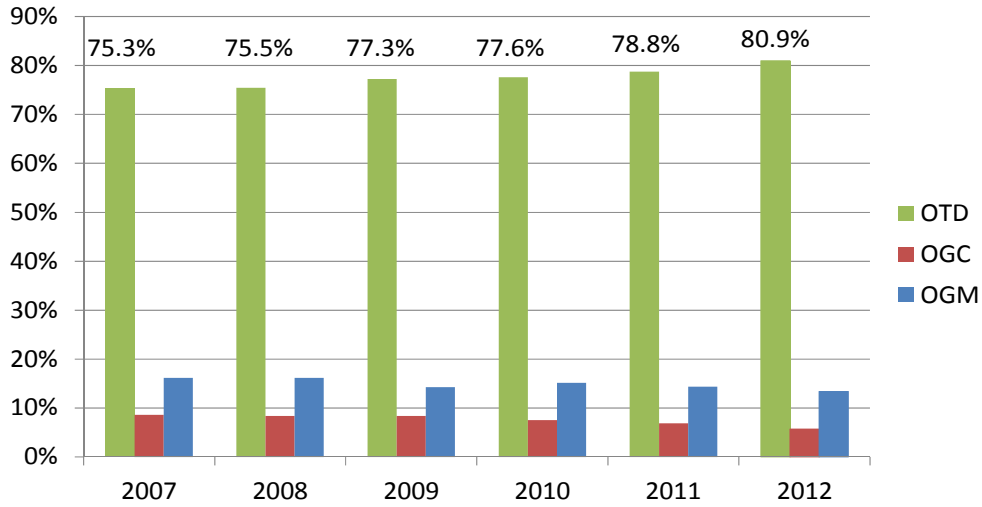
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FY 2012 Obligations = \$28,690,479



As shown on the following page, approximately 80% of the Board's obligations support the Board's technical personnel with the remainder supporting its legal and business operations staff, consistent with the past several years.

DNFSB Obligations by Group



AUDIT RESULTS

The Board received an unqualified audit opinion on its FY 2012 financial statements. The auditors disclosed no instances of noncompliance with laws and regulations and identified no material internal control weaknesses.

A copy of the full audit report as provided to the Board can be found in Chapter 3 of this PAR.

FINANCIAL STATEMENT HIGHLIGHTS

The Board's financial statements summarize the financial activity and financial position of the agency. The financial statements, footnotes, and required supplemental information appear in Chapter 3, *Auditors' Reports and Financial Statements*. Analysis of the principal statements follows:

Analysis of the Balance Sheet

	<u>FY 2012</u>	<u>FY 2011</u>
Total Assets	\$9,413,076	\$6,671,644
Total Liabilities	\$3,301,717	\$2,760,160
Net Position	\$6,111,359	\$3,911,484

The Board's assets were \$9,413,076 as of September 30, 2012, an increase of \$2,741,432 from the end of FY 2011. Its total liabilities and net position (which together equal total assets) were \$3,301,717 and \$6,111,359, respectively, as of the end of FY 2012, increases of \$541,557 and \$2,199,875, respectively, from the end of FY 2011. The Fund Balance with Treasury (FBWT) represents the Board's largest asset. The significant increases in Total Assets and Net Position were primarily due to the increased appropriation received in FY 2012.

Analysis of the Statement of Net Cost

	<u>FY 2012</u>	<u>FY 2011</u>
Net Cost of Operations	\$27,814,344	\$27,873,161

The Board's net cost of operations for the year ended September 30, 2011, was \$27,814,344, a slight decrease of \$58,817 or .2% from FY 2011 costs. Although the Board increased its staffing from 111 at the end of FY 2011 to 116 by the end of FY 2012, many of the new employees were hired in the last quarter, so that the Board operated at the same FTE level (109) each year. Costs in other areas (e.g., travel, contracts) remained relatively stable.

Analysis of the Statement of Changes in Net Position

The Statement of Changes in Net Position reports the changes in net position during the reporting period. Net position is affected by changes in its two components - Cumulative Results of Operations and Unexpended Appropriations. The increase in Net Position of \$2,199,875 from FY 2011 to FY 2012 is due primarily to the increase in Unexpended Appropriations.

Analysis of the Statement of Budgetary Resources

The Statement of Budgetary Resources shows the sources of budgetary resources available and the status at the end of the period. It presents the relationship between budget authority and budget outlays, and reconciles obligations to total outlays. For FY 2012, the Board had Total Budgetary Resources available of \$29,615,151, the majority of which was derived from new

appropriations. Total Budgetary Resources increased \$2,094,190 or 7.6% from the FY 2011 amount of \$27,520,961 due to the decreased level of appropriations received in 2011.

For FY 2012, the Statement of Budgetary Resources showed the Board incurred obligations of \$28,690,479, an increase of \$1,535,903 or 5.7% over FY 2011 obligations of \$27,154,576. Net Outlays for FY 2012 were \$26,519,468, a \$488,811 or 1.8% decrease from FY 2011 outlays of \$27,008,279.

In FY 2011, the Board utilized its beginning unobligated balance of \$3,844,724 and \$461,358 in recoveries of prior year obligations to fund the \$3,951,076 difference between the \$27,154,576 in obligations and available appropriations received of \$23,203,500, leaving an ending unobligated balance of \$366,386 brought forward into FY 2012. The enacted appropriation of \$29,130,000 in FY 2012 is more closely aligned with the obligations of \$28,690,479, i.e., there is no longer a large unobligated balance that can be used to offset a level of obligations greater than the enacted appropriation as occurred in FY 2011.

LIMITATION OF THE FINANCIAL STATEMENTS

The principal financial statements have been prepared to report the financial position and results of operations of the Board, pursuant to the requirements of the Accountability of Tax Dollars Act of 2002. While the statements have been prepared from the books and records of the Board in accordance with generally accepted accounting principles (GAAP) for Federal entities and the formats prescribed by OMB, the statements are in addition to the financial reports used to monitor and control budgetary resources which are prepared from the same books and records.

The statements should be read with the realization that they are used for a component of the U.S. Government, a sovereign entity.

The Board's financial statements were audited by Lani Eko & Company, LLC.

COMPLIANCE WITH THE INSPECTOR GENERAL ACT OF 1978

The Board is required to file a report annually under the Inspector General Act of 1978, Pub. L. 95-452, Oct. 12, 1978, 92 Stat. 1101, codified at 5 U.S.C. Appendix 3. The statute mandates a report which:

(A) States whether there has been established in the Federal entity an office that meets the requirements of this section;

(B) Specifies the actions taken by the Federal entity otherwise to ensure that audits are conducted of its programs and operations in accordance with the standards for audit of governmental organizations, programs, activities, and functions issued by the

Comptroller General of the United States, and includes a list of each audit report completed by a Federal or non-Federal auditor during the reporting period and a summary of any particularly significant findings; and

(C) Summarizes any matters relating to the personnel, programs, and operations of the Federal entity referred to prosecutorial authorities, including a summary description of any preliminary investigation conducted by or at the request of the Federal entity concerning these matters, and the prosecutions and convictions which have resulted.

The Board reports as follows for Fiscal Year 2012:

(A) The Board did not establish an inspector general's office.

(B) The Board took the following actions to ensure audit of its programs and operations:

- Annual Financial Statements Audit in accordance with the Accountability of Tax Dollars Act of 2002.
- The Board engaged an advisory and assistance contractor, Mosley and Associates to perform a risk assessment of the Board's operations and to prepare a potential audit plan for FY 2013.

(C) The Board referred no matters to prosecutorial authorities.

SYSTEMS, CONTROLS, AND LEGAL COMPLIANCE

This section provides information on Board's compliance with the Federal Managers' Financial Integrity Act (FMFIA) and the Improper Payments Information Act, as well as other management information, initiatives, and issues. FMFIA requires that agencies establish controls that provide reasonable assurance that: (1) obligations and costs comply with applicable law; (2) assets are safeguarded from waste, loss, unauthorized use, or misappropriation; and (3) revenues and expenditures are properly recorded and accounted for. It also requires the Chairman to provide an assurance statement on the adequacy of management controls.

Assurance Statement (FMFIA)

The Defense Nuclear Facilities Safety Board's (Board) management is responsible for establishing and maintaining effective internal controls that meet the obligations of FMFIA within their areas of responsibility. Based on my personal observation, evaluations from the Executive Committee on Internal Controls (ECIC), Office Directors and line managers' knowledge of daily operations, the Board is able to provide a statement of assurance that the formal internal controls over the business and legal operations meet the objectives of FMFIA. In FY 2013, the Board plans to develop some formal internal controls over the technical program areas of the DNFSB which will be evaluated by the ECIC. The outside auditor's review in FY 2012, marks the fifth consecutive year that the Board's unqualified financial audit opinion was coupled with no instances of non-compliance with laws and regulations and no material internal control weaknesses.



Peter S. Winokur, Ph.D.
Chairman

11-16-2012

Date

Improper Payments Information Act

The Board is considered to be at low risk for improper payments since the functional payment areas are limited to traveler reimbursement, commercial vendors for supplies and services, and the payroll electronic funds transfer payments. The Board does not administer any entitlement, grant, or loan programs. During FY 2012 GSA and the Bureau of the Public Debt made net total payments of \$26,519,468 on behalf of the Board. Neither the GSA accounting staff, nor the Board's finance staff, has identified any improper payments during this period.

Federal Travel Card Program

The Board is a full participant in the Federal Travel Card Program, and has issued travel credit cards to employees whose official duties may require them to travel. The Board's funds control staff routinely monitors each employee's usage of the travel card to ensure that charge activities are restricted to official government travel-related expenses, and that the employee is paying his/her credit card bills on-time.

During FY 2012, employees were reimbursed for authorized travel-related expenses no more than five working days after their completed travel vouchers were submitted for processing. During this same period, no Board employee's travel card account was more than 60 days delinquent and no inappropriate usage of the travel card was identified during our monthly review of credit card activity.

Federal Purchase Card Program

The Board has made extensive use of the U.S. Government's purchase card program to expedite the purchase of authorized supplies and services both in its headquarters and field operations. During FY 2012 transactions using individual purchase cards totaled \$428,350. The Board established a system of internal controls to ensure that only authorized purchases are made by each card holder. The Board's purchase card procedures were distributed to all new purchase cardholders during FY 2012. These procedures stressed the requirement for completion of the electronic training program necessary to exercise the delegations of procurement authority.

The Board's internal control procedures for the purchase card program feature a review much more stringent than the requirements of the program itself, without sacrificing the overall efficiency and timeliness of this purchasing method. All card purchases are reviewed and approved by the cardholder's supervisor, the purchase card coordinator, and finally, a Board contracting officer who gives final approval of invoices. The number of purchase cardholders is kept at the minimum necessary to effectively conduct Board operations. At the close of FY 2012, the total number of purchase cards issued was 8 at headquarters, and 4 at our field locations.

Federal Information Security Management Act (FISMA)

In FY2012 the Board re-certified its general support system (GSS), which is the Board's primary internally-operated IT system. As part of the re-certification effort the Board also completed a Privacy Impact Assessment (PIA) to ensure the Board's increased use of externally-operated IT systems does not put sensitive information at risk. In a continued effort to embrace cloud computing and improve the resiliency of the Board's IT infrastructure, additional IT services including the Board's e-mail system, BlackBerry Enterprise Server, and phone system were migrated from on-premise solutions to externally-operated services, which further reduces the size of the Board's primary datacenter.

The Board continued to build on the progress made in the prior year and improve its IT security posture. Based on the standard procedures the Board has instituted, no additional areas of concern or material weaknesses were identified in the independent auditor's internal control report for the fourth year in a row.

Government Accountability Office (GAO) Investigations and Reports

Audit follow-up is an integral part of good management. In accordance with OMB Circular A-50, each agency must establish systems to assure the prompt and proper resolution and implementation of audit recommendations. During FY 2012, the GAO did not conduct any reviews or investigations of Board oversight programs, and there are no open audit recommendations from previous GAO reviews.

Internal Control Program

The Board has a formal internal control program described in its Administrative Directive 211.1, dated March 23, 2007, which delineates the requirements for the program. The Board has an Executive Committee on Internal Controls (ECIC) composed of the following: General Manager, Technical Director, General Counsel, Deputy General Manager and the Chief Information Officer (CIO). In FY 2012, internal controls for the following areas which have been routinely evaluated over the years were evaluated once again with no significant or reportable issues: Time and Attendance, Metro Transit Subsidies, Purchase Cards, Employee Travel Cards, Property Accountability, Classified Documents, Security Clearances, Ethics, Financial Disclosure, Alternative Dispute Resolution, Radiation Exposure Program, Recruitment, Retention and Relocation Bonuses Program, Telework Program, Intranet and Internet (Data Quality), and IT Security.

Internal controls of the following additional areas were added for assessment during FY 2012; Advisory and Assistance Contracts, Awards Program, Drug Free Workplace, Records Management, and Sunshine Act. All assessments and a summary of the ECIC meeting were

provided to the Board's external auditors for review and use in conducting their audit. Additionally, each Office Director was required to submit a statement of reasonable assurance of appropriate management controls over their respective areas.

The Board is committed to the continual pursuit of excellence in its operations, and the responsible stewardship of public resources. The Board understands that in order to best effectuate its vital health and safety mission, it must constantly evaluate and improve the quality of its internal controls. To this end, the Board hired an advisory and assistance contractor, Mosley & Associates, with specialized experience in auditing internal government controls to prepare a Risk Assessment and proposed FY 2013 Audit Plan of the Board's operations. The Board received their finalized report on November 8, 2012.

The results of the assessment were generally very positive. For example, the report found that both the Office of the General Counsel and Office of the General Manager have "...well-thought out policies and procedures in place for a number of activities to help them achieve their [respective] goals and objectives." Moreover, the assessment stressed that the technical reports generated by the Office of the Technical Director (OTD) are "highly-regarded" by DOE. Regardless, the report identified a number of opportunities for improvement. Specifically, "DNFSB/OTD needs to better document its assessment of technical mission activities in its annual review of internal controls under A-123." Additionally, the report suggested that the Board enhance its performance planning and measurement process. The Board values these remarks as constructive and beneficial for the continual improvement of the agency, and intends to fully evaluate the proffered recommendations and implement them where appropriate.

Chapter 2
Program Performance

Overall Outcome: Using its expert knowledge, the Board has complied with its statutory mission to ensure that public and worker health and safety are adequately protected at DOE defense nuclear facilities and met its performance goals for FY 2012. The report notes cases where additional safety improvements sought by the Board have not yet been fully achieved by DOE. The Board is actively pursuing these safety improvements in FY 2013.

INTRODUCTION

The Board's contribution to the safety of DOE's defense nuclear activities derives from four basic types of activities that are embodied in the Board's enabling legislation. First, the Board evaluates DOE's organization policies and processes to ensure that fundamental safety requirements necessary to undertake highly hazardous operations exist at DOE. These reviews evaluate topics such as technical competence of DOE and contractor personnel, adequacy of safety requirements and guidance, and the presence of a strong safety culture. The deficiencies in Federal oversight and corporate safety programs revealed by the Deepwater Horizon oil rig accident clearly illustrate the safety risks inherent in deficiencies in these areas and the need for safety organizations, such as the Board, to emphasize reviews of this type. The Board plans this type of oversight in advance, and those plans are generally not affected by unanticipated changes in DOE's plans or activities.

The second major type of safety oversight activity performed by the Board is the evaluation of actual hazardous activities and facilities in the field. These reviews focus on identifying the hazards attendant with DOE's mission activities and evaluating the controls put in place to mitigate those hazards. The Board plans for these types of reviews based on the risk, complexity, maturity, and significance of the activities underway or planned by DOE. However, unanticipated changes in DOE's plans or new, emergent information often change the priority of the Board's oversight in this area. The Board continuously seeks to be proactive and to focus DOE's attention on the most significant safety issues present in the defense nuclear complex at any given time. Therefore, because the priority of safety issues can change rapidly, the Board cannot always predict in advance what activities it will review or what safety outcomes it will ultimately achieve.

Third, the Board provides expert-level reviews of the safety implications of DOE's actions, decisions, and analyses. It is extremely important that the Board provide DOE with independent evaluations of the technical quality and safety impacts of DOE's decisions and actions. For example, well-intended actions by DOE managers can have significant unintended negative consequences if they are based on faulty, inadequate, or misunderstood information.

The Board attempts to be proactive in conducting this type of review, but it is necessary that DOE first develop at least preliminary plans with sufficient detail to allow for a meaningful technical review.

Therefore, it is not possible for the Board to plan all of its efforts in this important area explicitly in advance.

The Board does allocate resources to this form of oversight, and does report the significant outcomes that result from such oversight in its performance reports.

The last major type of oversight performed by the Board is the identification of new safety issues that were otherwise unknown in the DOE complex. Since, by definition, these safety issues would not have been addressed without the Board's efforts, this may be the area in which the Board has the largest impact on the safety of DOE's highly hazardous operations. However, by their very nature, it is impossible to plan for these emergent safety issues in advance. The effectiveness of this type of safety oversight activity relies exclusively on the expertise of the Board and its staff.

The Board uses its Strategic Plan and Annual Performance Plan to ensure that its resources remain focused on the most significant safety challenges and the DOE activities that warrant the most external review. All of the Board's safety activities are closely tied to goals and objectives embodied in these plans. This approach gives the Board confidence that its staff (109 FTEs in FY 2012, including Board Members) and budget (approximately \$28.7 million in FY 2012 obligations) are dedicated to the highest-risk activities under the Board's jurisdiction. The Board's strategic plan may be viewed in its entirety on the Board's internet website at www.dnfsb.gov.

The information in this *Performance and Accountability Report* is also provided directly to the Congress in the Board's statutorily required annual report, also available on the Board's website. There are slight differences between the two reports because the annual report covers calendar years rather than fiscal years. The Board's *Twenty-Third Annual Report to Congress* will be issued during the first quarter of CY 2013. The Board also provides periodic reports to Congress and DOE on the status of significant unresolved technical differences between the Board and DOE on issues concerning (1) the design and construction of DOE's defense nuclear facilities and (2) the infrastructure of aging DOE defense nuclear facilities.

SAFETY GOALS

The Board revised its strategic plan in March 2011 to refocus its efforts and better align its resources to meet the challenges of ensuring safety in the defense nuclear complex as the DOE mission evolved during the latter half of the previous decade. The performance goals that result from the current strategic plan are summarized below.

SAFETY OVERSIGHT GOAL

Ensure adequate protection of public health and safety at the Department of Energy's defense nuclear facilities.

To achieve this general goal, the Board has identified the following five strategic areas of concentration and has developed objectives, performance goals, and outcomes for each:

AREA 1. SAFE NUCLEAR WEAPONS OPERATIONS:

Objective: DOE operations that directly support the nuclear stockpile and defense nuclear research are conducted in a manner that ensures adequate protection of the health and safety of the public, the workers, and the environment.

Performance Goal: The Board will promote DOE actions to effectively implement Integrated Safety Management (ISM) at the National Nuclear Security Administration's (NNSA) defense nuclear facilities. The Board will ensure that DOE adopts credible health and safety standards at NNSA's defense nuclear facilities, and properly implements them, with particular emphasis on formal conduct of operations, safety start-up/restart of facilities or activities, and nuclear explosive safety. The Board will assist DOE to improve the quality and implementation of Documented Safety Analyses at NNSA's defense nuclear facilities, including addressing such complex issues as specific administrative controls, electrostatic discharge hazards, and nuclear material packaging.

Outcome: DOE will have acknowledged, acted upon, and/or resolved the health and safety issues raised by the Board, and will operate its defense nuclear facilities to approved safety standards, rules, orders, and directives. Follow-up technical evaluations of DOE's nuclear stockpile activities will verify necessary improvements in safety.

AREA 2. SAFE PROCESSING AND STABILIZATION OF NUCLEAR MATERIAL:

Objective: The processing, stabilization, and disposition of DOE defense nuclear materials and facilities are performed in a manner that ensures adequate protection of health and safety of the public, the workers, and the environment.

Performance Goal: The Board will promote DOE actions to effectively implement ISM at DOE's defense nuclear facilities. The Board will ensure that DOE adopts credible health and safety standards at DOE's defense nuclear facilities, and properly implements them, with particular emphasis on formal conduct of operations, and safety start-up/restart of facilities of activities. The Board will assist DOE to improve the quality and implementation of Documented Safety Analyses at DOE's defense nuclear facilities, including addressing such complex issues as

specific administrative controls, Justifications for Continued Operation, and nuclear material packaging. The Board will encourage DOE to develop technically robust plans for the safe retrieval, handling, and stabilization of remnant nuclear material; the consolidation and disposition of plutonium; the management of high-level waste; and treatment of sludge from spent nuclear fuel.

Outcome: DOE will have acknowledged, acted upon, and/or resolved the health and safety issues raised by the Board. Follow-up technical evaluations of DOE's nuclear materials management and facility disposition activities will verify necessary improvements in safety, as DOE meets its commitments to the Board to stabilize and dispose of hazardous nuclear materials.

AREA 3. SAFETY IN NUCLEAR FACILITIES DESIGN AND INFRASTRUCTURE:

Objective: DOE's new defense nuclear facilities and major modifications to existing facilities are designed and constructed in a manner that ensures adequate protection of the health and safety of the public, the workers, and the environment.

Performance Goal: The Board will assist DOE to address safety reviews early in the design process for its defense nuclear facilities and monitor to ensure implementation during the construction phase of each facility. The Board will ensure that DOE develops facility designs that are robust, with appropriate safety controls that comply with approved nuclear codes and standards.

Outcome: DOE will have acknowledged, acted upon, and/or resolved the health and safety issues raised by the Board. Follow-up technical evaluations will verify necessary improvements in the design and construction of DOE's new nuclear facilities and major modifications to existing facilities. New nuclear facilities will meet acceptable safety standards.

AREA 4. EFFECTIVE NUCLEAR SAFETY PROGRAMS AND ANALYSIS:

Objective: DOE regulations, requirements, and guidance are developed, implemented, and maintained; and safety programs at defense nuclear facilities are established and implemented as necessary to adequately protect the health and safety of the public, the workers, and the environment.

Performance Goal: The Board will ensure that DOE maintains a credible suite of nuclear safety requirement in its directive system. The Board will encourage DOE line management to improve oversight of safety operations. The Board will assist DOE in improving the technical competence of its Federal workforce. The Board will require that DOE reinvigorate the development and implementation of ISM systems with particular focus on quality assurance,

nuclear criticality safety, and training and qualification. The Board will encourage DOE's nuclear safety programs be founded on solid research by ensuring the continued integration and support of research, analysis, and testing to understand the effect(s) of off-normal conditions on nuclear safety technologies.

Outcome: DOE will have acknowledged, acted upon, and/or resolved the health and safety issues raised by the Board. In addition, follow-up technical evaluation of DOE's safety programs at defense nuclear facilities will verify necessary improvements in safety.

AREA 5. MANAGEMENT EXCELLENCE:

Objective: The Board will strive for management excellence throughout its technical, legal, and administrative staffs.

Performance Goal: The Board has seven subordinate goals in this performance area.

- The Board will keep Congress informed on current health and safety issues at DOE's defense nuclear facilities and the status of progress toward issue resolution as required by the Board's statute and other legislation.
- The Board will inform the public of issues related to health and safety at defense nuclear facilities.
- The Board will adopt and execute processes and procedures with DOE that are compatible with the Board's enabling legislation and further the Board's mission.
- The Board will implement internal process and procedures that effectively support the Board's oversight operations and responsibilities as a Federal agency using OMB and OPM management guidance applicable to small agencies to gauge Board performance.
- Appropriate technical and professional expertise will be recruited and further developed by the Board to accomplish the mission.
- The Board will effectively manage the appropriated financial resources, exercise responsible stewardship over its resource to meet its need to accomplish the mission, and achieve a "clean" annual audit opinion on its financial statements.
- The Board will assign staff to be in residence at selected sites.

Outcome: There will be public confidence that DOE's defense nuclear facilities are being operated safely and that the Board's oversight is a positive influence on the safe execution of these activities. The Board will meet its responsibilities as a federal executive branch agency.

ANNUAL PERFORMANCE OBJECTIVES

The Board's *Annual Performance Plan for FY 2012* identified annual performance objectives that consist of reviews that were to be conducted in support of the Board's strategic plan, plus the

identification of candidate areas for these reviews. An outcome measure for each objective is described as part of the discussion of each annual performance goal. Qualitative assessments of the outcome associated with each annual performance goal are provided in this chapter of the Board's PAR.

The Board measures progress toward achieving the positive outcomes embedded in each annual performance goal in three stages, by evaluating:

- The DOE's acknowledgment that a safety enhancement is needed after the Board communicates the results of its technical reviews;
- The DOE's subsequent development of appropriate corrective actions to resolve the Board-identified safety issue; and
- The DOE's implementation of the necessary corrective actions, leading to the successful resolution of the safety issue and resulting in improved protection of the public, the workers, and the environment.

The basis of measurement for the qualitative assessment includes formal, publicly-available, correspondence from DOE and its defense nuclear contractors, Board correspondence, staff reports, DOE and contractor public testimony, and other sources. Past reporting (see the Board's annual reports) of Board-identified issues and associated DOE responses demonstrates that the Board has had a clear and positive impact on the safety of DOE defense nuclear activities.

Assessment of the Reliability and Completeness of Performance Data

The sources used by the Board to measure its outcome are robust, varied, and independent. Documentation of accomplishments includes the Board's Annual Reports to the Congress, correspondence to and from the Department of Energy, Board technical reports, and public meeting records. These documents are available for public review on the Board's Internet web site, www.dnfsb.gov. As such, the Board believes that the performance data used in this report are reliable and complete.

Comparison of Fiscal Year 2012 Actual Performance with Planned Performance

The following pages provide detailed information comparing the Board's actual performance driving safety improvements at DOE to its plans for FY 2012. Information concerning the Board's performance accomplishments in FY 2008 through FY 2011 is contained in the Board's FY 2013 Budget Request to Congress, which is published on our website at www.dnfsb.gov.

PERFORMANCE GOAL 1: SAFE NUCLEAR WEAPONS OPERATIONS

DOE operations that directly support the nuclear stockpile and defense nuclear research are conducted in a manner that ensures adequate protection of the health and safety of the public, the workers, and the environment.

OUTCOME: DOE will have acknowledged, acted upon, and/or resolved the health and safety issues raised by the Board, and the facilities are operated to approved safety standards, rules, orders, and directives. Follow-up technical evaluation of DOE's nuclear stockpile activities will verify necessary improvements in safety.

FY 2012 Performance Objectives:

The Board and its staff will verify the safety of DOE's defense nuclear facilities and activities relating to the maintenance, storage, and dismantlement of the nuclear weapon stockpile, quality assurance of the stockpile, as well as its associated research and development, and the capability to test nuclear weapons and disposition damaged or improvised nuclear devices (such as a terrorist device). The Board and its staff will conduct assessments of DOE's efforts to develop and implement safety management systems for stockpile management activities. The Board's evaluations will be split between DOE efforts to develop safety systems (e.g., system and process designs, safety bases, control schemes, and administrative programs) and DOE efforts to implement safety management systems. These reviews will focus on activities at the Pantex Plant, Y-12, Savannah River Site (SRS) tritium facilities, LANL, LLNL, SNL, and NNSS. Representative areas for review include:

- Development, implementation, and refinement of site-wide and facility-specific safety analyses and controls for nuclear facilities and activities (e.g., safety analysis reports and annual updates developed per 10 CFR 830).
- Cross-cutting functional areas such as legacy material disposition, nuclear criticality safety, fire protection, nuclear explosive safety, seismic design, conduct of operations, work planning, training and qualification, maintenance, and configuration management.
- Special studies of unique or significant hazards at DOE nuclear facilities (e.g., classified projects, process technology alternatives, and disposition of special items and by-product materials).
- Weapon-specific safety analyses and controls identification and implementation for nuclear weapon activities (e.g., B53, W76, W84, and W88).
- Nuclear explosive operations at Pantex (e.g., conduct of operations, procedures, lightning protection, electrostatic discharge controls), and adequacy of the Nuclear Explosive Safety Study process.

- Laboratory support of nuclear explosive operations at Pantex (e.g., sensitivity testing of high explosives, electrostatic discharge and lightning protection studies, and weapon response evaluation and documentation).
- Uranium chemical processing and component assembly/disassembly operations at Y-12 (e.g., conduct of operations, work planning and control, criticality safety, and fire protection).
- Safety Basis for the Waste Storage Facilities at LLNL
- Plutonium pit manufacturing and certification at LANL.
- Corrective actions to strengthen institutional safety programs and infrastructure at LANL, LLNL, and SNL including reviews of the adequacy of vital safety system assessments and the implementation of conduct of operations and engineering at various LANL facilities.
- Readiness to dispose of damaged nuclear weapons or improvised nuclear devices at NNSS.
- Subcritical experiments at NNSS.
- Nuclear explosive operations at the Device Assembly Facility at NNSS.
- Operation of the Criticality Experiments Facility at NNSS.
- Confinement ventilation and fire suppression system improvements at NNSS Device Assembly Facility.
- Development and implementation of upgrades to address seismic vulnerabilities identified by the Seismic Analysis of Facilities and Evaluation of Risk (SAFER) analyses recently completed for the LANL Plutonium Facility, and implementation of Recommendation 2009-2, *Los Alamos National Laboratory Plutonium Facility Seismic Safety*.
- NNSA's transition from Technical Business Practices, the Development and Production Manual, and Engineering Procedures to the new Requirements Modernization and Integration system for the weapon lifecycle.
- Safety basis for the Annular Core Research Reactor at SNL.
- Implementation of controls related to the Auxiliary Hot Cell Facility at SNL.

While performing its reviews, the staff will assess the effectiveness of integrated safety management implementation and the safety controls identified for ongoing operations as well as any new weapon system surveillance, life extension, or dismantlement projects at Pantex, Y-12, or NNSS that start in FY 2012.

FY 2012 Measured Performance:

Safety Basis and Controls at LANL. The Board identified concerns with the quality and timeliness of the safety basis update process across the laboratory during its public hearing held in Santa Fe, NM, in November 2011. Based on reviews of updates to both the Plutonium Facility Documented Safety Basis and the Area G Basis for Interim Operations, the Board issued a letter June 18, 2012 outlining its concerns with the safety basis for the Plutonium Facility. DOE is working to address the deficiencies identified by the Board.

LANL Plutonium Facility Confinement Ventilation. DOE's Implementation Plan for the Board's Recommendation 2009-2, *Los Alamos National Laboratory Plutonium Facility Seismic*

Safety, committed to provide seismically qualified fire suppression and active confinement ventilation systems. DOE has committed to provide a Project Execution Plan that describes its plan to implement these improvements by November 2012.

LANL Plutonium Facility Seismic Vulnerabilities. An update to the Probabilistic Seismic Hazards Analysis for the laboratory issued in 2007 indicated that the likelihood of high seismic ground motion (particularly in the vertical direction) was much greater than previously believed. Further analysis identified nine facility vulnerabilities that could lead to loss of building confinement or structural collapse. NNSA completed physical upgrades to address these new vulnerabilities. The Board noted additional vulnerabilities and continued working with NNSA personnel as they conducted a static nonlinear analysis of the facility. The Board communicated its concerns with the technical basis and acceptance criteria for this analysis in a July 18, 2012, letter. NNSA subsequently provided the Board with the initial results of this analysis, which identified more structural weaknesses in the building. On September 28, 2012, the Deputy Secretary of Energy replied to the Board's July 18 letter, committing to further analyses and continued cooperation with the Board.

Nuclear Criticality Safety at LANL. In August 2011, a significant violation of nuclear criticality safety requirements occurred at the Plutonium Facility. The Board evaluated the corrective action plan, its adequacy, and its applicability to other LANL facilities. Nuclear criticality safety concerns also arose in May 2012 at Technical Area 35 regarding the inventory and control of special nuclear materials. The Board has closely followed NNSA's involvement in this area, including observation of a Nuclear Criticality Safety Group assessment at LANL in February 2012.

Emergency Preparedness at LANL. The Board conducted a review of Emergency Preparedness in October 2011, and emphasized several weaknesses during its public hearing at Santa Fe in November 2011. Of particular concern were the wild-land fire mitigation program and LANL's preparations to confront site-wide or cascading natural phenomena events. LANL responded with increased effort and has initiated an exercise program focused on these kinds of accident scenarios.

Nuclear Explosive Safety at Pantex. The Board issued a letter on November 7, 2011, detailing concerns on how NNSA addresses nuclear explosive safety issues that are identified during studies of proposed and ongoing nuclear explosive operations. NNSA has committed to improving the management review of findings and documenting the technical justification for not addressing findings prior to beginning or continuing operations.

Additionally, the Board issued a letter on March 2, 2012, documenting concerns with the effectiveness of the nuclear explosive safety program at the Pantex Plant. NNSA took

immediate action to change the Pantex management structure to prevent conflicts of interest between nuclear explosive safety and production. NNSA and DOE's Office of Health, Safety and Security are also conducting reviews of the safety culture at Pantex.

Pantex Hazard Analysis Reports. In April 2011, NNSA approved the Pantex Documented Safety Analysis Upgrade Initiative, which will bring Pantex Hazard Analysis Reports into compliance with the applicable DOE directives. In October 2011, the first safety analysis document was drafted with the intent of meeting the upgraded requirements. In December 2011, the Board presented NNSA with concerns and comments regarding this draft document; NNSA is currently making revisions.

Implementation of DOE Standard 3016, *Hazard Analysis Reports for Nuclear Explosive Operations*. During FY 2012, the Board followed up on its April 5, 2011, letter to NNSA that identified shortcomings with NNSA oversight of the development and documentation of weapon response (an input to the safety basis for nuclear explosive operations at the Pantex Plant) in accordance with DOE Standard 3016. In response to the Board's letter, NNSA managers committed to evaluate implementation of the standard at each of the three weapon design agencies. The Board observed all of these reviews, the last of which was conducted in August 2012. The preliminary findings and weaknesses identified by the NNSA team are consistent with the concerns raised in the Board's letter. The NNSA review team will develop a final report and recommend corrective actions during FY 2013.

Pantex Chemical Control Program. In December 2011, the Board conducted an onsite review of the Pantex chemical control program and identified concerns with the categorization of hazardous chemicals and the technical basis of methods used for dispersion calculations. These concerns were transmitted to NNSA through staff to staff teleconferences and are being addressed.

Pantex Conduct of Operations and Technical Procedures. In February 2012, the Board conducted a review of the conduct of nuclear explosive operations at Pantex and provided immediate feedback to NNSA on areas for improvement. NNSA issued an updated Writer's Guide for technical procedures in March 2012; implementation of this guide has begun. The issues leading to improvements in the Writer's Guide and technical procedures were originally documented in a Board letter dated October 15, 2009.

Pantex Technical Safety Requirements Calculations. The Board issued a letter on March 2, 2012, documenting its review of the technical information and calculations Pantex used to develop its Technical Safety Requirements. The Board discussed a number of discrepancies with NNSA, and NNSA is taking action to address the concerns.

Pantex Fire Protection System. In July 2012, the Board conducted a review of the Pantex Fire Protection system and provided feedback NNSA on several areas for improvement.

Pantex Hazard Analysis Task Teams. In August 2011, the Board conducted a review of the operation of Hazard Analysis Task Teams at Pantex, which are used to identify hazards, develop safety controls, and complete the Hazard Analysis Reports for nuclear explosive operations. NNSA has committed to reviewing its processes and documenting them through its Requirements Modernization and Integration initiative.

Highly Enriched Uranium Materials Facility (HEUMF) Safety Analysis. In response to the Board's letter to DOE dated April 20, 2011, the Y-12 contractor re-incorporated the analysis of chemical and toxicological hazards into the facility safety basis in June 2012.

Y-12 Work Planning, Conduct of Operations, and Procedures. The Board continued to evaluate actions in response to its letter to DOE dated August 19, 2011, that identified concerns regarding the Y-12 contractor's failure to adhere to conduct of operations principles during nuclear operations and inconsistencies in the quality of operating procedures. During this fiscal year, the Y-12 contractor implemented a comprehensive Conduct of Operations Improvement Plan and significantly improved the quality of technical procedures and operator adherence to these procedures. Additionally, NNSA evaluated the effectiveness of the Y-12 contractor's corrective actions and briefed the Board on the improvements to date.

In a letter to DOE dated December 29, 2011, the Board identified concerns with the planning, control, execution, and oversight of work at Y-12. The Y-12 contractor identified corrective actions to address the Board's concerns, which are being implemented through execution of a comprehensive Work Planning and Control Performance Improvement Plan, and have led to improvements in the content and format of work packages and added management attention on work planning activities. DOE and the contractor performed assessments of the effectiveness of these actions and noted improvements, but concluded that continued attention by DOE and contractor management is required to ensure improvements continue to mature and are consistently implemented.

Y-12 Fire Protection. The Board identified concerns related to the Y-12 contractor's decision to test aged sprinkler heads in defense nuclear facilities rather than replace them when the 50-year operating lifetime was exceeded. As a result, the Y-12 contractor decided to adopt an appropriately conservative approach and began replacing the aged sprinkler heads in 2012, improving the safety posture of the Y-12 facilities.

Y-12 Training and Qualification Program. In a letter to NNSA dated June 5, 2012, the Board identified numerous areas for improvement related to the Y-12 Training and Qualification Program. The Y-12 contractor has taken action to improve the content of several training courses to improve operator performance for nuclear operations, and has committed to a more comprehensive plan with additional corrective actions by November 1, 2012.

Continued Operations of the 9212 Complex at Y-12. In a letter to DOE dated March 13, 2007, the Board identified concerns regarding NNSA's ability to safely operate the 9212

Complex for an extended period of time and established an annual reporting requirement to evaluate the physical condition of the building's systems, structures, and components. On July 24, 2012, DOE briefed the Board on the Continued Safe Operations Oversight Team's review, which fulfilled the annual reporting requirement. The Board continues to track the safety of operations in the 9212 Complex and advocate for necessary maintenance and repairs until these operations can be transferred to the planned Uranium Processing Facility.

LLNL Safety Basis Development, Review, and Approval. On March 29, 2011, the Board issued a letter expressing concern over the changes proposed in the contractor's annual update to the Tritium Facility safety basis, particularly with the selection of credited controls. The Board has further reviewed recent updates to the Plutonium Facility safety basis and is concerned that there is a trend toward decreasing rigor and conservatism in the development, review, and approval of important safety basis documents. The Board conveyed these concerns to NNSA in a letter dated August 30, 2012, and will monitor the response and any improvements in the safety basis process.

Safety System Design, Functionality, and Maintenance at LLNL. The Board issued a letter on December 13, 2011, which questioned the ability of two Plutonium Facility safety systems—wooden high-efficiency particulate air filter enclosures and the fire detection and alarm system—to perform their defined safety functions under all operating conditions. As a result, the laboratory is reviewing options for replacing the wooden enclosures, has made software improvements to the fire detection system to increase its reliability in some conditions, and is addressing the Board's concerns with additional Plutonium Facility systems (e.g., Hydrogen Gas Control System and Glovebox Exhaust System).

NNSS National Criticality Experiments Research Center (NCERC)—Safety Basis and Instrumentation and Control. In 2010 and 2011, the Board evaluated NNSS's readiness to begin operations at NCERC. In an August 5, 2010, letter to NNSA, the Board identified concerns with the safety analysis, classification of controls, and the reliability of instrumentation and control systems. In response, NNSA identified corrective actions for each of the Board's concerns that contributed to the safe startup of NCERC. In FY 2012, NNSA implemented compensatory measures for the start-up of critical assembly machines and experiments.

Readiness to Dispose of a Damaged Nuclear Weapon or Improvised Device at NNSS. For several years, NNSA completed life safety and tunnel infrastructure improvements and developed a plan for implementation of safety controls and upgrades for the facility at NNSS (G-Tunnel) that would be used in disposition of an improvised nuclear device. In FY 2012, NNSA abandoned G-Tunnel due to structural stability concerns. NNSA moved the planned location for such operations to a newer, more stable, and safer tunnel.

Formality of Operations for Subcritical Experiments at NNSS. The Board reviewed improvements to several safety management programs at NNSS nuclear facilities related to previous concerns with formality of operations. As a result of interactions with the Board

through 2012, NNSA implemented compensatory measures to improve the conduct of operations, work planning, and configuration of safety systems at nuclear facilities at NNSA.

Annular Core Research Reactor at SNL. In letters to NNSA dated February 28, 2012, and April 18, 2012, the Board identified issues with the safety analysis, the reliability of some safety systems, and quality assurance (including software quality assurance) for the Annular Core Research Reactor. In response, NNSA and SNL established compensatory measures to limit material at risk, evaluated the Board's issues, and developed an improvement plan.

PERFORMANCE GOAL 2: SAFE NUCLEAR MATERIAL PROCESSING AND STABILIZATION

The processing, stabilization, and disposition of DOE defense nuclear materials and facilities are performed in a manner that ensures adequate protection of the health and safety of the public, the workers, and the environment.

OUTCOME: DOE will have acknowledged, acted upon, and/or resolved the health and safety issues raised by the Board. Follow-up technical evaluation of DOE's nuclear materials management and facility disposition activities will verify necessary improvements in safety, as DOE meets its commitments to the Board to stabilize and dispose of hazardous nuclear materials.

FY 2012 Performance Objectives:

The Board and its staff will conduct assessments of DOE's efforts to characterize, stabilize, process, and safely store plutonium, uranium, and other actinides, residues, spent nuclear fuel, and wastes from the nuclear weapons program to ensure that these efforts are performed safely and that the risks posed by these materials are addressed in a timely manner. These reviews will be conducted using the principles of Integrated Safety Management and will include assessments of the design of new facilities, facility readiness to safely begin new operations, the safety of ongoing operations, and the suitability of long-term storage and disposal facilities. Representative areas for review include:

Implementation of Recommendation 2000-1:

- Stabilization and disposal of plutonium-bearing residues at LANL.
- Design of systems to remove spent nuclear fuel sludge in the K West Basin at the Hanford Site.
- Analysis of methods to treat K West Basin sludge at the Hanford Site.

Safe management of spent nuclear fuel:

- Long-term storage of spent nuclear fuel at SRS that no longer has a disposition path.
- Efforts to consolidate, store, and dispose of spent nuclear fuel at Hanford and INL.

Safe management of surplus nuclear materials:

- H-Canyon and HB-Line processing campaigns and life extension activities.
- Demonstration of plutonium blending and packaging at HB-Line.
- Long-term storage of neptunium oxides at INL.
- Disposal of U-233 inventory in Building 3019 at ORNL.
- Complex-wide consolidation and disposition of nuclear materials.

Safe management of high-level wastes:

- Removal and processing of salt waste from HLW tanks at SRS and startup preparations for the Salt Waste Processing Facility.
- Operation of HLW facilities at SRS including Saltstone and the Defense Waste Processing Facility.
- Bulk waste removal and cleaning of HLW tanks at Hanford and SRS.
- Development of a treatment method for organic-bearing HLW in Tank 48 at SRS.
- HLW tank structural integrity at SRS and the Hanford Site and implementation of corrosion controls.
- Conduct of operations and work planning in the tank farms at the Hanford Site and SRS.
- Design and testing of waste feed mixing and delivery systems at Hanford tank farms.
- Design of supplemental processing and treatment of waste from Hanford and SRS tanks.
- Ventilation system upgrades to Hanford double-shell tanks.
- Startup testing and transition to operations at the Integrated Waste Treatment Unit at INL.

Safe management of transuranic wastes:

- Retrieval, characterization, and packaging of TRU wastes at Hanford, LANL, ORNL, SRS, and INL.
- Operations at the Tank W-1A remediation project at Oak Ridge National Laboratory.
- Early operations of the Transuranic Package Transporter Model III (TRUPACT-III) unloading facility at WIPP.
- Improvements in work planning and control at WIPP.
- Completion of corrective actions to improve electrical safety and fire protection at WIPP.
- TRU waste disposal operations at WIPP.

Deactivation and decommissioning activities:

- Deactivation and decommissioning work at defense nuclear facilities.

FY 2012 Measured Performance:

Hanford Waste Encapsulation and Storage Facility (WESF). In October 2011, the Board sent DOE a letter documenting issues identified during a review of the facility's maintenance program and conduct of operations. The contractor completed numerous corrective actions and, with oversight from DOE, initiated a management assessment of nuclear operations at WESF and the Canister Storage Building in the fall of 2011. Subsequently, the contractor accomplished similar evaluations at some of its other defense nuclear facilities through the institution of a Nuclear Safety and Performance Evaluation Board. The contractor also rearranged the waste capsules in WESF to better distribute the heat load in the storage pools; thereby extending the time capsules would maintain their integrity after a seismically-induced loss of basin water accident.

Hanford Canister Storage Building. The Board evaluated the contractor readiness assessment for the restart of receiving multi-canister overpack containers from K Basin cleanout work. The

Board identified a number of minor issues with procedures and conduct of operations that were addressed by the contractor. The Board also identified, that contrary to the requirements in DOE Order 425.1D, *Verification of Readiness to Start Up or Restart Nuclear Facilities*, DOE did not perform a readiness assessment of its own. The Board discussed adherence to DOE directives with DOE Richland Operations Office personnel and contractors.

Hanford Processing of K Basin Wastes. The Board evaluated preparations at the K West Basin and Cold Vacuum Drying Facility to process knock out pot material from the K West Basin for safe interim storage at the Canister Storage Building. It was evident that the extensive testing and operator training for the operations was very helpful. The contractor initially planned to restart the Cold Vacuum Drying Facility for these operations without a formal readiness assessment to ensure the equipment and personnel were ready to resume operations safely. Subsequent to discussions with the Board's staff, the contractor completed a formal readiness assessment prior to authorizing facility operation. As a result of the thorough preparations, the knock out pot material was successfully removed from the K West Basin, processed at the Cold Vacuum Drying Facility, and is now safely stored away from the Columbia River in the Canister Storage Building.

Hanford K West Basin Sludge Retrieval and Disposition Project. The Board reviewed DOE's conceptual and preliminary designs for systems to remove radioactive sludge from the K West Basin at Hanford and noted several design issues. As a result, DOE has included control of public access to the Columbia River as part of the safety control set, resolved design issues regarding the structural details of K West Basin Modified Annex, agreed to remove non-conservative assumptions implicit in the accident analysis, and is specifying industry consensus standards for the design of safety-related instrumented control systems.

Safety Basis at Hanford Tank Farms. In response to a Board letter dated August 5, 2010, DOE committed to amend the safety basis to restore the safety-significant classification of the primary ventilation systems of the double-shell tanks to better prevent flammable gas events. Continued review and emphasis by the Board has been needed because DOE continues to defer execution of these commitments. On September 28, 2012, the Board issued Recommendation 2012-2, *Hanford Tank Farms Flammable Gas Safety Strategy*, to address the need to take actions to reduce the risk posed by flammable gas events at the Hanford Tank Farms.

Integrity of High-Level Waste Tanks and Transfer System at Hanford. DOE addressed some of the performance and maintenance issues of the waste transfer system identified in a Board letter dated April 26, 2011, in a Fitness for Service Program that DOE is evaluating to implement at the Hanford Tank Farms. The Board is closely following the development of the Fitness for Service test plan, and encouraged DOE to continue laboratory and in-situ testing of corrosion mechanisms for the high-level waste tanks. These efforts are important in determining

whether DOE's tanks and transfer pipelines can continue to perform for an anticipated 30 or more years. The Board is closely following DOE's recent efforts to determine if a double-shell tank has started to leak, as well as associated contingency plans and evaluations of other tanks containing similar wastes.

The Board's letter identified deficiencies in the methodology used by the Tank Farms contractor for extending the service life of hose-in-hose transfer lines. DOE began to develop a test plan for studying the aging of such lines and other common polymer components under environmental conditions at the Tank Farms. The Board continues to review progress in this area.

Conduct of Operations at Hanford Tank Farms. The Board reviewed DOE's corrective actions in response to conduct of operations issues at the Tank Farms identified in a letter to DOE dated March 30, 2011, and assessed whether various elements of the conduct of operations program were adequately implemented. The Board found that DOE had made progress in correcting deficiencies in some areas, but that further actions are needed in other areas. The Board is working with DOE to address the remaining deficiencies.

618-10/-11 Burial Ground Vertical Pipe Unit (VPU) Remediation Project at Hanford. The Board reviewed the design and process activities for retrieval of the radioactive wastes in the VPUs. This review identified safety issues and questions that are being addressed by the DOE and its contractor. Of particular importance were the need for greater rigor in providing a capability to confine potential releases of hazardous materials and implementation of As Low As Reasonably Achievable (ALARA) radiological safety principles. Subsequently, the contractor expanded active confinement capability and has committed to perform an ALARA review earlier in design than originally planned.

Recommendation 2012-1, *Savannah River Site Building 235-F Safety.* The Board issued Recommendation 2012-1 on May 9, 2012, identifying the need for DOE to take action to reduce the hazards associated with the large amounts of residual plutonium-238 contamination within defunct process equipment in Building 235-F. On July 10, 2012, the Secretary of Energy accepted the recommendation. DOE's Implementation Plan for the recommendation is due to the Board in October 2012.

Recommendation 2001-1, *High Level Waste Management at the Savannah River Site.* The Board closed Recommendation 2001-1 on December 7, 2011, because DOE has made satisfactory progress in meeting the intent of the recommendation. Ongoing high-level waste operations will be evaluated through the Board's normal oversight processes.

Emergency Preparedness at SRS. The Board continued its review of DOE's emergency preparedness programs at SRS. In large part due to the Board's encouragement at its June 2011 public meeting at SRS, DOE conducted two large-scale, multi-facility, multi-contractor exercises to evaluate the site's ability to respond to a major accident. DOE is using the lessons learned from these exercises to improve emergency preparedness at SRS.

Savannah River Fire Protection Water Supplies. The Board reviewed the fire protection water supplies for A- and K-areas at SRS. The Board found that the systems were not maintained in compliance with applicable standards and documented these observations in a letter to DOE on March 27, 2012. DOE has made progress correcting the deficiencies in K-area and is developing modifications for the fire protection systems in A-area.

Transuranic Waste Operations at SRS. The Board reviewed the safety of transuranic waste remediation operations in E-area, F-Canyon and H-Canyon. The Board encouraged DOE to make improvements in worker protection, fire suppression systems, and tool use.

Long Term Storage of Spent Nuclear Fuel at SRS. The Board assessed the safety of long term storage of spent nuclear fuel in L-area at SRS. DOE no longer has an ultimate disposition path for much of this nuclear material, and its storage time may increase dramatically. The Board identified concerns with several categories of materials stored in the basin, particularly reactive fuels stored in isolation cans. The Board is working with DOE to ensure that items undergoing degradation are properly addressed.

Processing of Spent Fuel in SRS H-Canyon. In February 2011, the Board sent a letter to DOE regarding the standdown of H-Canyon and the fate of spent nuclear fuel and other surplus nuclear materials. In FY 2012, DOE decided to process vulnerable sodium reactor experiment fuel in H-Canyon to eliminate that material from storage in L area. The Board reviewed the process and startup preparations for this activity and found them to be satisfactory.

Planned Plutonium Processing in SRS H-Canyon and HB-Line. DOE is planning a new plutonium processing mission in H-Canyon and HB-Line in support of the Mixed Oxide Fuel Fabrication Facility under construction at SRS. The Board is reviewing the safety basis documentation and facility modifications supporting this new mission.

Neptunium Oxide Storage at INL. The Board reviewed the storage of neptunium oxide at the Fuel Manufacturing Facility vault. No radiological contamination has been found outside the containers. However, O-ring seals in the containers have been in place since 2004 and are approaching the end of their design lifetime. The Board will continue to monitor DOE's management of this material.

Integrated Waste Treatment Unit at INL. The Board reviewed the contractor and DOE readiness assessment activities and found that they adequately conformed to the relevant DOE directives. During startup of the facility prior to processing radioactive waste, the facility suffered a process upset that will require significant corrective actions, including design changes. The Board continues to follow this project closely.

Transuranic Waste Operations at INL. The Board continued to review transuranic waste operations conducted at the Advanced Mixed Waste Treatment Project (AMWTP). In June 2012, the staff reviewed site's health physics program and found that it adequately conformed to

DOE directives. The Board's staff continues to monitor activities at AMWTP as it begins to process waste forms more complex than previously encountered.

Uranium-233 Disposition at ORNL Building 3019. A Board review of the technical basis for the radiation protection program revealed weaknesses that were addressed by DOE and the contractor. The contractor subsequently improved the peer review process used to review technical documents associated with the program. DOE successfully transferred two categories of uranium-233 materials out of Building 3019, is preparing to conduct a third transfer campaign, and is developing plans to process the uranium-233 materials stored in Building 3019 that cannot be disposed of directly. The Board will continue to monitor the safety of the transfer of materials and will review safety-related aspects of DOE's uranium-233 processing plans as they are developed.

Oak Ridge Transuranic Waste Processing Center Cask Processing Enclosure. The Board observed startup activities for the Cask Processing Enclosure. DOE was reluctant to conduct an independent readiness assessment; however, through discussions with the Board, DOE determined that an independent DOE readiness assessment was required by DOE directives. The contractor and DOE readiness assessments were successfully completed in June 2012, and the Cask Processing Enclosure is now operational.

Fire Protection at WIPP. The Board reviewed the fire protection program at WIPP and noted a number of deficiencies in a letter dated June 24, 2011. DOE acknowledged these problems and agreed to take corrective action. The Board's staff continues to follow implementation of the corrective actions.

WIPP Maintenance Program. On June 27, 2012, the Board issued a letter identifying safety issues associated with the formality and rigor of work planning and control for the maintenance program at WIPP. DOE and the contractor have taken steps to address the identified deficiencies.

Recommendation 2005-1, *Nuclear Material Packaging.* The Board issued Recommendation 2005-1 to increase protection for workers involved in the storage and handling of nuclear materials. In 2012, the Board continued to work with DOE to ensure that the SAVY-4000 containers developed at LANL are approved by the Los Alamos Site Office as meeting the requirements of DOE Manual 441.1-1, *Nuclear Material Packaging Manual*. The Board also worked with DOE to ensure that procedures are established to certify these containers for storage of plutonium-based materials at DOE sites other than LANL.

PERFORMANCE GOAL 3: SAFETY IN NUCLEAR FACILITIES DESIGN AND INFRASTRUCTURE

<p>New DOE defense nuclear facilities, and major modifications to existing facilities, are designed and constructed in a manner that ensures adequate protection of the health and safety of the public, the workers, and the environment.</p>

OUTCOME: DOE will have acknowledged, acted upon, and/or resolved the health and safety issues raised by the Board. Follow-up technical evaluation will verify necessary improvements in the design and construction of DOE's new nuclear facilities and major modifications to existing facilities. New nuclear facility designs will meet acceptable safety standards.

FY 2012 Performance Objectives:

The Board and its staff will continue reviews of DOE's implementation of integrated safety management in design and construction activities. At least five reviews will be completed. In general, the reviews will evaluate the adequacy of geotechnical specifications and hazards analyses; the design of safety-related structures, systems, and components (SSCs); and the adequacy of SSC installation, startup, and operational readiness. Candidates for review include:

- Continue design and construction reviews, and initiate review of testing and turnover of safety systems for the Waste Treatment and Immobilization Plant at the Hanford Site.
- Review the Operational Readiness Review and other activities associated with startup and transition to operations for the Integrated Waste Treatment Unit at Idaho National Laboratory.
- Review the preliminary and final design of the Chemistry and Metallurgy Research Replacement facility at Los Alamos National Laboratory. If NNSA proceeds with subdividing the project baseline, review construction design packages once finalized.
- Review the preliminary and final design, and safety basis development activities for the Transuranic Waste Facility project at Los Alamos National Laboratory.
- Review safety design strategy of the revised Pit Disassembly and Conversion Project at Savannah River Site.
- Review construction, development of the Documented Safety Analysis, and startup activities for the Salt Waste Processing Facility at Savannah River Site.
- Review construction of the Waste Solidification Building at Savannah River Site.
- Complete review of the preliminary design of the Uranium Processing Facility at Y-12 National Security Complex. Review the long-lead procurement and site preparation design.
- Continue systematic review of the adequacy of electrical safety programs at DOE nuclear sites and revision of DOE's electrical safety handbook.

- Review the adequacy of the DOE site probabilistic seismic hazard analysis for the Savannah River Site and Hanford.

As a result of these reviews, DOE will have acknowledged, acted upon, and/or resolved the health and safety issues raised by the Board. Follow-up technical evaluation will verify necessary safety improvement in the design and construction of DOE's new nuclear facilities and major modification to existing facilities. New nuclear facilities will meet acceptable safety standards.

FY 2012 Measured Performance:

Waste Treatment and Immobilization Plant (WTP) at the Hanford Site. The Board has continued its review of the design and construction of important-to-safety structures, systems, and components in the WTP facilities. The Board's activities primarily consisted of the identification and evaluation of emerging safety issues and the resolution of previously identified safety issues. Specifically:

- The Board held three separate public meeting and hearing sessions concerning WTP on March 22, 2012, and May 22, 2012. The sessions addressed unresolved technical issues with pulse jet mixing in WTP vessels, erosion and corrosion of process component materials, misalignments between the design and safety bases, and resolution of concerns with safety culture.
- On January 12, 2012, the Board evaluated and accepted DOE's Implementation Plan for the Board's Recommendation 2010-2, *Pulse Jet Mixing at the Waste Treatment and Immobilization Plant*. The recommendation addresses unresolved technical concerns with the WTP mixing and transfer systems.
- In a letter to DOE dated January 20, 2012, the Board identified safety issues with DOE's approach to resolving issues related to wear allowances for erosion/corrosion of piping and vessels at WTP.
- The Board evaluated and accepted DOE's Implementation Plan for Recommendation 2011-1, *Safety Culture at the Waste Treatment and Immobilization Plant*, with a request to take into account emerging information gained from DOE's assessment of safety culture at the WTP project.
- In a letter to DOE dated April 3, 2012, the Board identified safety issues with DOE's effort to verify and validate the FLUENT computational fluid dynamics model that will be used for mixing system design confirmation.

- In a letter to DOE dated April 13, 2012, the Board identified safety issues with the design and construction of the electrical distribution system for WTP.
- In a letter to DOE dated August 8, 2012, the Board expressed concern that the portions of the WTP piping design that transport slurries will not prevent the formation of sliding beds of solids along the bottom of process piping, posing a concern for erosion of the piping.

Waste Feed Mixing and Delivery Systems at Hanford. The Board observed DOE's efforts on a small-scale mixing demonstration for the Hanford double-shell tank waste feed delivery system. During development of the implementation plan for Recommendation 2010-2, the Board communicated to DOE the need to establish technical and safety requirements for the waste feed delivery system.

Integrated Waste Treatment Unit at Idaho National Laboratory. The Board reviewed the installation and testing of the safety-significant instrumentation systems that protect workers at Idaho National Laboratory from potential chemical and radiological hazards associated with operation of the Integrated Waste Treatment Unit. Additionally, the Board reviewed the project team's processes for system testing and evaluated the adequacy of the project team's efforts to resolve problems during component and system testing. The Board also reviewed the project's processes for training and preparing operators to safely operate the new facility. The Board observed both the contractor and DOE Operational Readiness Reviews and evaluated final integrated system testing to support the eventual introduction of radioactive waste into the facility for processing. Based on issues identified during the testing, waste processing is not expected to begin until April 2013.

Chemistry and Metallurgy Research Replacement Project at Los Alamos National Laboratory (LANL). DOE developed a set of activities necessary to substantially complete the Chemistry and Metallurgy Research Replacement Nuclear Facility design by the end of calendar year 2012. The Board monitored these design completion activities.

Radioactive Liquid Waste Treatment Facility (RLWTF) Upgrade Project at LANL. The Board resumed oversight of the RLWTF Upgrade Project after DOE finished an evaluation of alternatives to reduce project cost. Initial Board activities included a review of the project's draft Safety Design Strategy.

Transuranic Waste Facility Project at LANL. The Board completed its review of the preliminary design and safety basis for the Transuranic Waste Facility project. The Board's review identified several issues that could impact the identification, design, and functional classification of safety-related controls for protecting the public and workers. The Board formally communicated these issues to DOE in a letter dated June 11, 2012. These issues included: (1) the use of non-conservative values for accident analysis parameters; (2) inadequate bases for screening external man-made accidents such as large truck and aircraft crashes in the accident analysis; and (3) an inadequate definition of the boundary for a system supporting the operability of the safety-related fire suppression system.

Salt Waste Processing Facility (SWPF) at SRS. As part of construction oversight, the Board reviewed the welding program at SWPF and concluded that the program met the appropriate requirements. The Board noted a high cumulative rejection rate (12 percent) of production piping welds during radiographic inspection. The Board observed that many of the piping welds were manual welds on small piping which are difficult to produce. The Board was especially

concerned with welds joining piping and vessel nozzles on process vessels. The SWPF project is shifting from manual to orbital machine welding to reduce the rejection rate of piping welds.

The Board and DOE closed out a longstanding issue concerning operator actions following a seismic event. DOE implemented a number of design changes to ensure that operator actions required to prevent explosions following an earthquake could be accomplished, such as including seismically qualified interlocks to shut down large recirculation pumps to process vessels should waste temperatures exceed a specified limit. DOE also performed detailed calculations of the temperature rise of the liquid waste in process vessels if cooling is lost due to an earthquake. DOE will use these calculations to develop safety controls to prevent explosions. The Board reviewed these calculations and found them to be acceptable. The Board and DOE also closed one additional safety issue related to mixing system controls and made significant progress towards closing issues related to flammable gas control.

Uranium Processing Facility (UPF) at the Y-12 National Security Complex. DOE completed development of the safety documentation supporting the preliminary design of UPF in August 2011. The Board conducted a review of the project's safety design strategy and preliminary safety design report and concluded that they did not adequately implement DOE's requirements to integrate safety into the preliminary design. The Board documented these issues in a letter to DOE dated April 2, 2012. The Board subsequently worked with DOE to establish approaches to resolving the concerns identified in the letter.

In a letter to DOE dated September 6, 2012, the Board noted that the overall structural design of the main UPF building is adequate, but that the UPF project needed to validate a number of modeling assumptions in the structural analyses that could conceal issues with the performance of local areas of the structure.

The Board and NNSA closed issues related to the Board's letter to NNSA dated March 15, 2010, which identified concerns related to the geotechnical and structural analysis of UPF.

Electrical Safety. DOE is revising the DOE Electrical Safety Handbook (DOE-HDBK-1092-2004). The Board reviewed and provided DOE with comments on the draft revision. DOE expects to issue the revised handbook in FY 2012.

Central and Eastern United States (CEUS) Seismic Source Characterization (SSC) Project. The CEUS SSC project was completed and published as NUREG-2115, *Central and Eastern United States Seismic Source Characterization for Nuclear Facilities* (January 2012). The CEUS SSC project was a cooperative effort sponsored by DOE, the Electric Power Research Institute (as the nuclear industry representative), and the United States Nuclear Regulatory Commission. The Board's staff participated as a member of the participatory peer review panel. The product of this effort was a regional CEUS SSC model that is widely applicable to the entire CEUS and will be used by DOE to update probabilistic seismic hazard analyses (PSHAs) at several DOE sites during the next few years.

Probabilistic Seismic Hazard Analysis for SRS and Hanford. The Board reviewed activities associated with updating the PSHAs at SRS and Hanford. The Board reviewed seismic source and ground motion inputs being used by DOE to update the SRS PSHA and is working with DOE to ensure that all technical issues are resolved prior to the final report, anticipated early in FY 2013. The Board participated in the kick off meeting and first workshop to update the Hanford PSHA, which is scheduled to be completed during the next two years.

Deficiencies with the SASSI Computer Software. The DOE complex uses the computer program SASSI (A System for the Analysis of Soil-Structure Interaction) to evaluate interaction effects between nuclear facility structures and supporting soils. In an April 8, 2011, letter to DOE, the Board highlighted its concern that issues with the program could lead to erroneous conclusions that affect the safety-related structural design at DOE defense nuclear facilities. DOE responded to the Board in letters dated July 29, 2011, October 5, 2011, and December 27, 2011. DOE agreed with the Board's concerns and is taking actions to address both technical and quality assurance issues. DOE has developed a SASSI Project Plan and Technical Work Plan that will result in an improved set of SASSI validation and verification problems. The Board attended a DOE workshop on SASSI and continues to review DOE's efforts to develop an improved set of SASSI test problems. DOE also undertook two quality assurance audits of

contractors who execute SASSI. The Board observed these audits and is working with DOE to ensure that all findings and corrective actions are appropriately identified and resolved.

Periodic Reports to Congress. The Board issued two periodic 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. These reports have been highly effective in communicating Board concerns to Congress as well as DOE senior management. The reports were issued March 8, 2012 and June 25, 2012.

PERFORMANCE GOAL 4: EFFECTIVE NUCLEAR SAFETY PROGRAMS AND ANALYSIS

DOE regulations, requirements, and guidance are developed, implemented, and maintained; and safety programs at defense nuclear facilities are established and implemented; as necessary to protect adequately the health and safety of the public, the workers, and the environment.

OUTCOME: DOE will have acknowledged, acted upon, and/or resolved the health and safety issues raised by the Board. In addition, follow-up technical evaluation of DOE's safety programs at defense nuclear facilities will verify necessary improvements in safety, and effective implementation of Integrated Safety Management principles.

FY 2012 Performance Objectives:

DOE Directives. The Board will continue to assess proposed revisions or cancelations of DOE directives to ensure that any changes that affect safety at defense nuclear facilities are technically defensible and appropriate. The results of the directives reviews completed by the Board will be provided to DOE for action. The Board anticipates that approximately 30 DOE directives that may impact public and worker health and safety will require review, of which 10 to 15 are likely to require significant Board interaction to ensure satisfactory resolution of potential safety issues. The Board anticipates dedicating a significant amount of time to review draft DOE Order 420.1C, *Facility Safety*, draft DOE Guide 420.1-1A, *Nonreactor Nuclear Safety Design Criteria and Guide for use with DOE O 420.1, Facility Safety*, and draft DOE Guide 421.1-2, *Implementation Guide for Use in Developing Documented Safety Analyses to Meet Subpart B of 10 CFR 830*. The Board anticipates also reviewing revisions of DOE technical standards associated with these directives. The Board will assess DOE's implementation of Recommendation 2009-1, *Risk Assessment Methodologies at Defense Nuclear Facilities*, and Recommendation 2010-1, *Safety Analysis Requirements for Defining Adequate Protection for the Public and the Workers*, by reviewing the directives that will establish the necessary requirements and guidance. The Board also expects to continue to review supplementary directives issued and revised by NNSA, and it estimates that five NNSA directives will require review. As a result of the Board's reviews of DOE and NNSA directives, new or modified health and safety directives will be issued with improved requirements and guidance, resulting in improved safety through standardized requirements and guidance that provide for adequate protection of the workers and the public as well as the protection of the environment.

Integrated Safety Management. The Board plans to conduct five reviews in this area across the defense nuclear facilities complex in FY 2012. The Board plans to conduct another public hearing and meeting in the series of public meetings and hearings assessing DOE's response to

Recommendation 2004-1, *Oversight of Complex, High-Hazard Nuclear Operations*. The Board will also evaluate DOE's implementation plan for Recommendation 2011-1, *Safety Culture at the Waste Treatment and Immobilization Plant*.

Safety Management Programs. At least five reviews will be completed in areas such as training and qualification, quality assurance, nuclear criticality safety, software quality assurance, conduct of operations, configuration management, maintenance management, and readiness preparations. As a result of these reviews, it is anticipated that DOE will provide an acceptable approach and schedule to resolve any identified issues to support the safe operation of defense nuclear facilities. Reviews planned for FY 2012 include the following:

- Safety System Design, Functionality, and Maintenance—Conduct at least three reviews that assess the integrity of safety systems at operating defense nuclear facilities.
- Conduct of Operations—Assess corrective actions taken at Hanford and Y-12 National Security Complex to address deficiencies previously identified by the Board, and

evaluate conduct of operations at Idaho National Laboratory, Hanford, and Pantex based on weaknesses demonstrated during FY 2011.

- Federal Technical Capability Program (FTCP)—Participate in FTCP meetings and activities, review the FTCP’s FY 2012 Operational Plan to ensure it supports sustained improvement of the program and new or revised Functional Area Qualification Standards; work with the FTCP panel on a proposed program to expand the use of collaborative safety and health training across the DOE complex.
- Nuclear Criticality Safety (NCS)—Evaluate corrective actions for NCS programs at several sites, monitor DOE efforts to fill site office NCS oversight positions and qualify individuals in those positions, review NCS programs at two or more defense nuclear facilities, and evaluate DOE’s progress on implementing Recommendation 2007-1, *Safety-Related In Situ Nondestructive Assay of Radioactive Materials*.

Quality Assurance—Continue to review safety software procedure implementation, flow down of quality assurance requirements to sub-tier subcontractors and vendors, verification and validation of firmware used in safety-related digital instrumentation and control systems, and the effectiveness of commercial-grade dedication activities.

FY 2012 Measured Performance:

DOE Directives. As part of its continuing review of new and revised DOE directives, the Board evaluated more than 30 DOE directives including technical standards and NNSA supplemental directives. The Board provided constructive comments on directives being developed or revised, and evaluated the safety impact for directives that DOE proposed to cancel. Examples of reviews of DOE directives completed in FY 2012 include:

- DOE Order 420.1C, *Facility Safety*
- DOE Guide 420.1-1A, *Nonreactor Nuclear Safety Design Guide for Use with DOE O 420.1C, Facility Safety*
- DOE Guide 226.1-2, *Federal Line Management Oversight of Department of Energy Nuclear Facilities*
- DOE Standard 1066-YR, *Fire Protection*
- DOE Standard 1212-YR, *Explosives Safety*
- DOE Handbook 1092-YR, *Electrical Safety*

At year’s end, the Board was in the process of resolving issues regarding revisions or drafts of nine pending directives to improve the content, clarity, and consistency of safety requirements and guidance. These directives include a proposed revision of DOE Standard 3009-94 Change Notice 3, *Preparation Guide for U.S. Department of Energy Nonreactor Nuclear Facility Documented Safety Analyses*, and draft DOE Standard 1020, *Natural Phenomena Hazards Analysis and Design Criteria for DOE Facilities*.

Readiness Reviews. The Board evaluated Startup Notification Reports for defense nuclear facilities under its cognizance. The Board reviewed plans of action and implementation plans for

the proposed startup and restart of defense nuclear facilities, and the Board reviewed startup and restart activities accordingly. Additionally, the Board continued to review DOE site offices' and contractors' local implementing procedures for DOE Order 425.1D, *Verification of Readiness to Start Up or Restart Nuclear Facilities*, which requires site offices and contractors to develop local implementation procedures for readiness reviews. The Board provided constructive critiques of the local implementation procedures in an attempt to ensure clarity and consistency with DOE Order 425.1D and DOE Standard 3006-2010, *Planning and Conducting Readiness Reviews*.

Conduct of Operations. The Board reviewed conduct of operations at Hanford's Plutonium Finishing Plant and Tank Farms, as well as the Pantex Plant, and the maintenance programs at the Waste Isolation Pilot Plant (WIPP) and the Pantex Plant in FY 2012. The Board noted weaknesses in the quality and use of technical procedures, supervisory control of work activities, and execution of work. The Board formally communicated its concerns related to activities at Hanford and WIPP and will continue to evaluate DOE's efforts to improve conduct of operations and maintenance throughout the complex.

Federal Technical Capability Program (FTCP). The Board participated in FTCP meetings and activities during FY 2012 to ensure DOE maintained a competent and highly capable federal workforce at its defense nuclear facilities. The Board reviewed and commented on the FTCP's FY 2012 Operational Plan and provided input on potential enhancements to the Functional Area Qualification Standards, including expanding the depth and applicability of human factors competencies to a broader range of functional areas and reinforcing the need to focus on technical objectives, not administrative functions. The Board reviewed all newly issued and revised Functional Area Qualification Standards and provided extensive feedback to DOE on proposed improvements.

Recommendation 2002-3, *Requirements for the Design, Implementation, and Maintenance of Administrative Controls.* The Board followed DOE's efforts to verify the implementation of Recommendation 2002-3. During this fiscal year, the Board monitored onsite reviews at NNSA sites including LLNL, LANL, SNL, and Pantex. During the previous year, EM had completed a series of similar implementation reviews. DOE is in the process of integrating the results of these field reviews to determine whether sufficient justification exists to seek closure of the Board's recommendation.

Recommendation 2004-2, *Active Confinement Systems.* During FY 2012, Savannah River National Laboratory initiated several modifications to facility ventilation systems to address deficiencies identified as a result of the Board's Recommendation 2004-2. The Board also reviewed the laboratory's plans for addressing the highest priority deficiencies.

Recommendation 2009-1, *Risk Assessment Methodologies at Defense Nuclear Facilities.* The Board continued to monitor DOE's efforts in implementing Recommendation 2009-1. The Board's recommendation identified the need for adequate policies and associated standards and guidance on the use of quantitative risk assessment methodologies for safety applications at DOE

defense nuclear facilities. DOE has developed a draft Standard on the use of Probabilistic Risk Assessment in nuclear safety applications. The Board has been actively involved in encouraging DOE to seek opportunities for pilot application of the draft Standard. The Board will continue to work toward improving DOE's safety posture with respect to the use of risk assessment methodologies.

Safety System Design, Functionality, and Maintenance. During this fiscal year, the Board continued to conduct reviews of the design, functionality, and maintenance of safety systems at defense nuclear facilities and to follow up on previously identified issues. Examples of reviews conducted this year include detailed follow-up reviews related to safety system and control adequacy at LLNL and the Hanford Tank Farms. The Board's reviews have resulted in a number of hardware changes and significant commitments from DOE. The Board will continue to follow DOE's efforts to implement the changes associated with the Board's findings.

Oversight of Safety Basis Requirements. The Board engaged in significant efforts to improve DOE's system of safety basis requirements through the implementation of the Board's Recommendation 2010-1, *Safety Analysis Requirements for Defining Adequate Protection for the Public and the Workers*. The Board participated in several industry-wide workshops and evaluated DOE's efforts to revise DOE Standard 3009-94. The Board conducted extensive review and provided significant commentary to DOE in an effort to improve the standard. The Board is concerned that some of the proposed revisions to this vitally important guidance represent a relaxation or departure from longstanding safety principles. The Board will continue to closely monitor DOE's efforts to revise this standard and implement Recommendation 2010-1.

Emergency Management. The Board continued to pursue its review of emergency management programs at DOE sites with defense nuclear facilities. Key areas of concern included the ability of these programs to address severe events, multi-facility impacts, cascading or "connected" events, loss of utilities and supporting infrastructure, and the coordination of DOE and local response resources. Emergency preparedness, response, and recovery at LANL were key topics at the Board public meeting/hearing held in Santa Fe, NM, on November 17, 2011. The Board conducted reviews of emergency management programs and the incorporation of lessons learned from major accidents such as the tsunami impacts on Japan's Fukushima Daiichi nuclear power station into the programs at LANL, Hanford, and Y-12.

PERFORMANCE GOAL 5: MANAGEMENT EXCELLENCE

The Board will strive for management excellence throughout its technical, legal and administrative staffs.

OUTCOME: There will be public confidence that the defense nuclear facilities are being operated safely and that the Board’s oversight is a positive influence on the safe execution of these activities.

FY 2012 Performance Objectives:

	FY 2012 Target
<p>Performance Goal 5.1: The Board will keep Congress informed on current health and safety issues at DOE nuclear facilities and the status of progress toward issue resolution.</p>	<p>The Board will publish its annual report to Congress by March 1. This report is to include all recommendations made by the Board during the preceding year, and an assessment of: (1) the improvements in the safety of DOE’s defense nuclear facilities during the period covered by the report, (2) the improvements in the safety of DOE’s defense nuclear facilities resulting from actions taken by the Board or taken on the basis of the activities of the Board, and (3) the outstanding safety problems, if any, of DOE’s defense nuclear facilities.</p> <p>The Board will publish Periodic Reports on the <i>Status of Significant Unresolved Issues with the Department of Energy’s Design and Construction Projects</i> and the <i>Summary of Significant Safety-Related Infrastructure Issues at Operating Defense Nuclear Facilities</i>. These reports will serve to provide Congress and the public timely information on significant issues prior to publication of the Board’s Annual Report.</p>

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	FY 2012 Target
<p>Performance Goal 5.2: The Board will inform the public of issues related to health and safety at defense nuclear facilities.</p>	<p>The Board will post public documents, including all recommendations, the Board’s Annual Report, Periodic Reports, and other correspondence with DOE on its public website within 2 working days of publication date.</p> <p>The Board will plan a Public Meeting and Hearing at Los Alamos National Laboratory in the first quarter in order to review public health and safety at the site, provide transparency into DOE activities, and allow interested persons or groups to present comments, technical information, or data to the Board on the announced topics.</p>
<p>Performance Goal 5.3: The Board will adopt and execute processes and procedures with DOE that are compatible with the Board’s enabling legislation and further the Board’s mission.</p>	<p>The Board will be briefed on issues by senior DOE officials from EM and NNSA on a periodic basis in order continue a dialogue to further public health and safety at DOE defense nuclear facilities.</p> <p>The Chairman will consult with the DOE Secretary and Deputy Secretary on matters of interest and will meet with the DOE Deputy Secretary three times a year in order to ensure there are no misunderstandings concerning the Board’s Recommendations and other concerns at defense nuclear facilities.</p>
<p>Performance Goal 5.4: The Board will implement internal processes and procedures that effectively support the Board’s oversight operations and responsibilities as a Federal agency using OMB and OPM management guidance applicable to small agencies to gauge performance.</p>	<p>The Board will revise its SES performance management system to make it more performance oriented.</p>
<p>Performance Goal 5.5: Appropriate technical and professional expertise will be recruited and/or trained by the Board to accomplish the mission.</p>	<p>The Board will continue to hire technically competent engineers and scientists who can support the Board’s nuclear safety oversight mission. The</p>

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	FY 2012 Target
	Board will emphasize improving the diversity of its technical staff workforce. The Board will utilize at least 95% of its authorized FTEs.
Performance Goal 5.6: The Board will effectively manage the appropriated financial resources, and exercise responsible stewardship over its resources to meet its needs and accomplish the mission.	The independent auditor’s Report on Internal Control & Compliance with Laws and Regulations does not identify any material weaknesses or non-compliance with laws or regulations. This is to demonstrate the Board is properly managing its resources.
Performance Goal 5.7: The Board will assign staff to be in residence at selected sites.	The Board will review the assignment of site representatives semi-annually in order to ensure each manned site has at least one staff member assigned and assess the need for additional site representatives to meet operational needs.

FY 2012 Measured Performance:

Performance Goal 5.1: The Board will keep Congress informed on current health and safety issues at DOE nuclear facilities and the status of progress toward issue resolution.

- The Board submitted to Congress its 22nd Annual Report for Calendar Year 2011 on February 17, 2012. As required by 42 U.S.C. § 2286e (a), this report describes the Board’s current safety initiatives and assesses improvements in the safety of defense nuclear facilities as well as safety problems yet to be resolved.
- On March 7, 2012 and June 25, 2012 the DNFSB provided two quarterly reports to Congress and the Department of Energy (DOE) on the status of significant unresolved technical issues concerning the design and construction of DOE's defense nuclear facilities. These quarterly reports built on earlier reports to summarize the status of issues previously raised and identified new issues associated with the relevant projects.
- On April 17, 2012, the Chairman testified before the House Armed Services Committee, Subcommittee on Strategic Forces regarding “Safety Oversight of Department of Energy Defense Nuclear Facilities.”

Performance Goal 5.2: The Board will inform the public of issues related to health and safety at defense nuclear facilities.

- During FY 2012, The Board posted numerous documents to the public website to include the Board's Annual Report, Periodic Reports, weekly Site Representative Reports, Letters to Department of Energy from the Chairman regarding a multitude of safety issues, Board recommendations, Federal Register notices, and notices of Board hearings. The standard was met for posting documents to the public website within 2 working days of publication date.
- On November 17, 2011, the Board held a public hearing in Santa Fe, New Mexico on Seismic Safety of the Plutonium Facility, Los Alamos National Laboratory. The hearing was made publicly available via a live video stream on the Board's website.
- On March 22, 2012, in Session I, Parts 1 and 2, in Kennewick, Washington the Board held a public hearing and received testimony from the DOE and its contractors concerning the status of actions related to unresolved technical safety issues in the design of the Waste Treatment and Immobilization Plant. The hearing was made publicly available via a live video stream on the Board's website.
- On May 22, 2012, in Session II, the Board received testimony regarding the status of actions related to DOE's implementation plan for the Board's Recommendation 2011-1, *Safety Culture at*
- *The Waste Treatment and Immobilization Plant* at the Board's Headquarters in Washington, DC. The hearing was made publicly available via a live video stream on the Board's website.

Performance Goal 5.3: The Board will adopt and execute processes and procedures with DOE that are compatible with the Board's enabling legislation and further the Board's mission.

- The Board received numerous briefings on issues by senior Department of Energy officials from the Office of Environmental Management and National Nuclear Security Administration in order to continue the dialogue on public health and safety at DOE defense nuclear facilities.

Performance Goal 5.4: The Board will implement internal processes and procedures that effectively support the Board's oversight operations and responsibilities as a Federal agency using OMB and OPM management guidance applicable to small agencies to gauge performance.

- The Board implemented its new DN (Technical) Performance Management system during FY 2012 and began revising its SES Performance Management System during FY 2012 with the goal of achieving full OPM “certification” during FY 2013.
- The Board developed and posted its Operating Practices and Procedures on the Board’s public webpage and intranet.
- The Board occupied second place among 35 small agencies in “The Best Places to Work in the Federal Government 2011” list published by the Partnership for Public Service. This ranking is based on data drawn from the Federal Employee Viewpoint Survey, conducted annually by the Office of Personnel Management.

Performance Goal 5.5: Appropriate technical and professional expertise will be recruited and/or trained by the Board to accomplish the mission.

- The Board continued its recruitment of highly-qualified technical personnel to reach an on-board strength of 116 personnel, with the remaining four vacancies expected to be filled in early FY 2013.

Performance Goal 5.6: The Board will effectively manage the appropriated financial resources, and exercise responsible stewardship over its resources to meet its needs and accomplish the mission.

- The Consolidated Appropriations Act of 2012 provided the Board \$29.130 million in new budget authority. The Board effectively managed its appropriated financial resources and received monthly briefings from senior Board staff on the use of these resources.
- The Board achieved its sixth consecutive unqualified audit opinion on its (FY 2011) financial statements from an independent auditor, as required by the Accountability of Tax Dollars Act of 2002. The auditor found the Board complied with all applicable federal laws and regulations and had no material weaknesses in its internal controls.
- The Board hired an advisory and assistance contractor to perform a risk assessment of Board administrative and program activities and develop a draft FY 2013 audit plan.

Performance Goal 5.7: The Board will assign staff to be in residence at selected sites.

- The Board enhances its on-site safety oversight of defense nuclear facilities by assigning experienced technical staff members to fulltime duty at priority DOE sites. Currently ten full-time site representatives are stationed at six DOE sites: 1) Pantex Plant to oversee nuclear weapons activities, including the weapons stockpile stewardship and weapons disassembly programs; 2) Hanford Site to monitor waste characterization and stabilization and facility deactivation; 3) Savannah River Site to monitor DOE’s efforts to deactivate facilities, stabilize waste materials, and store and process tritium; 4) Oak

Ridge's Y-12 National Security Complex to monitor safety and health conditions at Y-12 and other defense nuclear facilities in the area; 5) Los Alamos National Laboratory (LANL) to advise the Board on overall safety and health conditions at LANL, and to participate in Board reviews and evaluations related to the design, construction, operation, and decommissioning of LANL defense nuclear facilities; and 6) Lawrence Livermore National Laboratory (LLNL) to perform similar advisory and review efforts.

- The Site Representatives Program provides a cost-effective means for the Board to closely monitor DOE activities, and to identify health and safety concerns promptly by having on-site staff conducting first hand assessments of nuclear safety management at the priority sites to which they have been assigned. Site representatives regularly interact with the public, union members, congressional staff members, and public officials from federal, state, and local agencies.

Chapter 3
CFO Letter, Auditor's Report, and Financial Statements

CFO LETTER

I am pleased to report that the Board's FY 2012 financial statements received an unqualified opinion from its independent auditors, our seventh consecutive unqualified opinion since our FY2004 financial statements were initially audited pursuant to the Accountability of Tax Dollars Act (ATDA) of 2002. In addition, FY 2012 marked the fifth consecutive year that the Board's unqualified opinion was coupled with no instances of non-compliance with laws and regulations and no material internal control weaknesses identified in the accompanying report.

The financial statements that follow were prepared and audited as part of this performance and accountability report within 45 days after the end of the fiscal year. To ensure that scarce resources are dedicated to fulfilling the demanding health and safety oversight mission, the Board has adopted the "economies of scale" philosophy for obtaining needed administrative support services and "contracts" (through an Interagency Agreement) with the General Services Administration (GSA) to act as its accounting services provider. The Board's financial staff worked diligently with our GSA accountants in preparing our FY 2012 financial statements and providing the necessary supporting documentation to our auditors, and credit should be given to both those organizations for achieving these accomplishments.

Compliance with Laws and Regulations

The auditors tested the Board's compliance with certain provisions of laws and regulations, non-compliance which could have a direct and material effect on the determination of financial statement amounts, and certain other laws in regulations specified in OMB Bulletin 07-04, *Audit Requirements for Federal Financial Statements*. For the fifth consecutive year, the auditors found no instances of non-compliance with such laws or regulations.

Internal Controls

In planning and performing the financial statements audit, the independent auditors considered the Board's internal controls over financial reporting by obtaining an understanding of our internal controls, determining if internal controls had been placed in operation, assessing controls risk, and performing tests of controls. Testing of internal controls was limited to those controls necessary to achieve objectives described in OMB Bulletin 07-04. The auditors noted no internal control material weaknesses for the fifth consecutive year.

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The auditor's report, together with the accompanying report on compliance with laws and regulations, and internal control are included in their entirety in this Chapter.



Debra H. Richardson, Chief Financial Officer

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INDEPENDENT AUDITOR'S REPORT

Chairman of the Board
Defense Nuclear Facilities Safety Board

We have audited the accompanying balance sheets of the Defense Nuclear Facilities Safety Board (DNFSB) as of September 30, 2012 and 2011, and the related statements of net cost, changes in net position, and budgetary resources for the years then ended. These financial statements are the responsibility of the DNFSB's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and Office of Management and Budget (OMB) Bulletin No. 07-04, *Audit Requirements for Federal Financial Statements*, as amended. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and the significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the DNFSB as of September 30, 2012 and 2011, and its net cost, changes in net position, and budgetary resources for the years then ended in conformity with accounting principles generally accepted in the United States of America.

In accordance with *Government Auditing Standards*, we have also issued our report dated November 8, 2012, on our consideration of the DNFSB's internal control over financial reporting and on our tests of its compliance with certain provisions of laws and regulations. The purpose of those reports are to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. Those reports are an integral part of an audit performed in accordance with *Government Auditing Standards* and should be considered in assessing the results of our audit.

Management's Discussion and Analysis (MD&A) and other accompanying information are not a required part of the DNFSB's basic financial statements but are supplementary information

FY 2012
DEFENSE NUCLEAR FACILITIES SAFETY BOARD
Performance and Accountability Report



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required by OMB Circular A-136, *Financial Reporting Requirements*, as amended, and the Federal Accounting Standards Advisory Board's Statement of Federal Financial Accounting Standards No. 15, *Management's Discussion and Analysis*. We made certain inquiries of management and compared the MD&A information with the DNFSB's audited financial statements and against other knowledge obtained during our audit. We also compared the other accompanying information with the audited financial statements. However, we did not audit the MD&A or other accompanying information and, therefore, express no opinion on them.

Lani Eko & Company, CPAs, PLLC

November 8, 2012
Alexandria, Virginia

FY 2012
DEFENSE NUCLEAR FACILITIES SAFETY BOARD
Performance and Accountability Report



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**REPORT ON INTERNAL CONTROL AND ON COMPLIANCE AND OTHER
MATTERS OVER FINANCIAL REPORTING BASED ON AN AUDIT OF THE
FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH
GOVERNMENT AUDITING STANDARDS**

Chairman of the Board
Defense Nuclear Facilities Safety Board

We have audited the financial statements of the Defense Nuclear Facilities Safety Board (DNFSB) as of and for the year ended September 30, 2012, and have issued our report thereon dated November 8, 2012. We conducted our audit in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and Office of Management and Budget (OMB) Bulletin No. 07-04, *Audit Requirements for Federal Financial Statements*, as amended.

Internal Control Over Financial Reporting

In planning and performing our audit, we considered the DNFSB's internal control over financial reporting as a basis for designing our auditing procedures, obtained an understanding of the design effectiveness of internal controls, determined whether the internal controls have been placed in operation, assessed control risk, and performed tests of the DNFSB's internal controls for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the DNFSB's internal control over financial reporting. Accordingly, we do not express an opinion on the effectiveness of DNFSB's internal control over financial reporting.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A *material weakness* is a deficiency, or combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the DNFSB's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or combination of deficiencies, in the internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over financial reporting was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over financial reporting that might be deficiencies, significant deficiencies or material weaknesses. We did not identify any deficiencies in internal control over financial reporting that we consider to be material weaknesses or significant deficiencies, as defined above.



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Compliance and Other Matters

The management of DNFSB is responsible for complying with laws and regulations applicable to the DNFSB. As part of obtaining reasonable assurance about whether the DNFSB's financial statements are free of material misstatement, we performed tests of its compliance with certain provisions of applicable laws and regulations and contracts, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards* or Office of Management and Budget (OMB) Bulletin No. 07-04, *Audit Requirements for Federal Financial Statements*, as amended.

This report is intended solely for the information and use of the management of the DNFSB, the OMB, the Government Accountability Office, and Congress and is not intended to be and should not be used by anyone other than these specified parties.

Lani Eko & Company, CPAs, PLLC

November 8, 2012
Alexandria, VA

FY 2012
DEFENSE NUCLEAR FACILITIES SAFETY BOARD
Performance and Accountability Report



DEFENSE NUCLEAR FACILITIES SAFETY BOARD
APPROPRIATED FUND

FINANCIAL STATEMENTS

For The Years Ended September 30, 2012 and 2011

FY 2012
DEFENSE NUCLEAR FACILITIES SAFETY BOARD
 Performance and Accountability Report

DEFENSE NUCLEAR FACILITY SAFETY BOARD

BALANCE SHEET

As Of September 30, 2012 and 2011

		2012	2011
Assets:			
Intragovernmental:			
Fund Balance With Treasury	(Note 2)	\$ 9,097,796	\$ 6,487,264
Accounts Receivable, net	(Note 3)	13,882	18,067
General Property, Plant and Equipment	(Note 4)	301,398	165,670
Other	(Note 5)	643	643
Total Assets		\$ 9,413,076	\$ 6,671,644
 Liabilities:			
Intragovernmental:			
Accounts Payable	(Note 7)	\$ 20,137	\$ 187,572
Employee Benefits	(Note 8)	184,607	187,572
Total Intragovernmental		204,744	187,572
Liabilities With the Public:			
Accounts Payable		894,818	492,057
Other:	(Note 9)		
Accrued Funded Payroll and Leave		988,610	944,565
Employer Contributions and Payroll Taxes Payable		35,704	35,976
Unfunded Leave		1,155,828	1,080,545
Worker's Compensation	(Note 10)	22,013	19,445
Total Liabilities With the Public		3,096,973	2,572,588
Total Liabilities		3,301,717	2,760,160
 Net Position:			
Unexpended Appropriations - Other Funds		6,973,920	4,827,737
Cumulative Results of Operations - Other Funds		(862,561)	(916,253)
Total Net Position		6,111,359	3,911,484
Total Liabilities and Net Position		\$ 9,413,076	\$ 6,671,644

*Amounts may be off by a dollar due to rounding.

The accompanying notes are an integral part of these statements.

FY 2012
DEFENSE NUCLEAR FACILITIES SAFETY BOARD
 Performance and Accountability Report

DEFENSE NUCLEAR FACILITY SAFETY BOARD

STATEMENT OF NET COST

For The Years Ended September 30, 2012 and 2011

	2012	2011
Program Costs:		
DNFSB:		
Gross Costs	(Note 12) \$ 27,814,344	\$ 27,873,161
Net Program Costs	27,814,344	27,873,161
Net Cost of Operations	\$ 27,814,344	\$ 27,873,161

*Amounts may be off by a dollar due to rounding.

The accompanying notes are an integral part of these statements.

FY 2012
DEFENSE NUCLEAR FACILITIES SAFETY BOARD
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DEFENSE NUCLEAR FACILITIES SAFETY BOARD

STATEMENT OF CHANGES IN NET POSITION

For The Years Ended September 30, 2012 and 2011

	2012	2011
Cumulative Results of Operations:		
Beginning Balances	\$ (916,253)	\$ (681,954)
Budgetary Financing Sources:		
Appropriations Used	26,983,817	26,696,859
Other Financing Resources (Non-Exchange):		
Imputed Financing	884,218	942,004
Total Financing Sources	27,868,035	27,638,863
Net Cost of Operations (+/-)	27,814,344	27,873,161
Net Change	53,692	(234,298)
Cumulative Results of Operations	\$ (862,561)	\$ (916,253)
Unexpended Appropriations:		
Beginning Balances	\$ 4,827,737	\$ 8,321,095
Budgetary Financing Sources:		
Appropriations Received	29,130,000	23,250,000
Other Adjustments		(46,500)
Appropriations Used	(26,983,817)	(26,696,859)
Total Budgetary Financing Sources	2,146,183	(3,493,359)
Total Unexpended Appropriations	6,973,920	4,827,737
Net Position	\$ 6,111,359	\$ 3,911,484

*Amounts may be off by a dollar due to rounding.

The accompanying notes are an integral part of these statements.

FY 2012
DEFENSE NUCLEAR FACILITIES SAFETY BOARD
Performance and Accountability Report

DEFENSE NUCLEAR FACILITY SAFETY BOARD

STATEMENT OF BUDGETARY RESOURCES

For The Years Ended September 30, 2012 and 2011

	2012	2011
BUDGETARY RESOURCES		
Unobligated balance brought forward, October 1	\$ 366,386	\$ 3,844,724
Recoveries of prior year unpaid obligations (unobligated balances)	108,324	461,358
Unobligated balance from prior year budget authority, net	474,709	4,306,082
Appropriations (discretionary and mandatory)	29,130,000	23,203,500
Spending authority from offsetting collections	10,442	11,379
Total budgetary resources	\$ 29,615,151	\$ 27,520,961
 STATUS OF BUDGETARY RESOURCES		
Obligations incurred (Note 13)	\$ 28,690,479	\$ 27,154,576
Apportioned	914,230	355,006
Unapportioned	10,442	11,379
Unobligated balance brought forward, end of year	924,672	366,386
Total budgetary resources	\$ 29,615,151	\$ 27,520,961
 CHANGE IN OBLIGATED BALANCE		
Unpaid obligations, brought forward, October 1 (gross)	\$ 6,120,878	\$ 6,447,318
Obligation incurred	28,690,479	27,154,576
Outlays (gross) (-)	(26,529,909)	(27,019,658)
Recoveries of prior year unpaid obligations (-)	(108,324)	(461,358)
Unpaid obligations, end of year (gross) (Note 14)	8,173,124	6,120,878
Obligated balance, end of year (net)	\$ 8,173,124	\$ 6,120,878
 BUDGET AUTHORITY AND OUTLAYS, NET		
Budget authority, gross (discretionary and mandatory)	\$ 29,140,442	\$ 23,214,879
Actual offsetting collections (discretionary and mandatory) (-)	(10,442)	(11,379)
Budget authority, net (discretionary and mandatory)	29,130,000	23,203,500
Outlays, gross (discretionary and mandatory)	26,529,909	27,019,658
Actual offsetting collections (discretionary and mandatory) (-)	(10,442)	(11,379)
Outlays, net (discretionary and mandatory)	\$ 26,519,468	\$ 27,008,279
Agency outlays, net (discretionary and mandatory) (Note 15)	\$ 26,519,468	\$ 27,008,279

*Amounts may be off by a dollar due to rounding.

The accompanying notes are an integral part of these statements.

FY 2012
DEFENSE NUCLEAR FACILITIES SAFETY BOARD
Performance and Accountability Report

DEFENSE NUCLEAR FACILITY SAFETY BOARD

STATEMENT OF BUDGETARY RESOURCES

For The Years Ended September 30, 2012 and 2011

	2012	2011
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*Amounts may be off by a dollar due to rounding.

The accompanying notes are an integral part of these statements.

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

APPROPRIATED FUND

Note 1 – Significant Accounting Policies

(a) Reporting Entity

The Defense Nuclear Facilities Safety Board (Board) is an independent Federal government agency with responsibility for the oversight of the Department of Energy (DOE)'s defense nuclear facilities located throughout the United States. The Board is directed by a Chairman and four other members appointed by the President. The Board's mission as described by the Atomic Energy Act is to ensure that the public health and safety are adequately protected at the DOE defense nuclear facilities.

(b) Basis of Presentation

These financial statements have been prepared from the accounting records of the Board in accordance with generally accepted accounting principles (GAAP) as promulgated by the Federal Accounting Standards Advisory Board (FASAB) and Office of Management and Budget (OMB) Circular A-136, "Financial Reporting Requirements." GAAP for Federal entities is the hierarchy of accounting principles prescribed in the American Institute of Certified Public Accountants' (AICPA) Statement on Auditing Standards No. 91, *Federal GAAP Hierarchy*.

Circular A-136 requires agencies to prepare principal statements, which include a Balance Sheet, a Statement of Net Cost, a Statement of Changes in Net Position, and a Statement of Budgetary Resources. The balance sheet presents, as of September 30, 2012, amounts of future economic benefits owned or managed by the Board (assets), amounts owed by the Board (liabilities), and amounts, which comprise the difference (net position). The Statement of Net Cost reports the full cost of the Board's operations and the Statement of Budgetary Resources reports Board's budgetary activity.

(c) Basis of Accounting

Transactions are recorded on the accrual accounting basis in accordance with OMB Circular A-136. Under the accrual basis of accounting, revenues are recognized when earned, and expenses are recognized when a liability is incurred, without regard to receipt or payment of cash. The preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results may differ from those estimates.

(d) Revenues and Other Financing Sources

The Defense Nuclear Facilities Safety Board receives its funding needed to support its programs through annual congressional appropriations. FY 2012 appropriated funds are available for obligation until September 30, 2013 (i.e., two year funds). FY 2011 appropriated funds remain available until expended (i.e., no year funds). None of the appropriations are “earmarked” funds.

An imputed financing source is recognized to offset costs incurred by the Board and funded by another Federal source (see Notes 1(i) and 8).

(e) Assets and Liabilities

Intra-governmental assets and liabilities arise from transactions between the Board and other Federal entities.

Funds with the U.S. Treasury compose the majority of assets on the Board’s balance sheet. All other assets result from activity with non-federal sources.

Liabilities represent amounts that are likely to be paid by the Board as a result of transactions that have already occurred. The accounts payable portion of liabilities consist of amounts owed to federal agencies and commercial vendors for goods, services, and other expenses received but not yet paid.

Liabilities covered by budgetary or other resources are those liabilities of the Board for which Congress has appropriated funds, or funding is otherwise available to pay amounts due. Liabilities not covered by budgetary or other resources represent amounts owed in excess of available congressionally appropriated funds or other amounts. The liquidation of liabilities not covered by budgetary or other resources is dependent on future congressional appropriations or other funding.

(f) Fund Balance with the U.S. Treasury

The U.S. Treasury processes the Board’s receipts and disbursements. Funds with the U.S. Treasury are cash balances from appropriations as of the fiscal year-end from which the Board is authorized to make expenditures and pay liabilities resulting from operational activity.

(g) Property, Plant, and Equipment (PPE)

PPE consists of capitalized equipment, furniture and fixtures, and software. There are no restrictions on the use or convertibility of property, plant, or equipment.

The Board capitalizes PPE with a useful life of at least two (2) years and individually costing more than \$10,000 (\$25,000 for leasehold improvements). Bulk purchases of lesser value items are capitalized when the cost is \$25,000 or greater.

Assets are depreciated on a straight-line basis over the estimated used life of the property. Information Technology (IT) equipment and software is depreciated over a useful life of three (3) years. All other equipment is depreciated over a five (5) year useful life. Furniture and fixtures are depreciated over a seven (7) year useful life and leasehold improvements over a ten (10) year useful life.

The Board owns no land and leases its office space from the General Services Administration. The lease costs approximate commercial lease rates for similar properties.

(h) Annual, Sick, and Other Leave

Annual leave is recognized as an expense and a liability as it is earned; the liability is reduced as leave is taken. The accrued leave liability is principally long-term in nature. Sick leave and other types of leave are expensed as leave is taken.

(i) Federal Employee Benefits

The Board recognizes its share of the cost of providing future pension benefits to eligible employees over the period of time that they render service to the Board. The pension expense recognized in the financial statement equals the current service cost for the Board's employees for the accounting period less the amount contributed by the employees. The Office of Personnel Management (OPM), the administrator of the plan, supplies the Board with factors to apply in the calculation of the service cost. These factors are derived through actuarial cost methods and assumptions. The excess of the recognized pension expense represents the amount being financed directly by OPM. This amount is considered imputed financing to the Board (see Note 8).

The Board recognizes a current-period expense for the future cost of post-retirement health benefits and life insurance for its employees while they are still working. The Board accounts for and reports this expense in a manner similar to that used for pensions, with the exception that employees and the Board do not make current contributions to fund these future benefits.

Federal employee benefit costs paid by OPM and imputed to the Board are reported as a resource on the Statement of Changes in Net Position.

(j) Contingencies

The Board has no material pending claims or lawsuits against it. Management believes that losses from other claims or lawsuits, not yet known to management, are possible, but would not likely be material to the fair presentation of the Board's financial statements. Thus, there is no provision for such losses in its statements. The Board has not entered into any contractual arrangements which may require future financial obligations.

Note 2 – Funds Balance with the U.S. Treasury

The Board's funds with the U.S. Treasury consist only of appropriated funds. Worksheet adjustments were made for credits of \$18,816 and \$166 for FY 2012 and FY 2011, respectively, for payroll charges that were reflected in the U.S. Treasury cash balance at year end but were not yet recorded in the GSA accounting system. There was also a credit adjustment in FY 2011 of \$267 for a keying error of a refund that was booked to the incorrect Treasury Symbol. The status of these funds as of September 30, 2012 and 2011 are as follows:

FY 2012
DEFENSE NUCLEAR FACILITIES SAFETY BOARD
Performance and Accountability Report

	<u>FY 2012</u>	<u>FY 2011</u>
A. Fund Balance with Treasury		
Appropriated Fund	\$9,097,796	\$6,487,264
B. Status of Fund Balance with Treasury		
Unobligated Balance		
(a) Available	914,230	355,006
(b) Unavailable	10,442	11,379
2) Obligated Balance not yet Disbursed	<u>8,173,124</u>	<u>6,120,878</u>
Total	\$ 9,097,796	\$ 6,487,264 *

*Rounding

Note 3 – Accounts Receivable, Net

The line item represents the gross amount of monies owed to the Board. The Board has historically collected receivables due and thus has not established an allowance for uncollectible accounts.

Accounts Receivable	FY 2012	FY 2011
Claims	\$13,882	\$18,067

Note 4 - General Property, Plant and Equipment, Net

The Board's total cost, accumulated depreciation, and net book value for PPE for the years ending September 30, 2012 and 2011 are as follows.

2012	Equipment	Furniture & Fixtures	Software	Software in Development	Total
Cost	\$901,536	\$40,174	\$683,023	\$0	\$1,624,733
Accum. Depr.	(733,204)	(40,174)	(549,957)	(0)	(1,323,335)
Net Book Value	\$168,332	\$ 0	\$133,066	\$0	\$ 301,398

2011	Equipment	Furniture & Fixtures	Software	Software in Development	Total
Cost	\$840,395	\$40,174	\$582,740	\$0	\$1,463,309
Accum. Depr.	(767,150)	(40,174)	(490,315)	(0)	(1,297,639)
Net Book Value	\$ 73,245	\$ 0	\$ 92,425	\$0	\$ 165,670

Note 5 – Other Assets

The FY 2011 Other Assets amount represents an unliquidated advance.

	FY 2012	FY 2011
Intragovernmental	\$ 0	\$0
With the Public – Associates	\$ 0	\$643
Total Other Assets	\$ 0	\$643

Note 6 – Liabilities Not Covered by Budgetary Resources

The liabilities on the Board’s Balance Sheets as of September 30, 2012 and 2011 include liabilities not covered by budgetary resources, which are liabilities for which congressional action is needed before budgetary resources can be provided. Although future appropriations to fund these liabilities are likely and anticipated, it is not certain that appropriations will be enacted to fund these liabilities. The composition of liabilities not covered by budgetary resources as of September 30, 2012 and 2011 is as follows:

	<u>2012</u>	<u>2011</u>
Unfunded Leave	\$1,155,828	\$1,080,545
<u>Workers’ Compensation</u>	<u>\$ 22,013</u>	<u>\$ 19,445</u>
Total liabilities not covered by budgetary resources	\$1,177,841	\$1,099,990
<u>Total liabilities covered by budgetary resources</u>	<u>\$2,123,876</u>	<u>\$1,660,170</u>
Total Liabilities	\$3,301,717	\$2,760,160

Note 7 - Intragovernmental Liabilities

Intragovernmental liabilities arise from transactions with other federal entities. As of September 30, 2012, the Board had accounts payable intragovernmental liabilities of \$20,137 with OPM. The Board had no accounts payable intragovernmental liabilities as of September 30, 2011. Employee benefits are the amounts owed to OPM and Treasury as of September 30, 2012 and 2011 for Federal Employees Health Benefits Program (FEHBP), Federal Employees’ Group Life Insurance Program (FEGLIP), Federal Insurance Contributions Act (FICA), Federal Employees Retirement System (FERS), and Civil Service Retirement System (CSRS) contributions (reference Note 8).

Note 8 – Federal Employee Benefits

All permanent employees participate in the contributory CSRS or FERS. FERS employees are covered under FICA. To the extent that employees are covered by FICA, the taxes they pay to the program and the benefits they will eventually receive are not recognized by the Board’s

Note 8 – Federal Employee Benefits (Continued)

financial statements. The Board makes contributions to CSRS, FERS and FICA and matches certain employee contributions to the thrift savings component of FERS. All of these payments are recognized as operating expenses.

In addition, all permanent employees are eligible to participate in the contributory FEHBP and FEGLIP and may continue to participate after retirement. The Board makes contributions through the OPM to FEHBP and FEGLIP for active employees to pay for current benefits; these contributions are recognized as operating expenses. The Board does not report on its financial statements these programs’ assets, accumulated plan benefits or unfunded liabilities, if any, applicable to its employees. Reporting such amounts is the responsibility of OPM; however, the financing of these costs by OPM and imputed to the Board are reported on the Statement of Changes in Net Position.

Employee benefits liabilities are current (versus non-current liabilities).

Note 9– Other Liabilities

Other liabilities with the public for the years ending September 30, 2012 and 2011 consist of Accrued Funded Payroll and Leave, Withholdings Payable, Unfunded Leave and Workers’ Compensation in the amounts shown below:

	With the Public	Non-Current	Current	Total
2012	Other Liabilities	\$1,155,828	\$ 1,046,327	\$2,202,155
2011	Other Liabilities	\$1,080,545	\$ 999,986	\$2,080,531

Note 10 – Workers’ Compensation

The Federal Employees’ Compensation Act (FECA) provides income and medical cost protection to covered federal civilian employees injured on the job, employees who have incurred a work-related disease, and beneficiaries of employees whose death is attributable to a job-related injury or occupational disease. Claims incurred for benefits for Board employees under FECA are administered by the Department of Labor and are paid, ultimately, by the Board.

The Board recorded an estimated liability for claims incurred, but not reported as of September 30, 2012 and 2011, as follows:

	FY 2012	FY 2011
Worker’s Compensation	\$22,013	\$19,445

Note 11 – Leases

The Board has not entered into any existing capital leases and thus has incurred no liability resulting from such leases. The Board’s one operating lease is for headquarters office space from GSA. Lease costs for office space for FY 2012 and FY 2011 under the terms of its leases amounted to \$2,211,869 and \$2,192,377, respectively. The Board entered into a new ten (10) year lease agreement effective March 8, 2006. Estimated future minimum lease payments under the terms of the lease are as follows:

Note 11 – Leases (Continued)

Fiscal Year Ending September 30	Payment
2013	\$2,206,524
2014	\$2,217,928
2015	\$2,406,360
2016 (through March 7)	\$1,009,162
Total Estimated Future Lease Payments	\$7,839,974

Note 12 – Intragovernmental Costs

The portion of the Board’s program costs (note as the Board earns no revenue from its operations, gross and net costs are identical) related to Intragovernmental Costs and Costs with the Public are shown as follows. Intragovernmental Costs are costs incurred from exchange transactions with other federal entities (e.g., building lease payments to GSA). Costs with the Public are incurred from exchanged transactions with non-federal entities (i.e., all other program costs).

	Intragovernmental Costs	Costs with the Public	Total Program Costs
FY 2012	\$7,366,689	\$20,447,655	\$27,814,344
FY 2011	\$4,506,644	\$23,366,517	\$27,873,161

The Board’s program costs/net cost of operations by OMB Object Class (OC) are as follows:

OC	Description	FY 2012	FY 2011
11	Personnel Compensation	\$14,502,781	\$14,978,938
12	Personnel Benefits	\$ 5,313,089	\$ 5,315,011

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DEFENSE NUCLEAR FACILITIES SAFETY BOARD
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13	Former Personnel Benefits	\$ 0	\$ 8,616
21	Travel & Transportation of Persons	\$ 973,593	\$ 965,821
22	Transportation of Things	\$ 37,710	\$ 76,487
23	Rent, Communications, & Utilities	\$ 2,425,316	\$ 2,398,111
24	Printing & Reproduction	\$ 22,146	\$ 32,857
25	Other Contractual Services	\$ 3,841,019	\$ 3,476,249
26	Supplies & Materials	\$ 267,647	\$ 272,373
31	Acquisition of Assets	\$ 431,043	\$ 348,698
	Total	\$27,814,344	\$27,873,161

Note 13 – Apportionment Categories of Obligations Incurred

The Board is subject to apportionment. All obligations are incurred against Category A (budgetary resources are distributed by fiscal year quarter) amounts apportioned on the latest Standard Form (SF)-132, *Apportionment and Reapportionment Schedule*.

	FY 2012	FY 2011
Direct		
Category A	\$28,690,479	\$27,154,576

Note 14 – Undelivered Orders at the End of the Period

The amount of Unpaid Obligated Balance, Net, End of Period shown on the Statement of Budgetary Resources includes obligations relating to Undelivered Orders (goods and services contracted for but not yet received at the end of the year) and Accounts Payable (amounts owed at the end of the year by the Board for goods and services received). The amount of each is as follows:

	Undelivered Orders	Accounts Payable	Unpaid Obl. Balance, Net
FY 2012	\$6,049,248	\$2,123,876	\$8,173,124
FY 2011	\$4,460,708	\$1,660,170	\$6,120,878

Note 15 – Explanation of Differences Between the Statement of Budgetary Resources and the Budget of the United States Government

Budgetary resources made available to the Board include current appropriations, unobligated appropriations and recoveries of prior year obligations. For fiscal year 2011, no material differences exist between the amounts on the Statements of Budgetary Resource and the amounts

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in the fiscal year 2013 President's Budget which are rounded to the nearest million. As the FY 2014 President's Budget is not yet available, comparison between the Statement of Budgetary Resources and the actual FY 2012 data in the FY 2014 Budget cannot be performed.

Note 16 – Explanation of the Relationship Between Liabilities Not Covered by Budgetary Resources on the Balance Sheet and the Change in Components Requiring or Generating Resources in Future Periods

The Change in Components Requiring or Generating Resources in Future Periods equals the difference between the opening and ending balances of Liabilities Not Covered by Budgetary Resources (as shown on the Balance Sheet, reference Note 6), shown as follows:

FY 2012

	FY 2011	FY 2012	Change
Unfunded Annual Leave	\$1,080,545	\$1,155,828	\$75,283
Workers Compensation	\$ 19,445	\$ 22,013	\$ 2,568
Total	\$1,099,990	\$1,177,841	\$77,851

FY 2011

	FY 2010	FY 2011	Change
Unfunded Annual Leave	\$987,623	\$1,080,545	\$ 92,922
Workers Compensation	\$ 0	\$ 19,445	\$ 19,445
Total	\$987,623	\$1,099,990	\$112,367

Note accrued funded payroll liability is covered by budgetary resources and is included in the net cost of operations, whereas unfunded annual leave liability includes the expense related to the increase in annual leave liability for which the budgetary resources will be provided in a subsequent period.

Note 17 – Reconciliation of Net Cost of Operations (proprietary to Budget)

Budget resources obligated are obligations for personnel, goods, services, benefits, etc. made by the Board in order to conduct operations or acquire assets. Other (i.e., non-budgetary) financing resources are also utilized by Board in its program (proprietary) operations. For example, spending authority from offsetting collections and recoveries are financial resources from the recoveries of prior year obligations (e.g., the completion of a contract where not all the funds were used) and refunds or other collections (i.e., funds used to conduct operations that were previously budgeted). As explained in Notes 1(i) and 8, an imputed financing source is recognized for future federal employee benefits costs incurred for Board employees that will be funded by OPM. Changes in budgetary resources obligated for goods, services, and benefits ordered by not yet provided represents the difference between the beginning and ending balances of undelivered orders (i.e., good and services received during the year based on obligations

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incurred the prior year represent a cost of operations not funded from budgetary resources). Resources that finance the acquisition of assets are budgetary resources used to finance assets and not cost of operations (e.g., increases in accounts receivables or capitalized assets). Financing sources yet to be provided represents financing that will be provided in future periods for future costs that are recognized in determining the net cost of operations for the present period. Finally, components not requiring or generating resources are costs included in the net cost of operations that do not require resources (e.g., depreciation and amortized expenses of assets previously capitalized).

A reconciliation between budgetary resources obligated and net cost of operations (i.e., providing an explanation between budgetary and financial (proprietary) accounting) is as follows (note: in prior years this information was presented as a separate financial statement (the Statement of Financing)):

	FY 2012	FY 2011
Budgetary Resources Obligated	\$28,690,479	\$27,154,576
Spending Authority from Recoveries and Offsetting Collections	(118,765)	(472,737)
Imputed Financing from Costs Absorbed by Others	884,218	942,004
Changes in Budgetary Resources Obligated for Goods, Services, and Benefits Ordered but Not Yet Provided	(1,587,896)	15,020
Resources that Finance the Acquisition of Assets	(285,327)	(20,232)
Financing Sources Yet to be Provided (see Note 16)	77,851	112,367
Components Not Requiring or Generating Resources	153,784	142,163
Net Cost of Operations	\$27,814,344	\$27,873,161

APPENDIX A: LIST OF ABBREVIATIONS AND ACRONYMS

C&A	Certification & Accreditation
CD	Critical Decision
CFR	Code of Federal Regulations
CY	Calendar Year
CMRR	Chemistry and Metallurgy Research Replacement
DAF	Device Assembly Facility
DNFSB	Defense Nuclear Facilities Safety Board
DOE	(U.S.) Department of Energy
FASAB	Federal Accounting Standards Advisory Board
FBWT	Fund Balance with Treasury
FISMA	Federal Information Security Management Act
FMFIA	Federal Managers Financial Integrity Act of 1982
FTCP	Federal Technical Capability Program
FTE	Full-Time Equivalent
FY	Fiscal Year
GAAP	Generally Accepted Accounting Principles
GSA	General Services Administration
GPRA	Government Performance and Results Act
HEPA	High-Efficiency Particulate Air (filter)
HLW	High-Level Waste
INL	Idaho National Laboratory
ISM	Integrated Safety Management
JCO	Justification for Continuing Operation
LANL	Los Alamos National Laboratory
LLNL	Lawrence Livermore National Laboratory
NCS	Nuclear Criticality Safety
NNSA	National Nuclear Security Administration
NNSS	Nevada National Security Site
OMB	Office of Management and Budget
OPM	Office of Personnel Management
ORNL	Oak Ridge National Laboratory
PAR	Performance and Accountability Report
PDP	Professional Development Program
PFP	Plutonium Finishing Plant
SNL	Sandia National Laboratories
SRS	Savannah River Site
SSC	Structures, Systems, and Components
UPF	Uranium Processing Facility
WIPP	Waste Isolation Pilot Plant
WTP	Waste Treatment and Immobilization Plant (at Hanford)
Y-12	Y-12 National Security Complex