

FY 2009 PERFORMANCE AND ACCOUNTABILITY REPORT

DEFENSE NUCLEAR FACILITIES
SAFETY BOARD



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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 2009.

The primary purpose of the Board is to ensure adequate health and safety and to significantly reduce the chance of failed programs and devastating accidents from becoming a reality in the 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 NNSA are pursuing more than 20 new defense nuclear projects with an estimated value of more than \$20 billion, including \$12.2 billion for the DOE Waste Treatment Plant (WTP) at the Hanford Site. The design, construction, and initial startup of these new facilities typically requires 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 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 is the last line of defense in preventing serious safety vulnerabilities and tragic accidents from occurring in very complex and dangerous DOE defense nuclear facilities.

During FY 2009, the Board continued to make significant progress in ensuring the safety of the public and the workers at or near DOE defense nuclear facilities. Considering that the Board is a small agency with 100 FTEs and with new budget authority of \$25 million in FY 2009, I am proud to recognize the sustained and dedicated effort of our staff. The detailed performance reports that appear later in this document attest to the accomplishments of this small, but highly talented team. Given the scope and significance of our health and safety oversight responsibilities, the performance accomplishments far exceed the level of resources invested.

The Board is committed to ensuring that the 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 data are complete and reliable. 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). Based on personal observation and reasonable assurances provided by internal managers, I believe that no material internal control weaknesses exist. In fact, I am pleased to report that FY 2009 marked the second year that the Board's (fourth consecutive) unqualified opinion on its financial statements from our independent auditors was coupled with no instances of non-compliance with laws and regulations and no material internal control weaknesses identified in the accompanying auditor report.

FY 2009
DEFENSE NUCLEAR FACILITIES SAFETY BOARD
Performance and Accountability Report

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 acceleration of 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. Moreover, the human capital issues will become critical to the viability of future Board operations.

The Board remains committed to improving DOE's management of the safety and reliability at our Country's most sensitive defense nuclear facilities where our nuclear arsenal is maintained, and where hazardous nuclear materials and components are stored in more 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.

A handwritten signature in black ink, appearing to read "John E. Mansfield". The signature is fluid and cursive, with a large initial "J" and "M".

John E. Mansfield, Vice Chairman
November 13, 2009

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, 2008 through September 30, 2009 (FY 2009). 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 PAR reports. Fiscal year 2009 is the sixth year that the Board has prepared and published a PAR report.

The Government Performance and Results Act of 1993 (GPRA) requires each agency to prepare and submit a strategic plan establishing long-term programmatic, policy, and management goals. The Defense Nuclear Facilities Safety Board's *Strategic Plan for FY 2003-2009* is available on the Internet at www.dnfsb.gov. In addition, 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 performance objectives for FY 2010 and FY 2011, as well as representative accomplishments for FY 2006 through 2009, will be included in its *FY 2011 Budget Request to the Congress* in accordance with the requirements of OMB Circular A-11. The final 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, organization structure, and the four major performance goals of the Defense Nuclear Facilities Safety 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 Board's financial position and audit results; and *Systems, Controls, and Legal Compliance* describe 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 1987.

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 protect 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. In so doing, 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 headed by 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, 2009, eleven full-time site representatives were stationed at the following DOE sites:

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

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, and local agencies.

The Board's budget authority for FY 2009 was \$25.0 million supporting 100 planned full-time equivalent staff. The Board's health and safety oversight activities are funded exclusively from a direct appropriation included in the annual Energy and Water Development Appropriation Act. No other cost recovery mechanisms such as fees, annual charges, or reimbursement from the DOE are authorized for the Board.

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. NUCLEAR WEAPON OPERATIONS:** DOE operations that directly support the nuclear stockpile and defense nuclear research.
- AREA 2. NUCLEAR MATERIAL PROCESSING AND STABILIZATION:** The processing, stabilization, and disposition of DOE defense nuclear materials and facilities.
- AREA 3. NUCLEAR FACILITIES DESIGN AND INFRASTRUCTURE:** The design and construction of new DOE defense nuclear facilities, and major modifications to existing facilities.
- AREA 4. 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.

The FY 2009 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 more than 20 design and construction or major modification projects currently underway or planned for the near future at an estimated value of more than \$25 billion.

Second, the Board's Congressional oversight and appropriations committees have continued to demand that the Board increase both the scope and pace of its independent health and safety oversight reviews at all DOE defense nuclear facilities, with special attention on new facilities in various design and construction stages, while continuing to ensure that legacy facilities are properly and competently maintained. Having noted repeated problems with DOE's new construction programs and associated cost overruns where significant safety flaws were not identified by DOE or its contractors early in the project development cycle, these committees have called upon the Board to apply its health and safety expertise at higher and higher levels of scrutiny. In perhaps the ultimate expression of the demand for the Board's unique capabilities the Duncan Hunter National Defense Authorization Act for Fiscal Year 2009, Public Law 110-417, enacted a limitation on funding for the Chemistry and Metallurgy Research Replacement (CMRR) Project at LANL until the Board and the National Nuclear Security Administration (NNSA) each certify that certain design issues reported by the Board have been resolved. Certification involves a level of rigor and expenditure of resources that is an order of magnitude greater than typical review activities. The Board expects Congress to continue to require similar activities in the future.

Third, in early 2009, the DOE Office of Management revised DOE Order 251.1B, *Departmental Directives Program*, which establishes the framework for the entire DOE directives program and is a key safety directive. As a result of this revision, DOE will reissue all documents containing safety requirements during the coming years. This will be another resource intensive and time consuming task for the Board as it ensures DOE properly reissues appropriate safety-related DOE directives while preserving the nuclear safety requirements that have been painstakingly developed in the course of more than 60 years of nuclear operating experience.

A fourth challenge is maintaining a determined, 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 more than 20 design and construction or major modification projects currently underway at an estimated value of more than \$25 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 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. This project is now estimated to cost in excess of \$12 billion. The WTP is a complex, high-risk program that has constantly changing design and construction parameters, will require more than 15 years 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.

Increased Congressional Concerns about DOE Facilities and Operations

Congress has continued to express its concern, both during hearings and in legislation, with DOE's ability to manage its nuclear programs. With its well-recognized technical expertise and cost-effective methods for conducting nuclear health and safety oversight, the Board has been asked to do more to assist the DOE in meeting mission requirements. For example, the *Duncan Hunter National Defense Authorization Act for Fiscal Year 2009*, Public Law 110-417, enacted a limitation on funding for the CMRR Project at LANL until the Board and the NNSA each certified that certain design issues reported by the Board have been resolved. The pertinent language reads as follows:

SEC. 3112. LIMITATION ON FUNDING FOR PROJECT 04-D-125 CHEMISTRY AND METALLURGY RESEARCH REPLACEMENT FACILITY PROJECT, LOS ALAMOS NATIONAL LABORATORY, LOS ALAMOS, NEW MEXICO.

Of the amounts appropriated pursuant to an authorization of appropriations in this Act or otherwise made available for fiscal year 2009 for Project 04-D-125 Chemistry and Metallurgy Research Replacement (in this section referred to as "CMRR") facility project, Los Alamos National Laboratory, Los Alamos, New Mexico, not more than \$50,200,000 may be made available until (1) the Administrator for Nuclear Security and the Defense Nuclear Facilities Safety Board have each submitted a certification to the congressional defense committees stating that the concerns raised by the Defense Nuclear Facilities Safety Board regarding the design of CMRR safety class systems (including

ventilation systems) and seismic issues have been resolved; and (2) a period of 15 days has elapsed after both certifications under paragraph (1) have been submitted.

The Board applied significant effort toward accomplishing this certification. The Board reviewed design documentation, including the Preliminary Documented Safety Analysis, supplied by NNSA and established a process that allowed NNSA and the Board to reach mutual agreement on issues identified by the Board. The Board expects Congress to continue to require similar activities in the future.

Review of DOE Directives

DOE Order 251.1C, Departmental Directives Program, was approved in January 2009. This directive codifies a set of principles relating to directives intended to simplify and clarify requirements, reduce redundancy and unnecessary burden, and support improved departmental 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 program, it affects all DOE safety directives. Further, DOE's Office of Health, Safety and Security (HSS) has been leading a multi-phased, multi-year effort to review and streamline key safety directives to ensure they meet the Secretary of Energy memorandum on an individual basis. HSS revised six safety directives in 2009. Those directives were submitted to a DOE red team and the Board's staff for an intensive review prior to the formal DOE review and comment process. The reviews of the HSS safety directives will continue for the next several years, demanding rigorous review by the Board and its staff to maintain the requisite nuclear safety requirements. As DOE reissues its directives to comply with the new program, and continues the HSS directive-by-directive reviews, the Board will need to review all of them to ensure health and safety requirements are properly included in the new directives.

Human Capital - The Board's Greatest Asset

Sixty-nine percent of the Board's FY 2009 obligations were dedicated to salaries and benefits for its staff and Board Members. The Board must function as an oversight organization comprised of 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 determined, 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 congressionally mandated mission. After years of experience, 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; general nuclear safety analysis; conventional and nuclear explosive technology and safety; nuclear weapons safety; storage of nuclear materials; nuclear criticality safety; and waste management. Most of the technical personnel have technical master's degrees, and approximately 20 percent 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 technical staff members with outstanding qualifications continues to be critical to successful accomplishment of the Board's mission.

During FY 2009, the Board increased its staff from 95 personnel to 102, despite losing three people to retirement and other attrition, including the Board Chairman. The hiring success was especially noteworthy in regard to the technical staff, as nine engineers were hired and only one was lost to attrition.

Building on its hiring successes of 2009, the Board will continue its aggressive approach to reach out to mid-career and senior-level scientists and engineers as it continues to staff up to meet the increasing workload. The combination of an aging workforce and high demand for experienced scientists and engineers by other organizations will impact Board operations if not dealt with in an aggressive manner. Nineteen 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 expected growth of nuclear power generating capacity in the near future, the consequent 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 recruiting of highly qualified technical personnel will continue in a highly competitive job market.

The Board will continue 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. In FY 2007, the Board set a goal to recruit two personnel into the PDP each year, allowing up to six PDP personnel in the program at any one time. The Board met its goal recruiting three people into the program in FY 2009, and now has a total of six 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:

The Board will assist DOE in improving safety at existing and proposed defense nuclear facilities by identifying health and safety issues affecting the public and the workers, recommending actions to address these issues, and ensuring that corrective actions are completed.

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

AREA 1. NUCLEAR WEAPON OPERATIONS

Performance Goal: 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 workers and the public.

Stockpile management is the term used to describe the industrial aspects of maintaining the U.S. nuclear weapon stockpile and complex. Board 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 the DOE 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 Test Site, and Sandia National Laboratories in New Mexico and California.

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 evaluations of DOE's nuclear stockpile activities will verify necessary improvements in safety.

AREA 2. NUCLEAR MATERIAL PROCESSING AND STABILIZATION

Performance Goal: 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 workers and the public.

With the shutdown of major weapon production activities at defense nuclear facilities in the early 1990s, substantial quantities of plutonium, uranium, transuranic isotopes, and irradiated fuel 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 includes the retrieval, stabilization, and safe interim storage of spent nuclear fuel and sludges in the K-Basin at the Hanford Site in Washington, the Savannah River Site, and the Idaho National Laboratory. The Board exercises oversight of the nuclear waste programs conducted at the Savannah River and Hanford Sites, as well as the Waste Isolation Pilot Plant (WIPP) in New Mexico and the Idaho National Laboratory. 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 Idaho National Laboratory, the Y-12 National Security Complex in Tennessee, and the Los Alamos and Lawrence Livermore National Laboratories in New Mexico and California.

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. NUCLEAR FACILITIES DESIGN AND INFRASTRUCTURE

Performance Goal: 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 workers and the public.

To ensure that safety is addressed early in the process, the Board reviews the design and construction of new DOE 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 under approved nuclear codes and standards, and demonstrate clear and deliberate implementation of Integrated Safety Management 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 more than 20 projects in the design and construction phase. Examples of these new projects include the Integrated Waste Treatment Unit, currently in the construction stage at the Idaho National Laboratory; the Hanford Waste Treatment and Immobilization Plant, which is in the design and construction phases; the Highly Enriched Uranium Materials Facility, which is in the start-up phase at the Y-12 National Security Complex; the Chemistry and Metallurgy Research Replacement Facility, which is in both the design and construction phases at the Los Alamos National Laboratory; and the Salt Waste Processing Facility, which is in the design and construction phases at the Savannah River Site.

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 safety 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.

AREA 4. NUCLEAR SAFETY PROGRAMS AND ANALYSIS

Performance Goal: 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 workers and the public.

The Board's oversight effort in this area focuses on issues where a complex-wide perspective on health and safety issues is required to identify and correct generic health and safety problems. Under the aegis of Integrated Safety Management (ISM),¹ significant resources are applied to

¹ Integrated Safety Management (ISM) is the means by which the Department of Energy is institutionalizing the process of incorporating into the planning and execution of every major defense nuclear activity those controls necessary to ensure that environment, safety, and health objectives are achieved.

areas such as the technical competence of DOE's Federal workforce, the efficacy 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 first three areas, integrating and analyzing the results to feed back 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.

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.

Interdependency of the Four 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 remediation issues before they happen. 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 Highly Enriched Uranium Materials 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, 2009, 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 until expended. The sources of funds available for obligation in FY 2009 and FY 2008 are listed as follows:

FY 2009
DEFENSE NUCLEAR FACILITIES SAFETY BOARD
Performance and Accountability Report

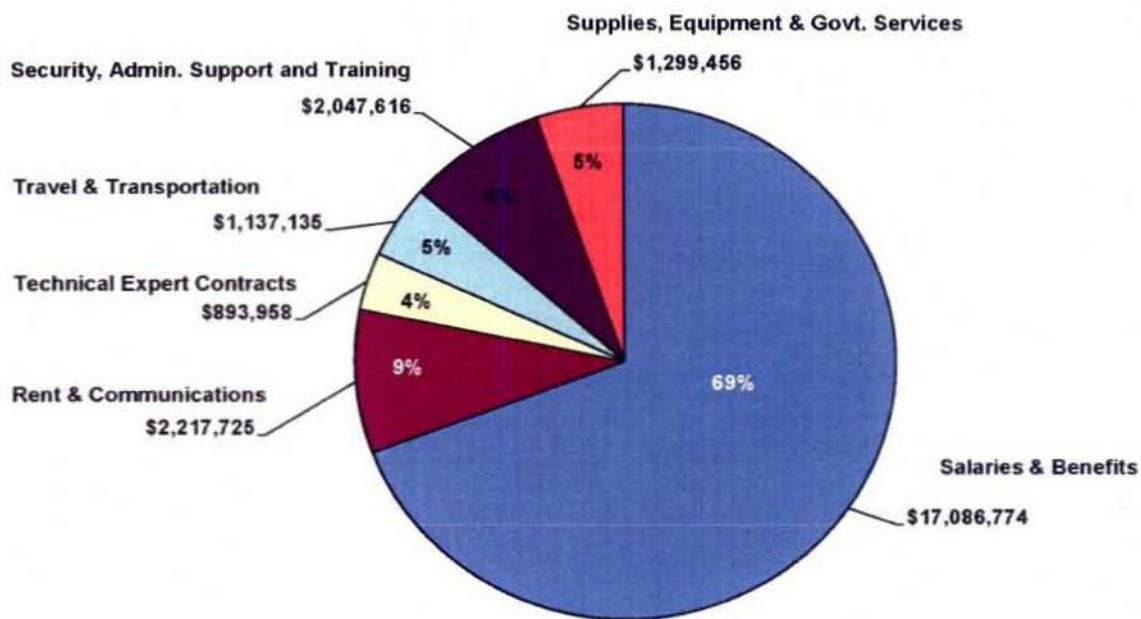
	<u>FY 2009</u>	<u>FY 2008</u>
New Budget Authority	\$25,000,000	\$21,909,000
Prior Year Unobligated Balance	3,250,056	3,950,891
Recovery of Prior Year Obligations & Offsetting Collections	464,294	658,682
Total Budgetary Resources	\$28,714,350	\$26,518,573

The Board has no reimbursable work for others authority, and is not authorized to collect fees or charges for its oversight services conducted at DOE defense nuclear facilities.

Uses of Funds by Function

The Board incurred obligations of \$24,862,664 in FY 2009. As shown on the chart on the following page, the FY 2009 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 five Board Members and employees as they conducted oversight operations.

FY 2009 Total Obligations = \$24,682,664



AUDIT RESULTS

The Board received an unqualified audit opinion on its FY 2009 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 2009</u>	<u>FY 2008</u>
Total Assets	\$10,176,769	\$9,432,387
Total Liabilities	\$2,732,532	\$2,538,420
Net Position	\$7,444,237	\$6,893,967

The Board’s assets were \$10,176,769 as of September 30, 2009, an increase of \$744,382 from the end of FY 2008. Its total liabilities and net position (which together equal total assets) were \$2,732,532 and \$7,444,237, respectively, as of the end of FY 2009, increases of \$194,112 and \$550,270, respectively, from the end of FY 2008. The Fund Balance with Treasury (FBWT) represents the Board’s largest asset. The increases in Total Assets and Net Position were due to the higher level of new budget authority in FY 2009 (~ \$3.1M), most of which was offset by higher expenditures as the Board operated at an increased FTE level in FY 2009.

Analysis of the Statement of Net Cost

	<u>FY 2009</u>	<u>FY 2008</u>
Net Cost of Operations	\$25,117,100	\$23,275,751

The Board’s net cost of operations for the year ended September 30, 2009, was \$25,117,100, an increase of \$1,841,349 or 7.9% over the FY 2008 costs. Costs increased primarily because of higher employee expenses as the Board operated at 99 FTEs in FY 2009 versus 91 in FY 2008 and incurred higher employee costs due to Federal pay raises and other non-discretionary compensation and benefits increases. The Board has historically operated with a target FTE level of 100, but experienced significant attrition in recent years. As a result of a targeted and successful hiring campaign, the Board increased personnel in FY 2008 from 92 at the start of the year to 95 at the end, and continued this success in FY 2009, ending the year with 102 personnel and a resulting FTE count of 99.

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 \$550,270 from FY 2008 to FY 2009 is due primarily from the net change in Unexpended Appropriations. The increase in Unexpended Appropriations is the result of the higher FY 2009 new budget authority, as explained above.

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 2009, the Board had Total Budgetary Resources available of \$28,714,350, the majority of which was derived from new appropriations. Total Budgetary Resources was increased by \$2,195,777 or 8.3% from the FY 2008 amount of \$26,518,573 due to the increased level of appropriations received.

For FY 2009, the Statement of Budgetary Resources showed the Board incurred obligations of \$24,862,664, an increase of \$1,594,147 or 6.9% over FY 2008 obligations of \$23,268,517. The increase was primarily due to higher personnel costs resulting from higher FTEs and Federal pay raises. Total Net Outlays for FY 2009 were \$24,043,034, a \$1,705,300 or 7.6% increase over FY 2008 outlays of \$22,337,734.

LIMITATION OF THE FINANCIAL STATEMENTS

The principle 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.

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.

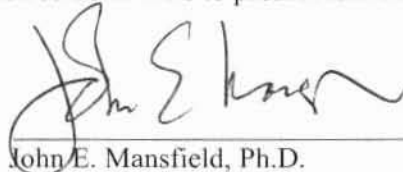
COMPLIANCE WITH THE INSPECTOR GENERAL ACT OF 1978

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 Calendar Year 2009:

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



John E. Mansfield, Ph.D.
Vice Chairman

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 line managers' knowledge of daily operations and other management reviews, the Board is able to provide an unqualified statement of assurance that the internal controls meet the objectives of FMFIA.



John E. Mansfield, Vice Chairman

11/13/09

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 2009, GSA and the Bureau of the Public Debt made net total payments of \$24,043,034 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 2009, 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 2009 transactions using individual purchase cards totaled \$404,670. 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 2009. 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 2009, the total number of purchase cards issued was 9 at headquarters, and 6 at our field locations.

Federal Information Security Management Act (FISMA)

The Federal Information Security Management Act (FISMA) requires each agency to report annually to OMB on the status of their information technology (IT) security program. In FY 2009, the Board has continued to submit all required FISMA reports to OMB, and this year used OMB's new automated reporting tool, CyberScope, to submit the required FISMA reports.

The Board continued to build on the progress made in the prior year and improve its IT security posture. Some of the improvements made in FY 2009 include ensuring all Board-issued laptops are configured with full disk encryption software to protect data at rest and the issuance of encrypted USB drives to Board staff to protect sensitive data during transit.

Based on the improvements the Board has made and 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 second 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 2009, the GAO did not conduct any reviews or investigations of Board oversight programs, and there are no open audit recommendations from previous GAO reviews.

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 2009. In a few cases noted in the report, 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 2010.

INTRODUCTION

The Board's contribution to the safety of DOE's defense nuclear activities derives from four basic types of activities. 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 space shuttle Columbia tragedy and the subsequent report by the Columbia Accident Investigation Board clearly point out the safety significance of 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 reviews, 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 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 (fewer than 100 FTEs, including five full-time Board Members) and budget (approximately \$25.0 million in FY 2009) 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 *Twentieth Annual Report to Congress* will be issued during the first quarter of CY 2010. The Board's annual reports and performance reports are drafted by Federal employees of the Board with only administrative assistance from contractors.

SAFETY GOALS

The Board revised its strategic plan in 2003 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 evolves during the latter half of this decade. Previous performance reports were established and executed to achieve the objectives of the earlier version of the Board's strategic plan. The changes to the plan are evolutionary in nature and primarily result in increased Board attention on ensuring safety in the area of nuclear facility design and infrastructure issues while maintaining vigilance in the areas of nuclear weapons and nuclear materials. The performance goals that result from the current strategic plan are summarized below.

SAFETY OVERSIGHT GOAL

The Board will assist DOE in improving safety at existing and proposed defense nuclear facilities by identifying health and safety issues affecting the public and the workers, recommending actions to address these issues, and ensuring that corrective actions are completed.

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

AREA 1. NUCLEAR WEAPON OPERATIONS:

Performance Goal: 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 workers and the public.

AREA 2. NUCLEAR MATERIAL PROCESSING AND STABILIZATION:

Performance Goal: 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 workers and the public.

AREA 3. NUCLEAR FACILITIES DESIGN AND INFRASTRUCTURE:

Performance Goal: 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 workers and the public.

AREA 4. NUCLEAR SAFETY PROGRAMS AND ANALYSIS:

Performance Goal: 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 the health and safety of the workers and the public.

ANNUAL PERFORMANCE OBJECTIVES

The Board's *Annual Performance Plan for FY 2009* 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.

Evaluation of the *Fiscal Year 2010 Performance Plan*

No changes to the *FY 2010 Performance Plan* have been identified based on a review of actual results achieved in FY 2009.

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.

The Board did not conduct an independent program evaluation in FY 2009.

Comparison of Fiscal Year 2009 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 2009. Information concerning the Board's performance accomplishments in FY 2006 through FY 2009 is contained in the Board's FY 2010 Budget Request to Congress, which is published on our website at www.dnfsb.gov.

PERFORMANCE GOAL 1: NUCLEAR WEAPON OPERATIONS

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

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 2009 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 National Security Complex (Y-12), Savannah River Site (SRS) tritium facilities, Los Alamos National Laboratory (LANL), Lawrence Livermore National Laboratory (LLNL), Sandia National Laboratories (SNL), and the Nevada Test Site (NTS).

Representative areas for Board and staff 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).
- 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, weapon response evaluation and documentation).
- Review of CASTLE software which is to be used to exchange, store, and update safety basis information for various weapon programs.
- Cross-cutting functional areas at Pantex, Y-12, NTS, LANL, LLNL, SNL, or SRS tritium facilities (e.g., legacy material disposition, nuclear criticality safety, fire protection, nuclear explosive safety,

seismic design, conduct of operations, work planning, training, maintenance, configuration management).

- Evaluation of the safety culture of the Pantex Plant and associated design agencies.
- 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).
- Startup preparations for the Highly Enriched Uranium Materials Facility.
- Modernization plans for Y-12, including the Beryllium Capability Project, accelerated dismantlement of weapons components, and infrastructure upgrades.
- Plutonium pit manufacturing and certification at LANL.
- Corrective actions to strengthen institutional safety programs and infrastructure at LANL, LLNL, and SNL.
- Readiness to dispose of damaged nuclear weapons or improvised nuclear devices at NTS.
- Subcritical experiments at NTS.
- Readiness for nuclear explosive operations at the Device Assembly Facility at NTS.
- Preparations for Criticality Experiments Facility operations at the Device Assembly Facility at NTS.
- Authorization of SNL Auxiliary Hot Cell Facility and the Radioactive Mixed Waste Management Facility as Hazard Category 3 facilities.
- Instrumentation upgrade for SNL Annular Core Research Reactor.
- Authorization of criticality experiments at SNL Sandia Pulsed Reactor Facility.
- Implementation of Recommendation 2005-1, *Nuclear Material Packaging*.

While performing its reviews, the staff will assess the effectiveness of ISM 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 NTS that start in FY 2009.

FY 2009 Measured Performance:

Continued Operation of the LANL Chemistry and Metallurgy Research Facility. In letters dated October 23, 2007, and May 16, 2008, the Board questioned DOE's decision to operate the 55-year-old Chemistry and Metallurgy Research facility an estimated six years past the previously planned shutdown date of 2010. Given the age, material condition, nuclear material inventory, and seismic fragility of the facility, the Board encouraged DOE to assess these risks promptly and evaluate alternative means of accomplishing programmatic requirements. In May 2009, the Board reviewed LANL's proposed safety basis for operations beyond 2010, identified inconsistent or inadequate assumptions in the safety analysis, and pointed out opportunities to improve safety by reducing the radioactive material at risk. LANL is revising the proposed safety basis.

Integrated Nuclear Planning. The Board identified that DOE had not demonstrated formal mechanisms to ensure that design requirements and interfaces for pit manufacturing at LANL were appropriately managed and controlled across the suite of projects that contribute to the future plutonium processing infrastructure. In response, DOE developed an Integrated Nuclear Planning process to improve coordination among its projects as national security mission requirements are refined. The Board has participated in four Integrated Nuclear Planning workshops this fiscal year and believes the process is effective and continues to improve.

Transuranic Waste Operations at LANL. In a letter dated January 18, 2007, the Board urged NNSA to promptly develop a viable pathway for shipping high-activity transuranic waste drums from LANL to the Waste Isolation Pilot Plant for disposal. Postulated accident scenarios involving these drums predict high consequences to the public because of their radiological loading, the proximity of the storage area to the site boundary, and the lack of robust engineered controls. In response, DOE has bolstered waste disposition work at LANL by facility infrastructure upgrades, new safety basis documents, and training and qualification of operators. By April 2008, NNSA had remediated all of the high-activity drums then available for processing. Preparations are underway to vent the remaining drums to allow processing and disposal.

Nuclear Criticality Safety at LANL. In a September 10, 2007, letter to NNSA, the Board expressed concern that a software tool (MASS) was being relied upon by operators as a control to ensure compliance with criticality safety limits without appropriate Software Quality Assurance. In response to the Board letter, NNSA committed to modifying procedures and retraining facility staff at LANL to ensure that MASS is not used to determine compliance with criticality safety limits. NNSA also stated that the Los Alamos Site Office (LASO) would review this issue during planned assessments. Overall, the actions that were taken by LANL resulted in a strengthened safety posture, and the schedule for bringing the nuclear criticality safety program into full compliance with industry standards and DOE directives appears acceptable.

LANL Plutonium Facility Confinement Ventilation. The decade-old safety basis for the Plutonium Facility credits a passive confinement strategy instead of active confinement ventilation as a safety-class control to protect the public from postulated accidents. As part of DOE's implementation plan for the Board's Recommendation 2004-2, an evaluation of the facility's confinement strategy was conducted along with a parallel effort to develop a new safety basis for the facility. The Board issued DOE a reporting requirement on January 13, 2009, to follow through on the DOE's commitment to deliver the Ventilation System Evaluation Report to the Board (originally due December 21, 2006) and provide Program Secretarial Office concurrence with and approval of the upgrades in coordination with the Central Technical Authority (originally due March 20, 2007). In its June 16, 2009, response, DOE asserted that some modifications identified as needed in the confinement ventilation evaluation may have subsequently been determined to be unnecessary to meet the overall safety strategy and goals under the final approved documented safety analysis. The DOE response contained inconsistencies regarding the course of action to address the scenario of a seismic event followed by a fire. The Board is continuing to engage DOE to ensure support for improvements to the safety posture of defense nuclear facilities is appropriate and timely.

LANL Plutonium Facility Vault Water Bath. The Board identified issues with the storage of plutonium-238 materials in the cooling water bath in the LANL Plutonium Facility's storage vault. Many of the containers lacked manufacturing pedigree and data on the condition of their contents. In response, the laboratory developed a plan to repack or overpack all questionable containers into robust packaging by June 2010.

LANL Weapons Engineering Tritium Facility. In October 2008, LANL ceased operations at the tritium facility due to a Technical Safety Requirement violation and problems with the pressure safety program. These issues were initially identified by a Board review in July 2007 and communicated to DOE by letter on October 16, 2007. To comply with the facility's safety basis, changes were made to the

pipng system, pressure relief components, and the facility's pressure safety procedures. The Board carefully tracked these changes and questioned the laboratory's plan (viewed as acceptable by the NNSA Los Alamos Site Office) to restart operations without a formal readiness review. In response to the Board's concerns, NNSA-Headquarters held discussions with its site office and the laboratory, with the result that LANL developed a detailed Plan of Action for a formal contractor Readiness Assessment that will also include significant Federal oversight.

Nuclear Explosive Safety. The Board evaluated 9 Nuclear Explosive Safety (NES) studies or change evaluations conducted at Pantex, including Master Studies of Pantex Special Purpose facilities and Support Activities. In a letter dated December 12, 2008, the Board identified shortcomings in the current NES process, including the designation of findings that must be addressed before or after nuclear operations are allowed to continue or start. In response, NNSA held a workshop to discuss these shortcomings and is pursuing actions to address the Board's concerns.

Revised Nuclear Explosive Safety Directives. In response to changes in operational and organizational realities and observations communicated by the Board, DOE completed the revision and implementation of key nuclear explosive safety directives, including DOE Order 452.1C, *Nuclear Explosive and Weapon Surety Program*; DOE Order 452.2C, *Safety of Nuclear Explosive Operations*; and DOE-STD-NA-3016-2006, *Hazard Analysis Reports for Nuclear Explosive Operations*.

Quality of Safety-Related Information for Nuclear Explosive Operations. The Implementation Plan for Recommendation 98-2, *Safety Management at the Pantex Plant*, addressed the need for DOE to issue further guidance on its expectations for the evaluation and documentation of weapon response to potential accident environments and stimuli. The Board and DOE agreed that the revised DOE-STD-NA-3016-2006 would include the needed requirements for these analyses. In FY 2009, the Board reviewed the design laboratories' implementation of the standard and closed Recommendation 98-2 based on the finding that each laboratory had developed a process that would meet the standard.

Lightning and Electrostatic Discharge Protection at Pantex. The Board issued a letter on March 30, 2007, identifying that work remained to adequately address the hazards posed by the indirect effects of a lightning strike on Pantex facilities. DOE responded by forming the Nuclear Weapons Complex Electromagnetics Committee to analyze both lightning and electrostatic discharge (ESD) hazards. The Committee has begun to execute a plan to systematically address the Board's concerns and to improve the safety of operations at Pantex relative to lightning and ESD hazards. In FY 2009, the concern for concrete spalling was addressed, and testing for intrinsic bonding in nuclear explosive facilities was initiated. The Board has engaged experts in the field of lightning effects to verify DOE's analyses.

Pantex Procedures. In 2009, the Board completed a series of onsite reviews and provided immediate feedback to Pantex on areas where immediate improvements could be made in nuclear explosive operating procedures. Pantex took action to address the deficiencies identified during the reviews.

W76 Restart at Pantex. On August 8, 2008, the Board issued a letter detailing concerns with the process DOE used to authorize restarting W76 nuclear explosive operations following a safety-related work suspension. The Board reviewed the technical basis for the controls that were put in place to address the hazards that caused the work suspension and determined the controls were adequate to ensure public health and safety.

Pantex Safety Basis. In a letter dated July 30, 2007, the Board identified issues with the Pantex safety basis, including the treatment of beyond design basis accidents, the level of detail in some technical safety requirements, and a systematic lack of timeliness in declaring potential inadequacies in the safety basis. In December 2008, DOE began work to upgrade the safety basis at Pantex by reviewing all Technical Safety Requirements and recategorizing all Specific Administrative Controls to be consistent with DOE-STD-1186-2004, *Specific Administrative Controls*. The Board is reviewing the progress of this initiative and its impact on nuclear explosive operations.

Pantex Training and Qualification. The Board conducted a review of training and qualification procedures at Pantex. The Board issued a letter on July 8, 2008, noting concerns with the DOE program for providing weapons training units sufficient to conduct high fidelity training and with the lack of design agency training for Pantex employees on specific skills critical to nuclear explosive operations. DOE developed a program to periodically review the training needs of each weapon program and incorporate provision of high fidelity trainer units into the budget. In FY 2009, Pantex completed this review on several programs.

Pantex Tooling Review. In 2009, the Board completed a review of the Pantex tooling program and provided immediate feedback on the strengths and weaknesses of the administrative procedures that govern the tooling program.

Y-12 Activity-Level Work Planning. The Board provided the results of its review of Y-12 activity-level work planning in a letter to DOE dated January 22, 2009. The Board identified several weaknesses with the planning, control, and oversight of work. In response to the Board's concerns, some activities were placed on hold until work planning problems could be resolved and corrected.

Y-12 Nuclear Criticality Safety. The Board completed a review of nuclear criticality safety evaluations that found that certain evaluations failed to meet select requirements, potentially compromising the safety margin for fissionable material operations. In response to the Board's January 23, 2009, letter documenting the review, the evaluations were strengthened and weaknesses identified during an extent of conditions review were corrected.

Special Capability Glovebox Project at Y-12. The Board's review of the Special Capability Glovebox design in 2007 found no major design issues but identified questions regarding administrative controls. The Board continued its review in FY 2009 and found no issues that would impact the plan to begin operations in FY 2010.

Conduct of Operations at Y-12. After several operational events, the Board urged NNSA to consider action to achieve consistent, disciplined operations. NNSA developed and began to implement corrective actions to address these issues including additional periodic training. The Board also noted that procedure use practices were inconsistent and that poor procedural compliance had been a contributor to many operational events. NNSA issued a Y-12 procedure use policy and began a campaign to review all procedures authorized for use during nuclear operations for potential improvements, including identifying the appropriate use category for each procedure.

Continued Operations of the Enriched Uranium Operations Building. Due to concerns over NNSA's ability to safely operate the Enriched Uranium Operations Building for an extended period of time, the Board advocated that NNSA regularly assess the physical condition of the building in a letter dated March 13, 2007. Per the Board's request, NNSA has provided the Board with two annual reports (in March 2008 and March 2009) that included specific actions NNSA has planned and taken to improve the safety posture of the Enriched Uranium Operations Building.

Work Planning and Control at LLNL. As part of the implementation plan for the Board's Recommendation 2004-1, *Oversight of Complex, High-Hazards Operations*, DOE promulgated a document in 2006 that provided the attributes and best practices of a successful work planning and control process. LLNL recently issued revised work planning processes for the laboratory as a whole and the Nuclear Materials Technology Program nuclear facilities. These processes were developed to meet the guidance document.

NTS Device Assembly Facility (DAF) Fire Suppression System. In 2008, the Board determined that DAF had significant weaknesses in the fire suppression system, weaknesses that should be corrected before beginning more hazardous operations. In response, NNSA initiated an improvement project for the fire suppression system to assess the condition of the system, analyze and prioritize needed improvements, and plan to improve the system. In FY 2009, NNSA evaluated the results of the condition assessment, developed improvement options, presented a path forward, and began improvements to the system.

Readiness to Dispose of a Damaged Nuclear Weapon or Improvised Device at NTS. NNSA is developing a plan for implementation of safety controls and upgrades appropriate for the scope of operations for the facility at NTS (G tunnel) that would be used in disposition of an improvised nuclear device. The Board expects the new plan to be available in 2010. As a result of the Board's interactions and discussions in FY 2009, NNSA continued to complete some facility improvements and implement the results of the cost/risk benefit analysis of proposed controls and improvements. FY 2009 improvements have focused on significant occupational safety issues, e.g., tunnel ventilation.

Criticality Experiments in DAF. NNSA has been preparing for Criticality Experiment Facility operations at the Device Assembly Facility. Previously the Board has reviewed and commented on the design for facility modifications and modification of the critical assembly machines. In FY 2009, the Board reviewed construction activities and the re-build and testing of the four machines. The Board will evaluate startup activities in 2010.

PERFORMANCE GOAL 2: NUCLEAR MATERIAL PROCESSING AND STABILIZATION

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

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 2009 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 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 adequacy of current storage conditions, evaluations of proposed treatment and disposal technologies, evaluations of the design of new facilities and process lines, assessments of facility readiness to safely begin new operations (including implementation of 10 CFR 830, *Nuclear Safety Management*), the safety of ongoing operations, and the suitability of long-term storage and disposal facilities. Representative areas for review include:

- H-Canyon processing campaigns, life extension activities, and documented safety analysis upgrades.
- Long-term storage of neptunium oxides at the Idaho National Laboratory (INL) (Recommendation 2000-1).
- Complex-wide consolidation and disposition of special nuclear materials.
- Stabilization and disposal of plutonium-bearing residues at Los Alamos National Laboratory (LANL) (Recommendation 2000-1).
- Safety of efforts to consolidate, store, and disposition spent nuclear fuel at Hanford, INL, and SRS.
- Conceptual design of systems to treat and store spent nuclear fuel sludge at the Hanford Site (Recommendation 2000-1).
- Safety of design and construction of modifications to Building 3019 at Oak Ridge National Laboratory in preparation for processing of uranium-233.
- Design of treatment facilities for high-level waste (HLW) liquids and salts at SRS, and system improvements to ensure safe management of the SRS HLW (Recommendation 2001-1).
- Removal and processing of salt waste from HLW tanks by the Interim Salt Disposition Project at SRS.
- Final cleanout of selected HLW tanks at SRS.
- HLW tank structural integrity at SRS and the Hanford Site and application of the results of DOE's corrosion testing program to corrosion chemistry controls.
- Operation of HLW retrieval and transfer systems at the Hanford tank farms.
- Conduct of operations and work planning at the Hanford Site.

- Implementation of lessons learned from the waste spill at the Hanford tank farms.
- Safety of supplemental processing and treatment of waste from Hanford tanks.
- Safety of the retrieval, characterization, and packaging of contact-handled transuranic (TRU) waste at Hanford, LANL, NTS, SRS and the Idaho Cleanup Project.
- Handling and packaging of remote-handled TRU waste at the Idaho Cleanup Project and Oak Ridge National Laboratory.
- TRU waste operations at the Waste Isolation Pilot Plant.

FY 2009 Measured Performance:

Electrical Systems at the Plutonium Finishing Plant (PFP). In late 2008, the Board reviewed the PFP life extension program for electrical systems and assessed the condition of select safety-related electrical equipment and cables. Several deficiencies were noted. The Board is continuing to evaluate DOE's work to resolve the issues.

Effectiveness of Corrective Actions at Hanford Tank Farms. Following the spill of radioactive waste at Hanford's Tank Farms in July 2007, DOE completed several investigations and issued corresponding corrective action plans. The Board continued its review of the effectiveness of the corrective actions for conduct of operations, emergency management, safety oversight, and equipment maintenance. The Board provided additional feedback to DOE. DOE is working to resolve the Board's issues.

HLW Tank Integrity at Hanford Tank Farms. The Board encouraged DOE to continue laboratory and in-situ testing of corrosion mechanisms related to the HLW tanks. This effort is expected to lead to assurance that DOE's tanks can continue to perform for an anticipated 30 or more years. The Board reviewed the integrity of the double-shell HLW tanks, and evaluated DOE's structural and leak assessment of the older single-shell HLW tanks.

Safety Standards at Hanford Tank Farms. The Board reviewed the standards invoked in DOE's proposed contract for the new tank farm contractor and noted that several important safety standards were missing. In response to Board inquiries, DOE added these standards to the contract.

Hanford Sludge Retrieval and Disposition Project. The Board observed the contractor's alternatives analysis and the subsequent DOE external technical review of the conceptual design for sludge retrieval. The Board closely followed this project to ensure that DOE followed proper project management processes for a high-hazard nuclear operation.

American Recovery and Reinvestment Act (ARRA). The Board began reviewing the management and work scope of the DOE activities funded by ARRA. In response to the Board's inquiries, DOE improved its ARRA guidance regarding safety and project management requirements.

HLW Tank Integrity Program at SRS. The Board reviewed the HLW tank integrity program at SRS with a continued focus on ultrasonic testing. In response to a Board letter to DOE regarding tank integrity, DOE issued a revised HLW Tank Inspection Plan and completed a more thorough ultrasonic test inspection of HLW Tank 29. The inspection results showed no obvious active pitting, but revealed many small pits that had not been noted before. These data may prompt further inspections.

Tank 48 Treatment Process at SRS. The Board closely followed DOE's efforts to design a process for treating wastes containing organic materials in HLW Tank 48. In response to a Board letter to DOE noting several project weaknesses, DOE took action to ensure compliance with the DOE Order on project management, and to meet its commitments to perform an evaluation of the confinement ventilation system for the project. In June 2009, DOE confirmed the fluidized bed steam reforming process as the preferred treatment process for Tank 48.

HLW Maintenance Program at SRS. The Board found that the contractor's Maintenance Implementation Plan had not been reviewed by DOE since February 2000, which was contrary to the DOE Order requirement that DOE review and approve the contractor's plan every two years. In response, DOE reviewed and approved the current plan, performed a comparison of the DOE Maintenance Program Guide with site maintenance procedures, and began implementing corrective actions.

Tank Closure at SRS. The Board's staff observed readiness reviews for mechanical waste removal in Tanks 18 and 19, as well as waste removal operations. The Board identified weaknesses in the performance of independent verifications, which were corrected.

H-Canyon Electrical Systems. The Board reviewed the safety of electrical systems within the H-Canyon and supporting facilities at SRS. The Board noted several deficiencies and highlighted these in a letter to DOE. DOE took action to immediately correct some of the weaknesses, and put in place plans to correct the remaining deficiencies.

H-Canyon Life Extension. A previous Board review of aging issues at H-Canyon highlighted the need to perform more inspections of aging equipment. The Board's review of the initial approach identified several flaws. The Board suggested a number of improvements to the system, and DOE took action to make improvements. The new Integrated Facility Aging Management Program produced the desired results, and DOE plans to expand the program to review safety systems across SRS.

Fire Protection Systems at SRS. At SRS, the Board noted aging equipment in the site's fire protection program and questioned how the aging equipment was complying with National Fire Protection Association guidance. In response, DOE developed a replacement methodology for aging fire apparatus and submitted a baseline change proposal to purchase new ladder and pump trucks. When the Board questioned the efficacy of Mutual Aid Agreements with nearby fire departments, DOE developed new plans and procedures to reduce response times.

Radiation Protection Program at WIPP. The Board reviewed the radiation protection program and its implementation at WIPP. The Board identified that there was no formal process for performing the triennial audits required by federal regulations. DOE acknowledged and agreed to address the identified concerns.

TRU Waste Handling at WIPP. The Board continued oversight of the safety of TRU waste handling operations at WIPP. After a review of conduct of operations and overall safety culture, the Board communicated several deficiencies to DOE and its contractor. A full-time conduct of operations "champion" was hired and empowered to direct efforts towards correcting the identified deficiencies.

TRU Waste Operations at the Idaho Cleanup Project. The Board observed TRU waste retrieval and repackaging operations at the Idaho Cleanup Project and identified deficiencies in conduct of operations and operational safety. DOE responded by assigning a full time person to address needed improvements through an emphasis on work planning and control.

PERFORMANCE GOAL 3: NUCLEAR FACILITIES DESIGN AND INFRASTRUCTURE

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 workers and the public.

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 2009 Performance Objectives:

The Board and its staff will continue reviews of DOE's implementation of integrated safety management (ISM) 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 (SSC); and the adequacy of SSC installation, startup, and operational readiness. Candidates for review include:

- Continue design and construction reviews of the Waste Treatment Plant at the Hanford Site.
- Complete review of the design and continue construction reviews of the Integrated Waste Treatment Unit at the Idaho National Laboratory.
- Review the preliminary design of the Chemistry and Metallurgy Research Replacement facility at Los Alamos National Laboratory. Assess readiness to proceed into final design and initiate review of the final design.
- Review the design of the Radioactive Liquid Waste Treatment Facility Replacement Project at Los Alamos National Laboratory.
- Review design and construction activities for the Criticality Experiments Facility at the Device Assembly Facility at Nevada Test Site.
- Review the final design of the Pit Disassembly and Conversion Facility at Savannah River Site.
- Review the final design of the Waste Solidification Building at Savannah River Site.
- Complete review of the final design and review the construction of the Salt Waste Processing Facility at Savannah River Site.
- Review the design of the Plutonium Preparation Project at Savannah River Site.

- Continue safety system reviews and review preparations for start of operations for the Highly Enriched Uranium Materials Facility at the Y-12 National Security Complex.
- Continue reviews of the preliminary design of the Uranium Processing Facility at the Y-12 National Security Complex.

Safety-in-Design. The Board will monitor DOE's implementation of DOE-STD-1189, *Integration of Safety into the Design Process*, and updates to DOE directives that have been identified as critical to successful implementation of DOE's overall safety-in-design objectives. These include updating the facility safety directive, seismic design standards, and the standard used to prepare nuclear safety design bases.

FY 2009 Measured Performance:

Congressional Mandate: Chemistry and Metallurgy Research Replacement Facility at Los Alamos National Laboratory. Pursuant to the Duncan Hunter National Defense Authorization Act for Fiscal Year 2009, the Board has conducted extensive reviews of the preliminary design of the CMRR Nuclear Facility as part of certifying that design concerns reported by the Board have been resolved. During the past year considerable resources have been dedicated to the CMRR certification review. The Board identified seven topical areas for the certification review, which were the five open Board concerns identified in its quarterly reports to Congress plus two additional areas the Board considered important for the CMRR design process. The Board developed a systematic approach to completing the certification review, identifying concerns with NNSA's resolution of the topic area, and formally transmitting these concerns to NNSA for resolution. Based on NNSA responses and commitments each of these concerns were resolved. On September 4, 2009, the Board met the Congressional mandate by issuing *Chemistry and Metallurgy Research Replacement Facility Project, Los Alamos National Laboratory, Certification Review, Report to Congressional Defense Committees*. NNSA has committed to implement detailed designs consistent with specific design requirements to which NNSA had agreed as part of the certification process. The Board intends to review additional design material as it becomes available, and to review the final design and Documented Safety Analysis once the CMRR project is given approval to proceed to final design.

Safety-in-Design: With significant Board involvement, DOE developed a change to DOE Order 413.3A, *Program and Project Management for the Acquisition of Capital Assets*, developed sixteen guidance documents to implement this order, and developed a proposed change to DOE Order 420.1B, *Facility Safety*, incorporating changes required to address safety-in-design issues. The Board reviewed and commented on these orders and guides.

Waste Treatment 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 Waste Treatment Plant facilities. The Board's activities primarily consisted of evaluating the resolution of previously identified issues. Specifically:

- Following resolution of Board comments, the final summary structural reports for the Pretreatment and High Level Waste Facilities have been prepared. DOE is continuing to work on the final structural design for these facilities. The Board expects that DOE will satisfactorily complete the

structural design for the Pretreatment and High Level Waste Facilities and submit final summary structural reports that fully demonstrate that the WTP facilities meet all structural design requirements.

- The Board resolved issues described in its letter dated June 24, 2008, regarding concerns with the contractor's proposed implementation of DOE Standard 1066, *Fire Protection Design Criteria*. The current WTP design for the confinement ventilation systems ensures they perform as expected and are adequately protected from the effects of a fire.
- In a letter dated January 9, 2009, the Board resolved a long standing issue with fire protection coating of structural steel in WTP facilities. The Board evaluated the adequacy of fire protection coatings to protect facilities containing radiological and chemical hazards, and reviewed the chemical hazards in each of the WTP facilities. The Board's review revealed that the fire coatings applied in each facility are adequate to prevent structural collapse in a design-basis fire.
- The Board initiated review of proposed changes to the safety strategy in the Pretreatment Facility that would have reduced the safety classification of all the safety systems in the facility. The Board did not find the bases for the proposed changes to be technically defensible. DOE has revised its strategy and is maintaining some safety-class controls but has not yet provided an adequate justification for the entire safety strategy. The Board is continuing its evaluation.

Integrated Waste Treatment Unit at Idaho National Laboratory. The Board continued its review of the design and construction of the Integrated Waste Treatment Unit. The Board's activities focused on evaluating the resolution of previously identified issues. In a safety-in-design project letter dated January 24, 2007, the Board had identified several issues that required resolution during final design. Based upon the root-cause analysis of an over-temperature event in the pilot plant's charcoal bed, DOE modified the design to prevent and mitigate the event. Analysis of the waste characterization was completed which verified the control strategy was adequate for the worst-case inventory. The safety-related instrumentation and control system design was revised to separate its safety-related functions and power supply from the rest of the network, and an appropriate design standard was adopted to ensure its reliability. These actions resolved all outstanding Board issues with the project.

New Solid Transuranic Waste Facility Project at Los Alamos National Laboratory (LANL). Following the Board's review in November 2008, NNSA decided to place construction plans on hold pending completion of an engineering needs assessment. The Board's review identified problems with the facility safety strategy, e.g. the use of personal protective equipment in lieu of engineered safeguards to provide worker protection, and poor integration of safety into the design. This project remains on hold.

Radioactive Liquid Waste Treatment Facility Replacement Project at LANL. The Board had previously raised concerns with the preliminary design of the facility, and concluded there was weak integration of the safety and design processes and weak federal oversight. The Board continued to pursue the resolution of these concerns. NNSA has made some progress in addressing some of the concerns. For example:

- Federal oversight has been enhanced through the addition of more personnel dedicated to the project. It is premature to assess whether this action will be effective in improving federal oversight.
- The design was changed to require stainless steel process equipment in lieu of plastic processing equipment to provide confinement for the liquid radioactive waste.

Criticality Experiments Facility and Device Assembly Facility at the Nevada Test Site. The criticality testing capability from TA-18 at LANL is being relocated to the Criticality Experiments Facility, which will be housed in the Device Assembly Facility at the Nevada Test Site. In a letter dated January 18, 2008, the Board highlighted the lack of progress in addressing ongoing operational problems and design deficiencies in the water supply for the safety-related fire suppression systems. DOE subsequently conducted several studies culminating in long-term line item requests to replace the water tank and lead-in pipes. In the interim, short-term projects are being pursued to modify sprinkler systems to correct design deficiencies, replace strainers, refurbish the existing water tank, and investigate using standalone fire suppression systems to supplement the existing deficient fire sprinkler systems. A July 29, 2009, Board letter encouraged NNSA to complete the planned work and not allow administrative compensatory measures (e.g., posting a fire watch) to serve as a long-term substitute for reliable engineered safety systems.

Device Assembly Facility Structure. In a letter dated August 16, 2006, the Board noted concerns with extensive cracking and water leaks in the Device Assembly Facility. After further Board urging, DOE conducted concrete strength testing to determine whether the facility structure can function as designed. The Board reviewed the test results and concluded that the concrete meets strength requirements. This long-standing concern is now considered closed.

Flammable Gas Generation at the Savannah River Site (SRS) Salt Waste Processing Facility. The Board previously identified the need to evaluate the impact of thermolysis on the generation of flammable gases in the process vessels. The flammable gas generation rate assumed in the project analysis was not technically defensible. As a result of the Board's review, DOE initiated testing to validate the assumptions made in the safety basis regarding generation of flammable gases. The Board reviewed the test results and concluded that the flammable gas generation rate assumed in the design analysis adequately bounded the rate determined in the experimental testing. This concern is now considered closed.

Structural Design of the SRS Salt Waste Processing Facility. The Board previously pointed out deficiencies in the analysis of the facility's ability to resist natural phenomena hazards. The Board's review of the structural design focused on the resolution of these deficiencies. The Board completed its review of the finite element analysis, structural design, and summary structural report for the facility, and determined that all concerns were resolved.

Final Design Review of the SRS Salt Waste Processing Facility. The Board reviewed the final design of the Salt Waste Processing Facility. As a result of this review, the Board issued a safety-in-design project letter concurrent with Critical Decision (CD)-3 that stated the safety strategy was sound and identified no significant safety issues that would preclude the start of construction. The Board identified several new issues that require resolution as the design process continues: (1) the structural analysis of the

ability of process piping to withstand potential explosions (deflagrations or detonations) did not include several considerations, (2) flammable gas generation rates assumed by the facility did not consider all potential sources of heat input into process vessels, (3) the design of the confinement ventilation system does not implement all features or demonstrate the equivalency of the design to those features specified in Section 14 of DOE Standard 1066, *Fire Protection Design Criteria*, for the protection of the final stage of high-efficiency particulate air filters, (4) the design of the facility does not ensure that all operator actions deemed necessary in the Preliminary Documented Safety Analysis following a seismic event can be readily accomplished, and (5) additional actions beyond those identified in the Preliminary Documented Safety Analysis may be required. The project is in the process of revising its design and performing additional analyses to address these concerns.

Instrumentation and Control System for the SRS Salt Waste Processing Facility. The Board reviewed the design of the safety-related portion of the instrumentation and control system for the Salt Waste Processing Facility. This review identified that (1) the isolation of the safety-related portion of the distributed control system from other portions of the system requires better description and understanding by the project to ensure this functional requirement is met, (2) the safety integrity level specified in the Preliminary Documented Safety Analysis may not be achievable, and (3) the project lacked a clear plan to ensure adequate quality of the software to be used in the system. The project is taking action to address the concerns raised during this review.

Quality Assurance for SRS Salt Waste Processing Facility. The Board initiated reviews of the construction practices being utilized for the placement of concrete for the facility. The Board identified numerous quality problems with the control of the materials used to form the concrete that could have affected the as-placed concrete strength. The project took actions to correct the problems identified. The Board also initiated review of the procurement of safety-related equipment. The project is using a commercial grade dedication process for most procurements. The Board's review concluded that the methodology would not ensure the requisite quality of the safety-related components. The Board reviewed configuration management procedures for the project, and found weaknesses that resulted in discrepancies in design and procurement documentation. The project is in the process of rewriting procedures to correct its configuration management and procurement practices. The Board will continue to review this area.

Waste Solidification Building at SRS. The Board completed a final design review for the Waste Solidification Building, as documented in a letter dated January 12, 2009. The Board closed all final design issues related to structural design, red oil, and hydrogen deflagration/detonation prior to the project receiving CD 2/3 on December 10, 2008. The issues related to red oil and hydrogen deflagration/detonation will continue to be followed by the Board as safety controls are being finalized and implemented.

Uranium-233 Downblending at Oak Ridge National Laboratory. In a September 14, 2007, safety-in-design project letter, the Board identified safety-related concerns with the Uranium-233 Downblending and Disposition Project. The Board and DOE reached agreement on the path forward to address these issues. The Board initiated review of the Preliminary Documented Safety Analysis.

Startup Testing for the Highly Enriched Uranium Materials Facility at the Y-12 National Security Complex. The Board reviewed the startup testing of safety-related systems at the Highly Enriched Uranium Materials Facility. The Board concluded that the testing generally ensured that the safety-related systems would meet their functional requirements, although two gaps were noted. The Board also noted problems with the configuration management of the software used for the safety-related confinement ventilation system. The project is taking action to address the Board's concerns.

Quality Assurance for the Y-12 Highly Enriched Uranium Materials Facility. As the Highly Enriched Uranium Materials Facility was being constructed, the project identified quality assurance concerns with thousands of fasteners used in safety-class storage racks. The Board ensured that corrective actions that included sample testing of fasteners would provide a technically defensible rationale for acceptance of the fasteners. The project's initial plans were inadequate; additional actions identified by the Board were subsequently incorporated into the corrective action plan. The Board reviewed the testing results and concluded that the fasteners could be reasonably accepted as-is. This concern is considered closed. The Board is now encouraging DOE to provide detailed lessons learned to help preclude recurrence of this and other quality problems experienced by the project.

Uranium Processing Facility at the Y-12 National Security Complex. The Uranium Processing Facility project continued with its preliminary design phase in FY 2009. The Board has continued to conduct reviews of the project management, DOE oversight, geotechnical and structural design, development of safety systems design, design criteria development, and technology development. These reviews have served to resolve open items from the Board's August 9, 2007, safety-in-design project letter, have provided timely input to improve the project design inputs, and kept the Board up to date on revision to design strategies to prevent new issues from developing and support future reviews at the completion of preliminary design.

Filter Test Facility. Nuclear-grade high-efficiency particulate air (HEPA) filters used in essentially all new nuclear facilities are tested in the Filter Test Facility to ensure the filters meet performance requirements. In a letter dated March 17, 2008, the Board expressed concerns with degradation in quality of the nuclear filters as reported by the Filter Test Facility. In the past year, DOE has improved the acquisition and transmittal of data from testing to responsible procurement personnel, allowing formal corrective action processes to be initiated for testing failures. DOE is continuing to work with the contractors to address quality improvement and verification testing for HEPA filters purchased by DOE.

PERFORMANCE GOAL 4: 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 workers and the public.

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 2009 Performance Objectives:

The Board will continue to assess the adequacy of proposed changes to DOE directives to ensure that any revisions are appropriate. The results of the directives reviews completed by the Board will be provided to DOE for action. The Board anticipates that approximately 60 DOE directives that may impact public and worker health and safety will require review, of which many are likely to require significant Board and staff interaction to ensure satisfactory resolution of potential issues. This is a direct result of the DOE Safety Directives Review, which is an effort to revise and document the technical basis for requirements in 24 different health and safety directives of interest to the Board. In those rare cases in which new directives are determined to be required, the Board will work with DOE to ensure that the applicable documents are appropriately developed. The Board also expects to continue its involvement in the efforts of the National Nuclear Security Administration (NNSA) to establish its own directives system. It is estimated that 10 NNSA directives will also require review. As a result of these reviews, new or modified health and safety directives will be issued, 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.

The Board will continue its reviews of DOE's implementation of integrated safety management (ISM) and associated nuclear safety programs. In addition, while the Board has noted that considerable progress has been made in the implementation of ISM, continued DOE efforts are necessary to maintain ISM systems and ensure continuous improvement across the complex. Specific functional areas will be sampled to a greater depth. At least five reviews will be completed in areas such as work planning and control, 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 for resolution of any identified issues to support the safe operation of defense nuclear facilities. Example reviews will include:

- Review technical capability of the workforce. This will be accomplished through reviews focused on qualification processes and how those capabilities are sustained and enhanced through continuing training programs.

- Evaluate DOE's effort to revise the directives governing the startup and restart of nuclear facilities and monitor DOE's effort to implement the changes in the field.
- Perform reviews of nuclear criticality safety programs at DOE sites under the Board's purview.
- Monitor progress on the implementation plan for Recommendation 2007-1, *Safety-Related In Situ Nondestructive Assay of Radioactive Materials*, and work with DOE to ensure that the milestones are met and that the results meet the expectations set forth in the Recommendation.
- Evaluate the effectiveness and implementation of DOE's efforts to satisfy Recommendation 2002-3, *Requirements for the Design, Implementation, and Maintenance of Administrative Controls*.
- Review the important aspects of safety system design, functionality, and maintenance at defense nuclear facilities including the implementation of quality assurance programs; specifically ensuring requirements flow down from DOE to the contractor as well as the implementation of those requirements.

The Board will continue to oversee DOE's progress in developing an effective policy, along with useful implementing guidance, to govern the use of risk assessment methodologies at DOE facilities.

The Board will work with DOE to develop and implement a satisfactory approach for the use of Justifications for Continuing Operations (JCOs) in the defense nuclear complex. Board review of DOE's processes and practices associated with the use of JCOs at defense nuclear facilities review showed that DOE needs to develop more definitive guidance and expectations to structure the development and implementation of JCOs in the complex.

FY 2009 Measured Performance:

DOE Directives. As part of its continuing review of new and revised DOE directives, the Board and its staff evaluated and provided constructive critiques of over 40 directives associated with, but not limited to nuclear design criteria, radiological protection, maintenance management, worker protection, and project management. At year's end, the staff was in the process of resolving issues regarding revisions or drafts of 10 pending directives to improve the content, clarity, and consistency of safety requirements and guidance. Examples of DOE directive reviews completed in 2009 include:

- DOE Order 425.1D, *Verification of Readiness to Start Up or Restart Nuclear Facilities*
- DOE Order 426.X, *Federal Technical Capability*
- DOE Order 410.2, *Management of Nuclear Materials*
- DOE Order 452.2D, *Nuclear Explosive Safety*
- DOE Order 452.1D, *Nuclear Explosive and Weapon Surety Program*
- Title 10, Code of Federal Regulations Part 712, *Human Reliability Program*
- DOE Guide 413.3-4, *U.S. Department of Energy Technology Readiness Assessment Guide*
- DOE Order 414.1X, *Quality Assurance*
- DOE Standard 1172, *Safety Software Quality Assurance Functional Area Qualification Standard*
- DOE Standard XXXX, *Application of Safety Instrumented Systems used in Non-Reactor Nuclear Facilities*

- DOE Standard 1173-2009, *Criticality Safety Functional Area Qualification Standard*
- DOE Standard 1083-2009, *Processing Exemptions to Nuclear Safety Rules and Approval of Alternative Methods for Documented Safety Analyses*
- DOE Handbook 1028-2009, *Human Performance Improvement Handbook*, Volume 1: *Concepts and Principles*, and Volume 2: *Human Performance Tools for Individuals, Work Teams, and Management*

Use of Quantitative Risk Assessment Methodologies. The Board identified the timely need for adequate policies and associated standards and guidance on the use of quantitative risk assessment methodologies at DOE defense nuclear facilities and issued Recommendation 2009-1, *Risk Assessment Methodologies at Defense Nuclear Facilities*. The Board recommended that DOE:

1. Establish a policy on the use of quantitative risk assessment for nuclear safety applications.
2. Consistent with this policy, establish requirements and guidance in a DOE directive or directives that prescribe controls over the quality, use, implementation, and applicability of quantitative risk assessment in the design and operation of defense nuclear facilities.
3. Evaluate current ongoing uses of quantitative risk assessment methodologies at defense nuclear facilities to determine if interim guidance or special oversight is warranted pending the development of formal policy and guidance.
4. Establish a requirement to identify deficiencies and gaps in ongoing applications of quantitative risk assessment along with the additional research necessary to fill those gaps in support of the development and implementation of the final policy and guidance.

DOE's Implementation Plan for this Recommendation is expected in late calendar year 2009.

Recommendation 2007-1, Safety-Related In Situ Nondestructive Assay of Radioactive Materials. The Board evaluated DOE's progress in implementing the Recommendation issued in October 2007. The Technical Support Group, defined in the Implementation Plan and comprised of senior DOE and contractor personnel with significant experience in nondestructive assay, developed lines of inquiry to be used during site reviews starting in calendar year 2009. Lines of inquiry included criteria for reviews of training and qualification, design requirements for new facilities and equipment, standards for conducting holdup measurements, implementation of standards, research and development, quality assurance, and oversight. The Board's staff observed the Technical Support Group's benchmarking efforts at key defense nuclear facilities.

Nuclear Criticality Safety. The Board conducted reviews in 2009 related to nuclear criticality safety issues highlighted in Board correspondence with DOE in January 2008 that expressed concerns that DOE reviews of criticality safety may not be of sufficient depth to accurately assess the health of nuclear criticality safety programs at defense nuclear facilities. The Board issued a letter in January 2009 underscoring issues with Nuclear Criticality Safety Evaluations conducted by Y-12. In addition, the Board's staff conducted a review of nuclear criticality safety at Los Alamos National Laboratory to assess progress in resolving previously identified issues. The Board continued to evaluate complex-wide activities as described in DOE's annual report on criticality safety.

Justifications for Continued Operations. The Board continued its review and oversight of DOE's processes and practices associated with the use of justifications for continued operations (JCO) at defense nuclear facilities. Previously the Board found a number of weaknesses in the JCO process and its implementation at defense nuclear facilities. In response to the Board's concerns, DOE is making progress in developing revised guidance for use in the field in the development and implementation of JCOs. Formal review of this guidance is expected to be completed by late calendar year 2009.

Safety System Design, Functionality, and Maintenance Reviews. In 2008 the Board conducted reviews of safety system design, functionality, and maintenance at a number of defense nuclear facilities. These reviews identified a number of deficiencies and weaknesses related to ensuring that credited safety systems can adequately perform their required functions in all operating regimes. Throughout FY 2009 the Board interacted with DOE and NNSA to properly disposition these findings. In particular, the Board has taken definitive action to fully characterize and drive the corrective actions for significant safety issues at Los Alamos National Laboratory at both the plutonium and tritium facilities.

A previous Board review of aging issues at H-Canyon highlighted the need to perform more inspections of aging equipment. The Board's review of the initial proposed approach identified many major flaws, and the Board strongly encouraged DOE to pursue a different approach. The new Integrated Facility Aging Management Program is producing the desired results in a timely manner and is now being expanded to review safety systems across SRS.

Readiness Reviews. The Board reviewed updates to directives related to startup and restart of nuclear facilities, as well as their implementation at defense nuclear facilities. Revisions to these directives are expected to provide much needed clarity. The Board actively monitors Startup Notification Reports for defense nuclear facilities under its cognizance and reviews startup and restart activities accordingly.

Conduct of Operations. The Board conducted conduct of operations reviews at Y-12 and Hanford in 2009. These reviews assessed the adequacy of DOE directives and standards implementation in the flow down to site-specific policies, procedures and instructions. Although the Board noted areas where opportunities for improvement in conduct of operations existed, overall these two sites had properly implemented conduct of operations programs.

Recommendation 2002-1, Quality Assurance for Safety Related Software. On December 22, 2008, the DOE Chief Health, Safety and Security Officer proposed an approach for managing the safety software central registry, a task of the remaining commitment of DOE's Implementation Plan for Recommendation 2002-1. Based on progress throughout this fiscal year, the Board expects DOE to formally request closure of this recommendation late this calendar year, 2009. The Board's staff continues to evaluate quality assurance practices for safety-related software throughout the complex.

DOE Technical Capability. The Board continues to follow the state of technical competency throughout the DOE defense nuclear facilities complex. The Board's staff observed the activities of DOE's Federal Technical Capabilities Panel (FTCP) throughout the fiscal year and reviewed directives governing the FTCP as well as technical qualification standards for several areas of technical specialization. After the Board identified several deficiencies with qualification cards for Facility Representatives, DOE conducted an assessment, revised the qualification cards and standards, and disqualified a Facility Representative who had been improperly granted interim qualifications. After the Board identified the

lack of training opportunities for Facility Representative candidates, DOE set up a two-week course for Facility Representative candidates and Safety System Oversight candidates.

Activity-Level Work Planning. During 2009, the Board reviewed work planning processes at three sites. The reviews of work planning and control processes at Idaho National Laboratory, Y-12, and Los Alamos National Laboratory indicate that their programs have not been fully implemented and weaknesses still remain. DOE has made efforts to address these weaknesses, but to date these efforts have been inadequate.

Implementation of Safety Basis Controls. Independent validation of implementation of safety basis controls is important to nuclear safety, as discussed in a Board letter to DOE in 2008. Some DOE sites have protocols for performing such validations, but DOE continues to lack complex-wide requirements and guidance for independent reviews of the implementation of nuclear safety basis controls. In a brief to the Board on March 26, 2009, DOE provided the Board with information on a new Guide that has been drafted, *Guide for Performance of Independent Verification Reviews (IVRs) of Safety Basis Controls*. This draft Guide was issued to the field on March 19, 2009, in a 6 month pilot effort. The memo states that, "It is expected that each site will compare the practices outlined in this guide to your current site processes and adjust them, if appropriate." This direction is a positive step in compelling independent verification reviews at defense nuclear facilities.

Safety Culture Improvement Project. Starting in FY 2008 with DOE and its contractors establishing a jointly sponsored task team to develop tools for assessing and improving the safety culture of the federal and contractor workforces, progress continues to be made in refining these tools. As evidenced by the Deputy Secretary of Energy's memorandum dated January 16, 2009, support for strengthening safety culture now has strong leadership support. The Board has been closely observing the team's efforts and will continue to evaluate and encourage this effort as it continues to mature.

Recommendation 2004-1, Oversight of Complex, Hazardous Nuclear Operations. All 22 commitments made in the DOE Implementation Plan responding to Recommendation 2004-1 were due to be complete by 2009. Concerns remain with several commitments that are late or have no discernable response from the DOE. The Board issued a letter to the Secretary of Energy on March 23, 2009, highlighting particular commitments needing attention from senior management and organizational support to meet the intent of the recommendation. The specific troubled commitments highlighted to the Secretary of Energy are:

- Commitment 7, develop process to identify research and development needs across DOE/NNSA and identify the extent that these needs are being met by existing programs; and Commitment 8, develop method to ensure nuclear safety research. These commitments are more than two years late. Efforts made by the office of primary responsibility have fragmented and fall far short of a complex-wide assessment.
- Commitment 2, provide adequate technical support for the Central Technical Authorities (CTAs); and Commitment 3, fully implement the CTA function. The DOE CTA function supporting the Under Secretary of Energy underwent turmoil during the transition of Presidential administrations, and the technical support of the NNSA CTA has been degraded as result of staff

reorganization at NNSA. It appears that the DOE CTA issue was resolved following the confirmation of the Under Secretary of Energy.

The Board also remains engaged in two other areas that have been problematic:

- Commitment 5, issue DOE Safety Oversight Guide. This is intended to be a key document to improve the consistency and completeness of implementation of Integrated Safety Management.
- Commitment 10, deliverable A, develop and implement Quality Assurance Plans required by DOE Order 414.1C, *Quality Assurance*. NNSA's inadequate performance in this area indicates that implementation has not been effective.

Chapter 3

CFO Letter, Auditor's Report and Financial Statements

CFO LETTER

I am pleased to report that the Board's FY 2009 financial statements received an unqualified opinion from its independent auditors, our fourth 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 2009 marked the second 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 DNFSB 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 2009 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 with 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 second 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.

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.



Brian Grosner, Chief Financial Officer



LANI EKO & COMPANY, CPAs, PLLC
110 S. Union Street, Suite 301
Alexandria, VA 22314

Phone: (703) 647-7444
Fax: (866) 665-7269
www.laniekopas.com

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, 2009 and 2008, 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 applicable Office of Management and Budget (OMB) guidance for audits of federal financial statements. 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, 2009 and 2008, 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 6, 2009, 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 that report is 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. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* and should be considered in assessing the results of our audits.

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 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*

FY 2009
DEFENSE NUCLEAR FACILITIES SAFETY BOARD
Performance and Accountability Report

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 audits. 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.

Lari Eko & Company, CPAs, PLLC

November 6, 2009
Alexandria, Virginia



LANI EKO & COMPANY, CPAs, PLLC
110 S. Union Street, Suite 301
Alexandria, VA 22314

Phone: (703) 647-7444
Fax: (866) 665-7269
www.laniekocpas.com

**INDEPENDENT AUDITOR'S REPORT ON
INTERNAL CONTROL OVER FINANCIAL REPORTING
AND ON COMPLIANCE WITH LAWS AND REGULATIONS**

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 years ended September 30, 2009 and 2008, and have issued our report thereon dated November 6, 2009. 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 applicable Office of Management and Budget (OMB) guidance for audits of federal financial statements.

Internal Control over Financial Reporting

In planning and performing our audits, 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 the 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.

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, as defined above.

Compliance with Laws and Regulations

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, 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* and OMB guidance for audits of federal financial statements.

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 6, 2009
Alexandria, Virginia



DEFENSE NUCLEAR FACILITIES SAFETY BOARD

APPROPRIATED FUND

FINANCIAL STATEMENTS

As Of and For The Years Ended September 30, 2009 and 2008

DEFENSE NUCLEAR FACILITY SAFETY BOARD
BALANCE SHEET

As Of September 30, 2009 and 2008

		2009	2008
Assets:			
Intragovernmental:			
Fund Balance With Treasury	(Note 2)	\$ 9,677,632	\$ 8,720,666
Other	(Note 3)	0	155,000
Total Intragovernmental		\$ 9,677,632	8,875,666
Accounts Receivable, net	(Note 4)	19,666	32,698
General Property, Plant and Equipment	(Note 5)	479,462	524,023
Other	(Note 3)	9	0
Total Assets		\$ 10,176,769	\$ 9,432,387
Liabilities:	(Note 6)		
Intragovernmental:			
Accounts Payable	(Note 7)	\$ 8,772	\$ 29,931
Employee Benefits	(Note 8)		130,389
Other	(Note 9)	142,918	
Total Intragovernmental		151,691	160,320
Liabilities With the Public:			
Accounts Payable		751,113	794,595
Other:	(Note 9)		
Accrued Funded Payroll and Leave		921,482	704,665
Withholdings Payable		3	
Unfunded Leave		904,000	871,316
Worker's Compensation	(Note 10)	4,243	7,523
Total Liabilities With the Public		2,580,841	2,378,100
Total Liabilities		2,732,532	2,538,420
Net Position:			
Unexpended Appropriations - Other Funds		8,683,910	8,049,967
Cumulative Results of Operations - Other Funds		(1,239,673)	(1,156,000)
Total Net Position		7,444,237	6,893,967
Total Liabilities and Net Position		\$ 10,176,769	\$ 9,432,387

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

*The accompanying notes are an integral
 part of these statements.*

DEFENSE NUCLEAR FACILITY SAFETY BOARD
STATEMENT OF NET COST
 For The Years Ended September 30, 2009 and 2008

	2009	2008
Program Costs:		
DNFSB:		
Gross Costs (Note 12)	\$ 25,117,100	\$ 23,275,751
Net Program Costs	25,117,100	23,275,751
Net Cost of Operations	\$ 25,117,100	\$ 23,275,751

*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
STATEMENT OF CHANGES IN NET POSITION
 For The Years Ended September 30, 2009 and 2008

	2009	2008
Cumulative Results of Operations:		
Beginning Balances	\$ (1,156,000)	\$ (1,194,943)
Budgetary Financing Sources:		
Appropriations Used	24,366,057	22,697,062
Other Financing Resources (Non-Exchange):		
Imputed Financing	667,370	617,632
Total Financing Sources	25,033,427	23,314,694
Net Cost of Operations (+/-)	25,117,100	23,275,751
Net Change	(83,673)	38,943
Cumulative Results of Operations	\$ (1,239,673)	\$ (1,156,000)
Unexpended Appropriations:		
Beginning Balances	\$ 8,049,967	\$ 8,838,029
Budgetary Financing Sources:		
Appropriations Received	25,000,000	21,909,000
Appropriations Used	(24,366,057)	(22,697,062)
Total Budgetary Financing Sources	633,943	(788,062)
Total Unexpended Appropriations	8,683,910	8,049,967
Net Position	\$ 7,444,237	\$ 6,893,967

*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
STATEMENT OF BUDGETARY RESOURCES
 For The Years Ended September 30, 2009 and 2008

	2009	2008
Budgetary Resources:		
Unobligated Balance:		
Beginning of Period	\$ 3,250,056	\$ 3,950,891
Recoveries of Prior Year Obligations	448,277	651,757
Budget Authority:		
Appropriations Received	25,000,000	21,909,000
Earned		
Collected	16,017	6,925
Subtotal	\$ 25,016,017	\$ 21,915,925
Total Budgetary Resources	\$ 28,714,350	\$ 26,518,573
Status of Budgetary Resources:		
Obligations Incurred		
Direct (Note 13)	\$ 24,862,664	\$ 23,268,517
Subtotal	\$ 24,862,664	\$ 23,268,517
Unobligated Balances		
Apportioned	3,387,392	2,591,374
Subtotal	\$ 3,387,392	\$ 2,591,374
Unobligated Balances - Not Available	464,294	658,682
Total Status of Budgetary Resources	\$ 28,714,350	\$ 26,518,573
Change in Obligated Balances:		
Obligated Balance, Net:		
Unpaid Obligations, Brought Forward, October 1	\$ 5,470,610	\$ 5,198,508
Total, Unpaid Obligated Balance, Brought Forward, Net	\$ 5,470,610	\$ 5,198,508
Obligations Incurred	24,862,664	23,268,517
Gross Outlays (-)	(24,059,051)	(22,344,659)
Recoveries of Prior-Year Unpaid Obligations, Actual (-)	(448,277)	(651,757)
Obligated Balance, Net, End of Period:		
Unpaid Obligations (+) (Note 14)	5,825,946	5,470,610
Total, Unpaid Obligated Balance, Net, End of Period	\$ 5,825,946	\$ 5,470,610
Net Outlays:		
Gross Outlays (+)	24,059,051	22,344,659
Offsetting Collections (-)	(16,017)	(6,925)
Net Outlays (Note 15)	\$ 24,043,034	\$ 22,337,734

*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 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 Accountant's (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, 2009, 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 congressional appropriations. Appropriated funds are received annually and 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 postretirement 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. A worksheet adjustment was made for a credit of \$813 for FY 2009 for payroll charges that were reflected in the U.S. Treasury cash balance but were not yet recorded in the GSA accounting system. The status of these funds as of September 30, 2009 and 2008 are as follows:

	<u>FY 2009</u>	<u>FY 2008</u>
A. Fund Balance with Treasury	\$9,677,632	\$8,720,666
Appropriated Fund		
B. Status of Fund Balance with Treasury		
1) Unobligated Balance	3,618,485	2,591,374
(a) Available	464,294	658,682
2) Obligated Balance not yet Disbursed	<u>5,594,853</u>	<u>5,470,610</u>
Total	\$9,677,632	\$8,720,666

Note 3 – Other Assets

At the end of FY 2007, the Board entered into an Interagency Agreement (IA) with the Public Research Division of the Library of Congress for a research and report project. Per the Library of Congress's enabling authority and the terms of the IA, they billed in advance for the services. The project was completed by the end of FY 2009; the 2008 Intra-governmental amount was the balance for services still to be rendered as of September 30, 2008.

	FY 2009	FY 2008
Intragovernmental	\$0	\$155,000
With the Public - Associates	\$9	\$ 0
Total Other Assets	\$9	\$155,000

Note 4 – 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 2009	FY 2008
Claims	\$19,666	\$32,698

Note 5 – 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, 2009 and 2008 are as follows.

2009	Equipment	Furniture & Fixtures	Software	Total
Cost	\$935,609	\$52,644	\$530,006	\$1,518,259
Accum. Depr.	(657,837)	(52,644)	(328,316)	(1,038,797)
Net Book Value	\$277,772	\$ 0	\$201,690	\$ 479,462

2008	Equipment	Furniture & Fixtures	Software	Total
Cost	\$901,448	\$52,644	\$392,629	\$1,346,721
Accum. Depr.	(574,229)	(52,644)	(195,825)	(822,698)
Net Book Value	\$327,219	\$ 0	\$196,804	\$ 524,023

Note 6 – Liabilities Not Covered by Budgetary Resources

The liabilities on the Board’s Balance Sheets as of September 30, 2009 and 2008 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, 2009 and 2008 is as follows:

	<u>2009</u>	<u>2008</u>
Unfunded Leave	\$ 904,000	\$ 871,316
<u>Workers’ Compensation</u>	<u>\$ 4,243</u>	<u>\$ 7,523</u>
Total liabilities not covered by budgetary resources	\$ 908,243	\$ 878,839
<u>Total liabilities covered by budgetary resources</u>	<u>\$1,824,289</u>	<u>\$1,659,581</u>
Total Liabilities	\$2,732,532	\$2,538,420

Note 7 - Intragovernmental Liabilities

Intragovernmental liabilities arise from transactions with other federal entities. Of the FY 2009 accounts payable intragovernmental liabilities, \$1,703 is with GSA and the balance of \$7,069 is with OPM. Of the FY 2008 accounts payable intragovernmental liabilities, \$7,978 is with GSA, \$10,784 is with DHS and the balance of \$11,169 is with OPM. Employee benefits are the amounts owed to OPM and Treasury as of September 30, 2009 and 2008 for Federal Employees Health Benefits Program (FEHBP), Federal Employees’ Group Life Insurance Program (FEGSIP), 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 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, 2009 and 2008 consist of Accrued Funded Payroll and Leave, Withholdings Payable and Unfunded Leave in the amounts shown below:

	With the Public	Non-Current	Current	Total
2009	Other Liabilities	\$904,000	\$921,485	\$1,825,482
2008	Other Liabilities	\$871,316	\$704,665	\$1,575,981

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, 2009 and 2008, as follows:

	FY 2009	FY 2008
Worker’s Compensation	\$4,243	\$7,523

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Note 11 – Leases

The Board has not entered into any existing capital leases and thus has incurred no liability resulting from such leases. Its one operating lease is for headquarters office space from GSA. Lease costs for office space for FY 2009 and FY 2008 under the terms of its leases amounted to \$2,190,193 and \$2,196,340, 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:

Fiscal Year Ending September 30	Payment
2010	\$ 2,272,920
2011	\$ 2,344,425
2012	\$ 2,319,873
2013	\$ 2,355,130
2014	\$ 2,391,445
2015 and thereafter	\$ 3,447,443
Total Estimated Future Lease Payments	\$15,131,236

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 2009	\$3,885,602	\$21,231,498	\$25,117,100
FY 2008	\$3,695,928	\$19,579,823	\$23,275,751

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

OC	Description	FY 2009	FY 2008
11	Personnel Compensation	\$13,403,661	\$11,844,915
12	Personnel Benefits	\$ 4,274,093	\$ 3,990,545
21	Travel & Transportation of Persons	\$ 956,570	\$ 845,006
22	Transportation of Things	\$ 66,866	\$ 86,137
23	Rent, Communications, & Utilities	\$ 2,374,947	\$ 2,326,078
24	Printing & Reproduction	\$ 18,686	\$ 20,989
25	Other Contractual Services	\$ 3,291,946	\$ 3,453,861
26	Supplies & Materials	\$ 252,417	\$ 196,606
31	Acquisition of Assets	\$ 477,914	\$ 511,614
	Total	\$25,117,100	\$23,275,751

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 2009	FY 2008
Direct		
Category A	\$24,862,664	\$23,268,517

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 good and services received). The amount of each is as follows:

	Undelivered Orders	Accounts Payable	Unpaid Obl. Balance, Net
FY 2009	▪ 4,001,658	\$1,824,288	\$5,825,946
FY 2008	\$3,811,029	\$1,659,581	\$5,470,610

In addition, in FY 2008 the Board had \$155,000 in prepaid Undelivered Orders relating to the advance payment to the Library of Congress (reference Note 3).

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 2008, no material differences exist between the amounts on the Statements of Budgetary Resource and the amounts in the fiscal year 2010 President’s Budget which are rounded to the nearest million. As the FY 2011 President’s Budget is not yet available, comparison between the Statement of Budgetary Resources and the actual FY 2009 data in the FY 2011 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:

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FY 2009

	FY 2008	FY 2009	Change
Unfunded Annual Leave	\$871,316	\$904,000	\$32,684
Workers Compensation	\$ 7,523	\$ 4,243	(\$ 3,280)
Total	\$878,839	\$908,243	\$29,404

FY 2008

	FY 2007	FY 2008	Change
Unfunded Annual Leave	\$794,541	\$871,316	\$76,775
Workers Compensation	\$ 8,941	\$ 7,523	(\$ 1,418)
Total	\$803,482	\$878,839	\$75,357

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

Budgetary resources obligated are obligations for personnel, goods, services, benefits, etc. made by 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 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)):

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	FY 2009	FY 2008
Budgetary Resources Obligated	\$24,862,664	\$23,268,517
Spending Authority from Recoveries and Offsetting Collections	(464,294)	(658,682)
Imputed Financing from Costs Absorbed by Others	667,370	617,632
Changes in Budgetary Resources Obligated for Goods, Services, and Benefits Ordered but Not Yet Provided	(35,638)	84,009
Resources that Finance the Acquisition of Assets	(207,571)	(363,353)
Financing Sources Yet to be Provided (see Note 15)	29,404	75,357
Components Not Requiring or Generating Resources	265,165	252,271
Net Cost of Operations	\$25,117,100	\$23,275,751

APPENDIX A: LIST OF ABBREVIATIONS AND ACRONYMS

C&A	Certification & Accreditation
CD	Critical Decision
CFR	Code of Federal Regulations
CY	Calendar Year
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
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
NTS	Nevada Test Site
OMB	Office of Management and Budget
ORNL	Oak Ridge National Laboratory
PAR	Performance and Accountability Report
PDP	Professional Development Program
SNL	Sandia National Laboratories
SRS	Savannah River Site
WIPP	Waste Isolation Pilot Plant
WTP	Waste Treatment Plant (at Hanford)
Y-12	Y-12 National Security Complex