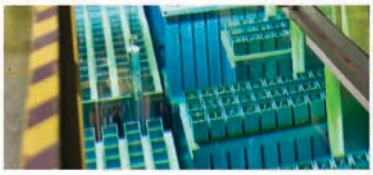
Strategic Plan
FY 2011 – 2016



The Defense Nuclear Facilities Safety Board

March 1, 2011

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DEFENSE NUCLEAR FACILITIES SAFETY BOARD

Wasington, D.C. 20004-2901

Message from the Board

We are pleased to present the Defense Nuclear Facilities Safety Board's (Board) Strategic Plan for Fiscal Years 2011–2016. We expect the Department of Energy's (DOE) defense nuclear facilities to present the Board new challenges as they undergo significant changes, including the potential for a transformation of the nuclear weapons complex and the design and construction of major nuclear waste processing and stabilization facilities. This updated Strategic Plan sets forth a broad vision of how the Board will fulfill its statutory mission to ensure adequate protection of public health and safety at DOE's defense nuclear facilities in the face of these challenges. The Board recognizes that the safety of defense nuclear facility workers is an important part of its mission.

As we plan to meet these responsibilities, the Board's strategic safety goals and objectives are aligned to its core functions and organizational structure. The Board continues to emphasize technical expertise, independent judgment, focused nuclear safety reviews, and public hearings. This ensures that the Board provides independent, stable, and predictable safety oversight of defense nuclear facilities. This Strategic Plan also describes our agency's commitment to management excellence. This plan includes the core values that will guide our work.

In order to meet its statutory obligations and its strategic goals, the Board intends to focus on six strategic initiatives over the period of this plan. These initiatives are designed to drive DOE to create the culture necessary to achieve adequate protection of public health and safety in its defense nuclear facilities.

- **Safety in Design.** The Board calls for early identification and resolution of safety requirements and issues for new defense nuclear facilities.

- **Integrated Safety Management.** The Board calls for renewed commitment to and rigorous implementation of Integrated Safety Management (ISM) principles for all operations conducted within defense nuclear facilities.

- **Technical Competence.** The Board calls for the acquisition, training and qualification of a workforce that is technically competent to manage and operate the defense nuclear facilities safely.

- **Nuclear Safety Research and Development.** The Board calls for DOE to ensure the continued integration and support of research, analysis, and testing in nuclear safety technologies.

- **Standards.** The Board calls for DOE to properly document, maintain, and implement safety requirements within the DOE Directives System.

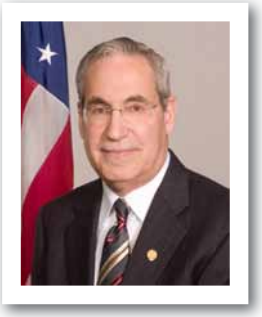
- **Formality of Operations.** The Board calls for DOE to institute formal conduct of operations principles and formal conduct of engineering principles across all of its defense nuclear facilities.

We will use all of the Board's legislative authorities while executing these initiatives. The Board prefers to resolve safety concerns and issues at the lowest level possible but will elevate concerns and issues as necessary. To accomplish this, the Board utilizes letters, reports, public hearings, and formal Recommendations to advise the Secretary of Energy and the DOE staff of its findings and concerns.

The Strategic Plan for Fiscal Years 2011–2016 will serve as a guide for how the Board discharges its responsibilities to the American people.

Sincerely,

Peter S. Winokur, Ph.D.
Chairman



Peter S. Winokur, Chairman

Jessie H. Roberson, Vice Chairman

John E. Mansfield, Board Member

Joseph F. Bader, Board Member

Introduction

The Defense Nuclear Facilities Safety Board (Board), an independent executive branch agency, is charged under its enabling statute with providing technical safety oversight of the DOE's defense nuclear facilities and activities in order to protect the health and safety of the public and workers.

The Board is composed of five respected experts in the field of nuclear safety with demonstrated competence and knowledge relevant to its independent investigative and oversight functions. The 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 general public with added assurance that DOE's defense nuclear facilities are being safely designed, constructed, operated, and decommissioned. The Board's specific functions set forth at 42 U.S.C. § 2286a.(a) and 2286d. are:

(1) Review and evaluation of standards.

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.

(2) Investigations.

(A) 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.

(B) The purpose of any Board investigation under subparagraph (A) shall be –

(i) to determine whether the Secretary of Energy is adequately implementing the standards described in paragraph (1) of the Department of Energy (including all applicable Department of Energy orders, regulations, and requirements) at the facility;

(ii) to ascertain information concerning the circumstances of such event or practice and its implications for such standards;

(iii) to determine whether such event or practice is related to other events or practices at other Department of Energy defense nuclear facilities; and

(iv) to provide to the Secretary of Energy such recommendations for changes in such standards or the implementation of such standards (including Department of Energy orders, regulations, and requirements) and such recommendations relating to data or research needs as may be prudent or necessary.

(3) Analysis of design and operational data.

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.

(4) Review of facility design and construction.

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.

(5) Recommendations.

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.

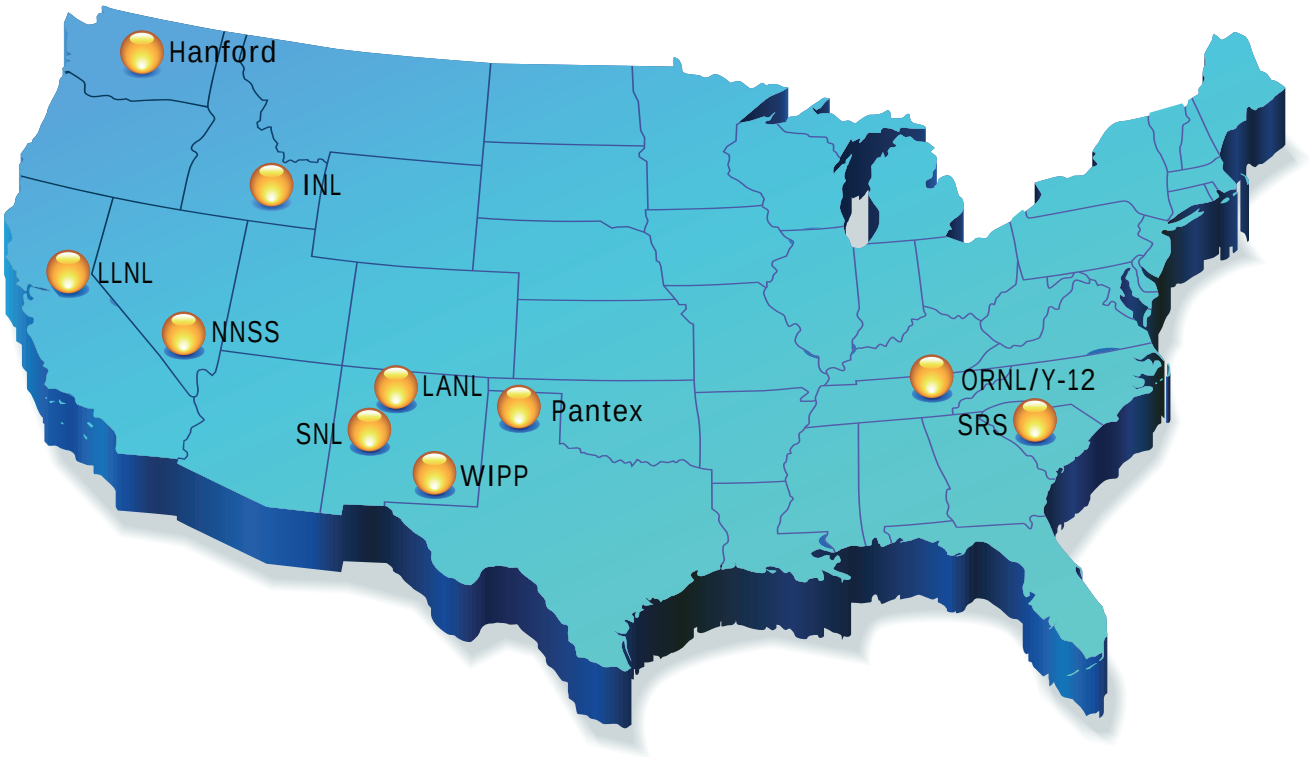
(6) Imminent or severe threat.

(1) In any case in which the Board determines that a recommendation submitted to the Secretary of Energy under section 2286a of this title [§ 312 of the Atomic Energy Act] relates to an imminent or severe threat to public health and safety, the Board and the Secretary of Energy shall proceed under this subsection in lieu of subsections (a) through (d) of this section.

(2) At the same time that the Board transmits a recommendation relating to an imminent or severe threat to the Secretary of Energy, the Board shall also transmit the recommendation to the President and for information purposes to the Secretary of Defense. The Secretary of Energy shall submit his recommendation to the President. The President shall review the Secretary of Energy's recommendation and shall make the decision concerning acceptance or rejection of the Board's recommendation.

(3) After receipt by the President of the recommendation from the Board under this subsection, the Board promptly shall make such recommendation available to the public and shall transmit such recommendation to the Committees on Armed Services and on Appropriations of the Senate and to the Speaker of the House of Representatives. The President shall promptly notify such committees and the Speaker of his decision and the reasons for that decision.

Defense Nuclear Facilities



The Board conducts independent health and safety oversight of the Department of Energy's activities at the following defense nuclear facilities:

Pantex Plant in Texas. Management and maintenance of the nuclear weapons stockpile, including assembly and disassembly, surveillance, maintenance, and dismantlement of nuclear weapons and the storage of special nuclear material, particularly plutonium pits.

Oak Ridge National Laboratory / Y-12 National Security Complex in Tennessee. Management and maintenance of nuclear weapons stockpile, including assembly and disassembly, surveillance, maintenance, and dismantlement of nuclear weapon components; fabrication of nuclear weapon components, including highly enriched uranium processing; dismantling and disposition of excess defense nuclear facilities; and storage of nuclear materials, including uranium from weapon components.

Savannah River Site (SRS) in South Carolina. Tritium operations, storage of special nuclear material, the stabilization of high-level waste and residual nuclear materials from previous defense nuclear operations, and the disposition of excess plutonium.

Los Alamos National Laboratory (LANL) in New Mexico. Management and stewardship of the nation's nuclear weapons stockpile, including research and enhanced surveillance of weapons, processing of nuclear materials, and pit production.

Lawrence Livermore National Laboratory (LLNL) in California. Management and stewardship of the nuclear weapons stockpile, including research and enhanced surveillance of weapons, and the processing of nuclear materials.

Nevada National Security Site (NNSS) in Nevada. Stewardship of the nuclear weapons stockpile, including subcritical experiments and criticality experiments, and the packaging and disposal of radioactive waste.

Sandia National Laboratories (SNL) in New Mexico and California. Management and stewardship of the nuclear weapons stockpile, including research and enhanced surveillance of weapons.

Hanford Site in Washington. Storage and disposition of high-level waste, stabilization of residual sludge from corroded spent nuclear fuel, stabilization of other residual nuclear material from previous operations, and the dismantling and disposition of excess defense nuclear facilities.

Idaho National Laboratory (INL) in Idaho. Storage and stabilization of high-level waste, the storage and disposition of spent nuclear fuel, packaging and disposition of radioactive waste, and the dismantling and disposition of excess defense nuclear facilities.

Waste Isolation Pilot Plant (WIPP) in New Mexico. Receipt, handling, and permanent deep geological disposal of transuranic wastes.

Risks to Public and Worker Health and Safety

DOE's nuclear weapons operations are unique in that they include nuclear explosives and experiments involving co-located high explosives and nuclear material.

Unlike commercial nuclear facilities, the risks at these defense nuclear facilities are not solely a function of the quantities of nuclear material present but can also involve the potential for explosive dispersal of radioactive materials or inadvertent nuclear detonation.

The potential causes of an inadvertent release of nuclear material with consequential harm to workers and the public include inadequate safety controls in new and old facility designs, human errors, equipment malfunctions, chemical reactions, fire, detonation of explosives, and inadvertent nuclear criticality events. Many DOE facilities continue to contain sufficient amounts of fissionable material such that the risk of an accidental nuclear criticality exists and must be controlled. Unpredictable chemical reactions in materials used in defense nuclear work need to be carefully monitored. As the massive DOE cleanup effort continues, use of leading edge technologies in new facilities can create additional safety risks due to lack of experience with these technologies.

The fact that DOE's nuclear weapons program remains a technically challenging and hazardous operation cannot be overemphasized. Tons of radioactive and toxic materials exist throughout the defense nuclear complex, either in use in the nuclear weapons program or in storage as a result of previous operations. There are multiple pathways by which these hazardous materials might be released, creating risks to the workers and the general public.

Many of the complex's facilities were constructed decades ago and are deteriorating as they age, posing significant hazards to the environment, the general public, and the facility workers. As new facilities are built, not only must the old waste and facilities be dealt with, but also new waste streams will be created that require extensive planning so as not to repeat the errors of the past. The integrity of facilities or structures that confine hazardous materials (new and old) can be threatened by earthquakes, extreme winds, floods, lightning, and other natural phenomena.

This strategic plan addresses the crucial work facing the Board in protecting public health and safety, and takes into account three trends that are expected to continue into the foreseeable future: increased activity at DOE's defense nuclear facilities, increased Congressional concerns about defense nuclear facilities and operations, and Executive Branch management requirements.

The Mission

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

Ten Point Vision

- Foster public confidence in the safety of activities at DOE's defense nuclear facilities.
- Ensure that the imbedded safety culture at defense nuclear facilities is sound, technically competent, and risk aware.
- Ensure that published standards are understood and implemented consistently – and without exception by the federal and contractor workforce.
- Ensure that DOE line management is fully cognizant of both the challenges faced and the competence of the federal and contractor workforce, and is committed to uncompromised public health and safety.
- Ensure that DOE anticipates safety risks and hazards, bounds safety risks at defense nuclear facilities conservatively, and takes action to prevent accidents caused by such risks and hazards.
- Ensure that existing or discovered hazards are mitigated quickly and comprehensively, and subsequent actions preclude the possibility that similar situations can threaten the public, including defense nuclear facility workers elsewhere in the defense nuclear complex.
- Ensure that DOE is adequately prepared for contingencies that may threaten the public, including defense nuclear facility workers.
- Ensure the continued integration and support of research, analysis, and testing of nuclear safety technologies.
- Ensure that activities and competence of the Defense Nuclear Facilities Safety Board and its staff earn the respect and confidence of the public and DOE for: expertise in the field of nuclear safety, demonstrated competence and knowledge relevant to its statutory independent investigative responsibilities, and performance of its oversight functions.
- Ensure that the highest standards of integrity, efficiency, effectiveness, transparency, fiscal responsibility, and management proficiency are maintained by the Defense Nuclear Facilities Safety Board.

Core Values

The Board is committed to exemplifying these core values and expects the staff to hold themselves to them:

- Exhibit excellence in all work products. Develop credibility by demonstrating technical and professional excellence at all times and requiring excellence of others.

- Understand the use of standards. The Board uses established standards of safety in conjunction with technical analysis of the risks to provide advice to the Secretary of Energy. Understand the concept of adequate protection of public health and safety as stated in the Board's enabling legislation. Application of standards extends to all fields – legal, administrative, support, and technical. Employees strive to understand each requirement and where it comes from.

- Apply federal ethics rules strictly within the Board as an example for others to emulate.

- Use leadership in confronting difficult issues. Make decisions that are objective, coherent, defensible, and open to public scrutiny.

- Make and take responsibility for difficult decisions. Base decisions on standards, ethics, and expert knowledge of the issue.

- Maintain a strong work ethic that includes diligence and initiative when completing tasks.

- Acquire knowledge through continuous training and qualification. Maintain proficiency and currency in your field of expertise.

- Foster and encourage creative thinking using teamwork. Appreciate divergent opinions and learn from your experience and the experience of others. Foster teamwork within your group and office and with other Board offices.

Goals

The Board has identified four strategic safety goals that are interdependent strategic areas of concentration, and a fifth goal (Management Excellence) that supports the others:

Strategic Goal # 1	Safe Nuclear Weapons Operations
Strategic Goal # 2	Safe Processing and Stabilization of Nuclear Material
Strategic Goal # 3	Safety in Nuclear Facilities Design and Infrastucture
Strategic Goal # 4	Effective Nuclear Safety Programs and Analysis
Strategic Goal # 5	Management Excellence

Strategic Initiatives Designed to Meet Strategic Goals

The Board's strategy is to achieve the five goals above by focusing on the following strategic initiatives. These initiatives are designed to drive DOE to create the culture necessary to achieve adequate protection of public health and safety in its defense nuclear facilities.

- **Safety in Design.** The Board calls for early identification and resolution of safety requirements and issues for new defense nuclear facilities. This will ensure adequate protection of public health and safety and aid in completing projects on time and within budget.

- **Integrated Safety Management.** The Board calls for renewed commitment to and rigorous implementation of Integrated Safety Management (ISM) principles for all operations conducted within defense nuclear facilities.

- **Technical Competence.** The Board calls for the acquisition, training, and qualification of a workforce that is technically competent to manage and operate the defense nuclear facilities safely. This includes, in particular, key federal oversight positions such as facility representatives and safety system oversight personnel.

- **Nuclear Safety Research and Development.** The Board calls for DOE to ensure the continued integration and support of research, analysis, and testing in nuclear safety technologies.

- **Standards.** The Board calls for DOE to properly document, maintain, and implement safety requirements within the DOE Directives System. The Board will particularly emphasize this as DOE implements a major restructuring and reissue of its Directives System.

- **Formality of Operations.** The Board calls for DOE to institute formal conduct of operations principles and formal conduct of engineering principles across all of its defense nuclear facilities to ensure that deliberate and considered actions are taken in all circumstances that could pose a hazard to public health and safety.

The Board uses all of the legislative authorities at its disposal while executing these initiatives. The Board prefers to resolve safety concerns and issues at the lowest level possible, but will elevate concerns and issues as necessary. To accomplish this, the Board utilizes letters, reports, public hearings, and formal Recommendations to advise the Secretary of Energy and the DOE staff of its findings and concerns.

Strategic Goal #1

Safe Nuclear Weapons Operations

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

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

OBJECTIVE

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

Performance Goal 1.
The Board will promote DOE actions to effectively implement Integrated Safety Management (ISM) at the National Nuclear Security Administration's (NNSA) defense nuclear facilities. The Board will ensure that DOE adopts credible health and safety standards at NNSA's defense nuclear facilities, and properly implements them, with particular emphasis on formal conduct of operations, safe start-up/restart of facilities or activities, and nuclear explosive safety. The Board will assist DOE to improve the quality and implementation of Documented Safety Analyses at NNSA's defense nuclear facilities, including addressing such complex issues as specific administrative controls, electrostatic discharge hazards, and nuclear material packaging. The Board will require that DOE acknowledge, act upon, and resolve the health and safety issues at NNSA's defense nuclear facilities in a timely and acceptable manner.

Strategic Goal #2

Safe Processing and Stabilization of Nuclear Material

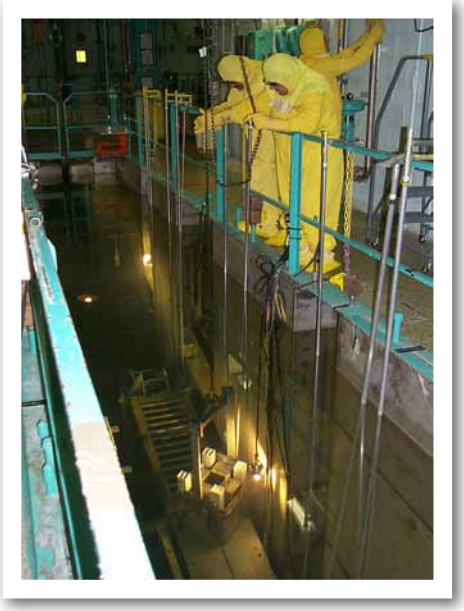
With the shutdown of major weapon production activities at defense nuclear facilities in the early 1990s, substantial quantities of plutonium, uranium, transuranic isotopes, irradiated fuel, and radioactive and hazardous fission products have remained in storage for extended periods under potentially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

The Board's focus in this strategic area is to aid DOE in identifying these excess materials and in reviewing DOE's plans/programs to stabilize the materials and place them in a safe configuration for storage pending future programmatic use or disposition. Board oversight in this area will include the stabilization of spent nuclear fuel at the Savannah River Site in South Carolina; the cleanup of the sludge from corroded spent nuclear fuel at the Hanford Site in Washington; and the conduct of the nuclear waste storage and remediation programs at both of these sites plus the Idaho National Laboratory, and the Waste Isolation Pilot Plant in New Mexico. The Board will also provide health and safety oversight of DOE programs to safely deactivate and decommission facilities at the Hanford and Savannah River Sites, the Y-12 National Security Complex in Tennessee, and the Los Alamos and Lawrence Livermore National Laboratories in New Mexico and California.

OBJECTIVE

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

Performance Goal 2.
The Board will promote DOE actions to effectively implement ISM at DOE's defense nuclear facilities. The Board will ensure that DOE adopts credible health and safety standards at DOE's defense nuclear facilities, and properly implements them, with particular emphasis on formal conduct of operations, and safe start-up/restart of facilities or activities. The Board will assist DOE to improve the quality and implementation of Documented Safety Analyses at DOE's defense nuclear facilities, including addressing such complex issues as specific administrative controls, Justifications for Continued Operation, and nuclear material packaging. The Board will encourage DOE to develop technically robust plans for the safe retrieval, handling, and stabilization of remnant nuclear material; the consolidation and disposition of plutonium; the management of high-level waste; and treatment of sludge from spent nuclear fuel. The Board will require that DOE acknowledge, act upon, and resolve the health and safety issues at DOE's defense nuclear facilities in a timely and acceptable manner.



Strategic Goal #3

Safety in Nuclear Facilities Design and Infrastructure

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

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

OBJECTIVE

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

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

Performance Goal 3.
The Board will assist DOE to address safety reviews early in the design process for its defense nuclear facilities and monitor to ensure implementation during the construction phase of each facility. The Board will ensure that DOE develops facility designs that are robust, with appropriate safety controls that comply with approved nuclear codes and standards. The Board will require the application of approved nuclear codes and standards and current DOE safety standards in the design and construction of new facilites.

Strategic Goal #4

Effective Nuclear Safety Programs and Analysis

The Board's oversight effort in this area focuses on issues where a complex-wide perspective on health and safety issues across the DOE complex is required to identify and correct generic health and safety problems. Under the aegis of ISM, significant resources are applied to areas such as the technical competence of DOE's Federal workforce, the efficiency of DOE's line management and safety oversight, and the development and implementation of ISM systems with particular focus on safety analyses and controls. Key supporting functional areas are also reviewed, such as quality assurance, nuclear criticality safety, and training and qualifications.

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

OBJECTIVE

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

Performance Goal 4.
The Board will ensure that DOE maintains a credible suite of nuclear safety requirements in its directive system. The Board will encourage DOE line management to improve oversight of safety operations. The Board will assist DOE in improving the technical competence of its Federal workforce. The Board will require that DOE reinvigorate the development and implementation of ISM systems with particular focus on quality assurance, nuclear criticality safety, and training and qualification. The Board will encourage DOE's nuclear safety programs be founded on solid research by ensuring the continued integration and support of research, analiysis, and testing to understand the effect(s) of off-normal conditions on nuclear safery technologies.

Strategic Goal #5

Management Excellence

The Board executes its oversight responsibilities using a matrix form of organization for its technical staff that is based on the four previous goals. This organizational structure allows the formation of technical teams composed of personnel from each group to share information and address cross-cutting issues more easily and efficiently.

Management techniques that keep the support staff small, while maximizing its technical staff, will be continued. The Board relies on management guidance from the Office of Management and Budget (OMB), Office of Personnel Management (OPM), and other Executive Branch agencies, especially guidance that applies to small agencies, in developing and assessing its internal policies and procedures. The Board uses cost-effective external service providers rather than maintaining a large government or on-site contractor staff. A small government staff, augmented by contractors, performs the functions of human resource management, financial management, acquisition management, information management, logistics management, security management, travel management, and other administrative matters. A separate General Counsel office provides legal advice to the Board. The Board adopts a conservative and incremental approach to management and change that invests in proven and reliable support systems to reduce risks and associated costs. The Board utilizes organizations such as the Small Agency Council as forums to address common management issues and seek best business practices from other small agencies.

The Board works directly with DOE management at all levels, both at DOE headquarters and in the field, as necessary to accomplish its safety oversight mission. The Board keeps the DOE Office of the Departmental Representative to the Defense Nuclear Facilities Safety Board informed of its activities and coordinates activities between the two agencies with that office when appropriate. The Board uses its legal authorities to establish policies, processes, and procedures for working with DOE.

The Board utilizes the annual Congressional authorization and appropriations process to acquire the resources necessary for the Board's safety oversight activities.

The Board manages three personnel systems: Excepted Service (for the technical staff), Competitive Service, and Senior Executive Service to support its human capital program. The Board's Professional Development Program provides a source for entry-level technical staff. The human resources (HR) staff provides staffing, recruiting, benefits, and policy management, and serves as an interface between the HR service provider and the Board's employees. The Board uses a robust training program to maintain and improve the competencies of the staff. The Board adheres to merit and equal employment opportunity principles. The Board maximizes use of incentives and benefits to attract and retain a quality workforce.

The Board uses its legislative authorities to stay attuned to the planning and execution of DOE's defense nuclear programs by gathering information from a broad range of sources. Once a safety concern is communicated to DOE, the Board uses the same information sources and techniques to ensure that appropriate corrective actions are developed by DOE and its contractors, commitments are made to implement these corrective actions in a timely manner, and these commitments are met. Based on an analysis of available information, the Board chooses from a broad spectrum of action-forcing mechanisms granted by law to communicate identified health and safety concerns and promote appropriate DOE corrective actions. By posting its oversight interactions with DOE and its contractors in the public domain using the Board's public website, the Board seeks to foster the transfer of lessons learned throughout the DOE's defense nuclear complex.

The public has access to the Board's work to the maximum extent possible. This provides visibility into DOE activities to help maintain and restore, as needed, public confidence that the defense nuclear facilities are being operated safely and that the Board's oversight is a positive influence on the safe execution of these activities. The Board documents its activities and makes its correspondence available to the Congress and the public in order to ensure there is no ambiguity concerning the Board's position on a particular matter. The Board maintains a public website and conducts public hearings, as appropriate. Reports to Congress include annual reports detailing new health and safety issues. The Board provides informal briefings to Congressional committees and testifies before Congress, as required. The Board and DOE provide joint reports on appropriate topics. The Board's signed and completed reports are posted on the Board's public web site at www.dnfsb.gov.

OBJECTIVE

Management excellence in support of the Board's mission.

Performance Goal 5.1.
The Board will keep Congress informed on current health and safety issues at DOE's defense nuclear facilities and the status of progress toward issue resolution as required by the Board's statute and other legislation, by: (1) providing annual and other reports (such as the Board's Quarterly Report on the Status of Significant Unresolved Issues with the DOE's Design and Construction Projects), (2) maintaining a public web site which includes Board correspondence to DOE and information on Board activities, (3) testifying and meeting with Congressional Members as requested, and (4) participating in meetings with the staffs of the authorizations and appropriations committees and subcommittees that have oversight of the Board and DOE's defense nuclear facilities.

Performance Goal 5.2.
The Board will inform the public of issues related to health and safety at defense nuclear facilities by: (1) holding public hearings, (2) maintaining a public web site with detailed information on Board identified safety issues and activities, and (3) properly noticing its recommendations and public meetings to encourage meaningful public involvement.

Performance Goal 5.3.
The Board will adopt and execute processes and procedures with DOE that are compatible with the Board's enabling legislation and further the Board's mission. As required by law, DOE must provide access to any and all information and to facilities that the Board deems necessary and appropriate for its work in furtherance of the Board's nuclear safety oversight activities.

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

Performance Goal 5.5.
Appropriate technical and professional expertise will be recruited and further developed by the Board to accomplish the mission. As part of the annual budget submissions to OMB and Congress, the staffing and technical competencies inventory will be reviewed by the Board to determine sufficiency and for planning future needs, including but not limited to, professional development and recruitment activities.

Performance Goal 5.6.
The Board will effectively manage the appropriated financial resources, exercise responsible stewardship over its resources to meet its needs to accomplish the mission, and achieve a "clean" annual audit opinion on its financial statements. The Board will carry over a small contingency fund into the next fiscal year to ensure continuity of operations, to prevent shutdown of operations, to protect against violations of the Anti-deficiency Act, 31 U.S.C § 1341, and to respond quickly to emergency oversight demands.

Performance Goal 5.7.
The Board will assign staff to be in residence at selected sites. These site representatives will provide continuous presence and continuity of Board safety oversight and provide direct, continuous feedback to the Board on hazardous activities and conditions.

Interdependency of Goals

This Plan is based upon interdependency between the five goals. This interdependency provides a strategic framework within which to allocate resources and plan workloads. Changes in one goal can affect the others.

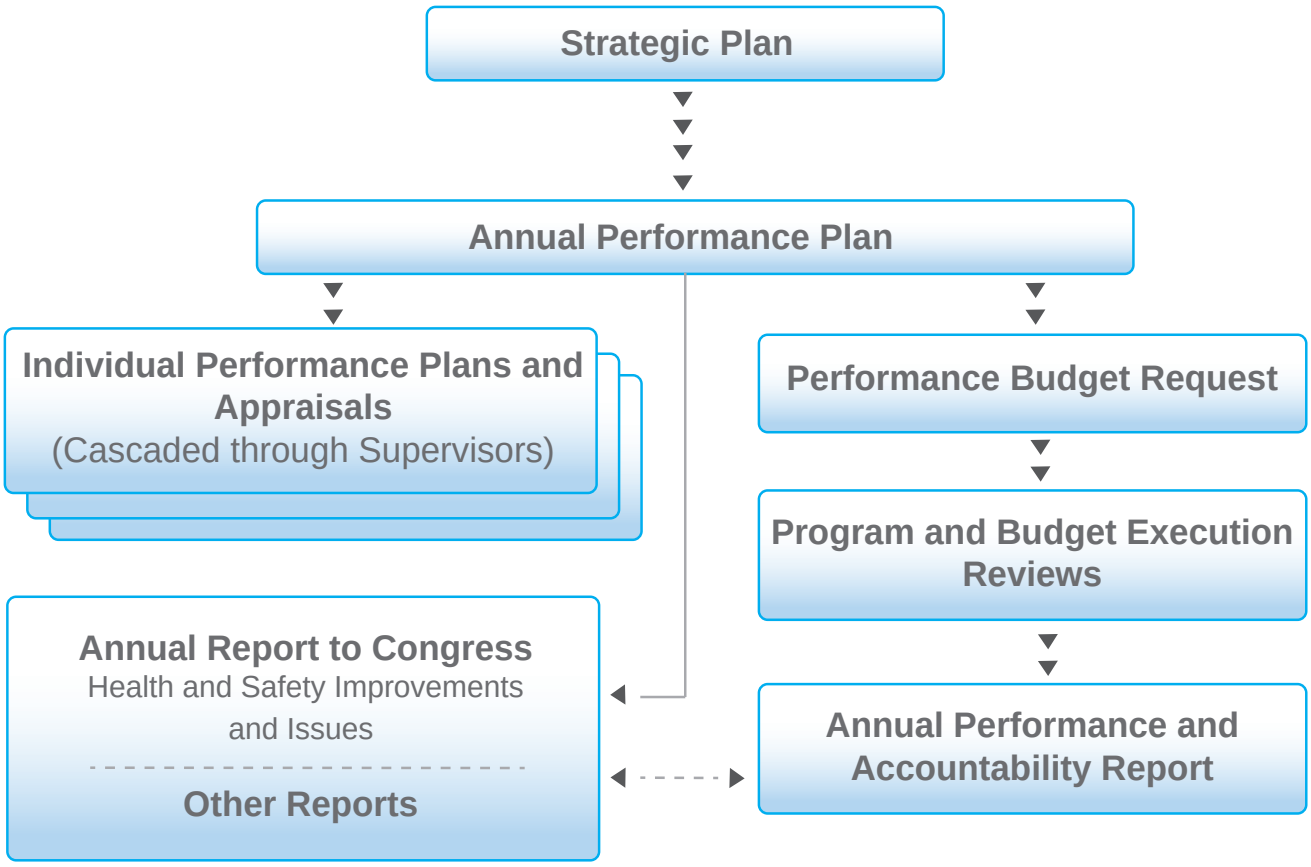
The four strategic areas of concentration goals are dependent upon the management excellence goal to provide the resources and support required to execute the Board's mission.

The nuclear safety review of a site or facility may involve technical review activities in all four strategic areas of concentration: Safe Nuclear Weapons Operations, Safe Processing and Stabilization of Nuclear Material, Safety in Nuclear Facilities Design and Infrastructure, and Effective Nuclear Safety Programs and Analysis. As such, the Board's goals do not represent stand-alone efforts that are independently funded or staffed.

The result of the above interdependency is that the Board looks upon all its activities as a single program for budget planning purposes. The Board uses this flexibility to reallocate resources internally among the various goals and strategic areas of concentration in order to respond to short-term needs, whether they are the result of an accident, changes in the DOE programs, or other external factors.

Relationship between Annual Performance Goals and the Strategic Plan

The goals outlined in this Strategic Plan encompass a broad and balanced spectrum of areas relevant to the Board's oversight activities. These goals require a multi-year effort. The Board develops an Annual Performance Plan that defines the work to be accomplished for the Annual Performance Goals for each performance year. The figure below shows how this Annual Performance Plan relates to the strategic plan, performance assessments, performance budget request, and required performance reports.



The pace and focus of the Board's health and safety oversight work are controlled, in large part, by DOE's planned activities at the defense nuclear facilities. These activities do not necessarily lend themselves to discrete annual tasks as they tend to be multi-year efforts that are subject to change with changing missions, priorities, and resources. Changes in DOE's activities affect accomplishment of the work planned in the Board's Annual Performance Plan. For example, if DOE had begun to execute its multi-year plans to start activities on a particular family of weapons, the Board would have begun to execute its plans to assess compliance with required safety standards based on these DOE plans. A subsequent DOE change to the schedule of completion for its actions might lead the Board to defer its assessment, and shift the resources to another, higher priority task; or to complete the assessment anyway if a particularly significant milestone had been achieved; or, if necessary, to approach the assessment using a different methodology. In all cases, the Board reports what DOE has actually accomplished and assesses DOE's progress based on actual annual accomplishments.

Appendix A: External Risk Factors

DOE's defense nuclear complex continues to evolve. The Board focuses its safety oversight on technical issues associated with external DOE mission-specific operations, which can change when DOE changes its plans, or when previously unrecognized safety concerns are raised. As changes occur, the Board redeploys its resources and modifies some of its strategic and annual performance planning targets accordingly.

The following key external factors may affect the Board's Strategic Plan:

- **Changes in U.S. national security policy concerning the size or composition of the nuclear weaponstockpile and defense nuclear activities.** An increase could include a corresponding increase in the design and construction oversight workload of the Board. Conversely, a decrease could include an increase in nuclear weapon dismantlement programs and materials disposition programs requiring additional oversight while the weapon production output decreases.

- **A major accident or safety-related event involving nuclear material at one of DOE's defense nuclear facilities.** Such an event or accident could dictate significant changes in priority and focus of the Board's oversight program.

- **The Administration's moratorium on the underground testing of nuclear weapons.** Resumption of underground testing, or a major initiative to achieve and maintain an accelerated test readiness program, would require a significant shift in the Board's resources for safety oversight.

- **DOE's commitment and approach toward the stabilization of nuclear materials and cleanup of contaminated defense nuclear facilities.** Fundamental changes in DOE's plans would require the Board to reassess its oversight approach as defined in this Strategic Plan.

- **The Board's statutory authority and responsibilities.** Fundamental changes to the Board's legislative mandate could significantly impact the strategies and means employed to accomplish the Board's oversight mission.

- **Science, Technology, Engineering, and Mathematics Workforce.** Competition for the limited nuclear science and engineering workforce from other federal agencies and the private sector could affect the Board's and DOE's ability to hire essential personnel.

Appendix B: Program Evaluations

The Board did not have any completed external program evaluations concerning its safety oversight mission. The Board has considered the following in preparing this strategic plan:

- **Congressional Committee Reports.** The Board reviewed recent applicable committee reports to determine direction from the Congress, such as Senate Report 109-254—National Defense Authorization Act for Fiscal Year 2007, Title XXXII—Defense Nuclear Facilities Safety Board Authorization (sec. 3201).

- **OPM Audit (2006).** In 2006, the OPM audited the Board's Human Resources policies and procedures. The audit increased the Board's awareness of external management requirements.

- **Financial Audits.** The Board's accounting system, internal controls, and information management systems program were audited by an independent auditing firm annually. Beginning in 2006, the Board received unqualified opinions on its financial statements. The audits validated the Board's management practices and provided feedback for further improvements.

Appendix C: Glossary

Core Values. Operating philosophies or principles that guide an organization's internal conduct as well as its relationship with the external world. Core Values aid in defining the long-term culture of an organization. Culture reflects and becomes the organization's reputation. Core Values define the daily beliefs, attitudes, and behaviors of those who represent the organization.

Defense Nuclear Facility (As defined by the Board's enabling statute (42 U.S.C. § 2286)):

(1) A production facility or utilization facility (as defined in section 2014 of this title [§11 of the Atomic Energy Act]) that is under the control or jurisdiction of the Secretary of Energy and that is operated for national security purposes, but the term does not include:

(A) any facility or activity covered by Executive Order No. 12344, dated February 1, 1982 [42 U.S.C. § 7158 note], pertaining to the Naval nuclear propulsion program;

(B) any facility or activity involved with the transportation of nuclear explosives or nuclear material;

(C) any facility that does not conduct atomic energy defense activities; or

(D) any facility owned by the United States Enrichment Corporation.

(2) A nuclear waste storage facility under the control or jurisdiction of the Secretary of Energy, but the term does not include a facility developed pursuant to the Nuclear Waste Policy Act of 1982 (42 U.S.C. 10101 et seq.) and licensed by the Nuclear Regulatory Commission.

Effectiveness: The ability to achieve the intended outcome(s) of an activity, program, or process. A program cannot be considered effective if it is not meeting its objectives and achieving the intended outcomes.

Efficiency: The ability to act with a minimum of waste, expense, or unnecessary effort. Efficiency embodies a combination of productivity, cost, timeliness, and quality.

High-Level Waste: Irradiated reactor fuel; highly radioactive waste material resulting from the reprocessing of irradiated reactor fuel, including liquid waste produced directly in reprocessing and solid material derived from such liquid waste that contains fission products in sufficient concentrations; and other highly radioactive material that is determined, consistent with existing law, to require permanent isolation.

Appendix C: Glossary (cont.)

Integrated Safety Management (ISM): The systematic integration of safety into management and work practices at all levels. In practice, ISM typically consists of the following five steps:

- Define the scope of work
- Analyze the hazards
- Develop and implement controls
- Perform work
- Feedback and continuous improvement

Integrated Safety Management 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.

Low-level Waste: Items that have become contaminated with radioactive material or have become radioactive through exposure to neutron radiation. This waste typically consists of contaminated protective shoe covers and clothing, rags, mops, filters, water treatment residues, and equipment and tools. The radioactivity can range from just above background levels found in nature to very high levels in certain cases (such as parts from inside the reactor vessel in a nuclear reactor).

Performance Goals: For each strategic goal included in the strategic plan, a limited number of long-term, outcome-oriented performance goals define the targeted level of performance of the strategic goal over time (Section 210, OMB Circular No. A-11 (2010)).

Safety Hazard: A source of danger (i.e., material, energy source, or operation) with the potential to cause illness, injury, or death to personnel or damage to an operation or to the environment (without regard for the likelihood or credibility of accident scenarios or consequence mitigation).

Safety Risk: The quantitative or qualitative expression of possible loss that considers both the probability that an event will occur and the consequences of that event.

Standards: As used in the Board's enabling legislation, a generic term for all of the rules, laws, regulations, DOE directives, national and international standards, and Federal standards applicable to DOE.

Strategic Goals and Objectives: Clear statements of what to achieve relevant to national problems, needs, or challenges (Section 210, OMB Circular No. A-11 (2010)).

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