



Department of Energy
National Nuclear Security Administration
Washington, DC 20585



November 1, 2007


The Honorable A. J. Eggenberger
Chairman
Defense Nuclear Facilities Safety Board
625 Indiana Avenue, NW, Suite 700
Washington, DC 20004

Dear Mr. Chairman:

As the National Nuclear Security Administration Implementation Plan manager for Board Recommendation 2004-1, *Oversight of Complex, High-Hazard Nuclear Operations*, I am forwarding the enclosed Integrated Safety Management System Description, NA-1 Supplemental Directive 450.4-1. It fulfills Commitment 22C in the Department's Implementation Plan for Recommendation 2004-1.

If you have any questions, please contact me at (202) 586-8395.

Sincerely,


for

Frank B. Russo
Senior Advisor for Environment, Safety and Health
National Nuclear Security Administration

cc: Mark B. Whitaker

Enclosure





**National Nuclear Security Administration
Headquarters**

**Integrated Safety Management System
Description**

This NNSA Headquarters Integrated Safety Management System Description describes the NNSA Headquarters role in establishing expectations and accomplishing work in a safe and environmentally sound manner to successfully execute the NNSA mission and strategic goals. NNSA senior managers strongly support and are personally committed to implementation of the policy and principles of Integrated Safety Management.

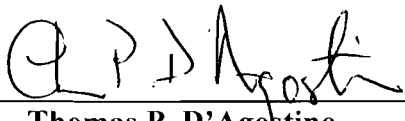
Approved: 
Thomas P. D'Agostino
Administrator

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EXECUTIVE SUMMARY

The Department developed DOE M 450.4-1, *Integrated Safety Management System Manual*, to help improve the effectiveness of and institutionalize expectations associated with Integrated Safety Management (ISM). A main emphasis of DOE M 450.4-1 is the development and implementation of DOE Federal ISM system descriptions. Department personnel play a vital role in the Department-wide ISM system. The Department role is at various times characterized as owner, customer, or regulator, which is markedly different from the contractor role, but very important for assuring safety.

DOE M 450.4-1 requires development of this NNSA Headquarters (HQ) ISM System Description. This NNSA HQ ISM System Description accomplishes the following:

- Emphasizes the strong support and personal commitment of NNSA senior managers to implementation of the policy and principles of Integrated Safety Management
- Describes the NNSA HQ role in establishing expectations for accomplishing work in a safe and environmentally sound manner to successfully execute the NNSA mission and goals
- Defines the NNSA HQ work activities related to achieving the ISM objective of safe mission accomplishment
- Describes the specific mechanisms, processes, and methods by which NNSA management ensures that ISM core functions and guiding principles are effectively implemented
- Describes how ISM, which includes Environmental Management Systems per DOE Policy 450.4, is integrated with other management systems, such as Line Oversight and Contractor Assurance Systems, Quality Assurance Programs, and Integrated Safeguards and Security Management Systems. In a separate but related action, NNSA has commenced efforts to eventually consolidate additional management systems into one integrated management system.
- Describes the set of Performance Objectives, Measures and Commitments that NNSA HQ currently uses to gauge the effectiveness of its ISM System.

The NNSA Senior Advisor for Environment, Safety and Health (NA-3.6) maintains this document and coordinates completion of actions required in DOE M 450.4-1, which are to:

- Perform an annual review of the effectiveness of implementation of the NNSA HQ ISM System
- Update this document as necessary to reflect new mechanisms, processes, methods, or improvements to remedy any identified gaps that NNSA Headquarters uses to implement Integrated Safety Management
- Update the set of Performance Objectives, Measures and Commitments as necessary.

Each NNSA Site Office is required under DOE M 450.4-1 to develop an ISM System Description within six months of approval of this document. The NNSA Office of Naval Reactors (NA-30) is not within the scope of this document. The NNSA Office of Secure Transportation (NA-15) is a government-owned, government-operated organization located outside the NNSA HQ region and will develop its ISM System Description in accordance with the timetable for NNSA Site Offices.

ACRONYMS

BOP	Business Operating Policy
CAIRS	Computerized Accident Incident Reporting System
CAS	Contractor Assurance System
CATS	Corrective Action Tracking System
CDNS	Chief of Defense Nuclear Safety
CFR	Code of Federal Regulations
CTA	Central Technical Authority
DART	Days Away, Restricted or on Job Transfer
DEAR	U.S. Department of Energy Acquisition Regulation
DNFSB	Defense Nuclear Facilities Safety Board
DNS	Defense Nuclear Security
DOE	U.S. Department of Energy
DSA	Documented Safety Analysis
DPO	Differing Professional Opinion
EMS	Environmental Management System
ES&H	Environment, Safety and Health
ESAAB	Energy Systems Acquisition Advisory Board
FEOSH	Federal Employee Occupational Safety and Health
FRAM	Safety Management Functions, Responsibilities, and Authorities Manual
FTCP	Federal Technical Capability Program
GAO	Government Accountability Office
HQ	Headquarters
HR	Human Resources
HSS	Office of Health, Safety and Security
IDP	Individual Development Plan
IG	Inspector General
ISM	Integrated Safety Management
ISMS	Integrated Safety Management System
ISSM	Integrated Safeguards and Security Management
LL	Lessons Learned
LOCAS	Line Oversight Contractor Assurance System
NA	National Nuclear Security Administration
NAP	NNSA Policy Letter
NESS	Nuclear Explosive Safety Study
NEPA	National Environmental Policy Act
NNSA	National Nuclear Security Administration
NTS	Noncompliance Tracking System
ORPS	Occurrence Reporting and Processing System
OST	Office of Secure Transportation
PAAA	Price-Anderson Amendments Act
PPBE	Planning, Programming, Budgeting and Evaluation
PSO	Program Secretarial Office
QAP	Quality Assurance Program
RFP	Request for Proposal
SRSO	Savannah River Site Office
TRC	Total Recordable Cases
TSR	Technical Safety Requirement

INTRODUCTION

In 2000, the National Nuclear Security Administration (NNSA) was established as a new element within the Department of Energy (DOE) in response to a Congressional mandate to reinvigorate the security posture throughout the nuclear weapons program and to reaffirm the Nation's commitment to maintaining the nuclear deterrence capabilities of the United States. NNSA was chartered to focus management attention on enhanced security, proactive management practices, and mission within the Department's national defense and nonproliferation programs. The Department performs its national security mission involving nuclear weapons and nuclear materials and technology through the NNSA.

The Department of Energy 2006 Strategic Plan includes the following strategic goals for NNSA:

Goal 1 – Nuclear Deterrent

Transform the Nation's nuclear weapons stockpile and supporting infrastructure to be more responsive to the threats of the 21st Century.

Goal 2 – Weapons of Mass Destruction

Prevent the acquisition of nuclear and radiological materials for use in weapons of mass destruction and in other acts of terrorism.

Goal 3 – Nuclear Propulsion Plants

Provide safe, militarily effective nuclear propulsion plants to the U.S. Navy.

[Note: this strategic goal is achieved through the Office of Naval Reactors (NA-30). This NNSA organization is excluded from the scope of this Integrated Safety Management System Description per DOE M 450.4-1, *Integrated Safety Management System Manual*]

This NNSA HQ Integrated Safety Management System Description describes the mechanisms through which NNSA HQ implements Integrated Safety Management to work safely to achieve the strategic goals.

1.0 Purpose and Objectives

The NNSA Headquarters Integrated Safety Management (ISM) System Description describes the NNSA Headquarters (HQ) role in establishing expectations and accomplishing work in a safe and environmentally sound manner to execute the NNSA mission and strategic goals.

This NNSA HQ ISM System Description accomplishes the following:

- Emphasizes the strong support and personal commitment of NNSA senior managers to implementation of the policy and principles of Integrated Safety Management
- Describes the NNSA HQ role in establishing expectations for accomplishing work in a safe and environmentally sound manner to successfully execute the NNSA mission and goals
- Defines the NNSA HQ work activities related to achieving the ISM objective of safe mission accomplishment
- Describes the specific mechanisms, processes, and methods by which NNSA management ensures that ISM core functions and guiding principles are effectively implemented
- Describes how ISM, which includes Environmental Management Systems per DOE Policy 450.4, is integrated with other management systems, such as Line Oversight and Contractor Assurance Systems, Quality Assurance Programs, and Integrated Safeguards and Security Management Systems. In a separate but related action, NNSA has commenced efforts to eventually consolidate additional management systems into one integrated management system.
- Describes the set of Performance Objectives, Measures and Commitments that NNSA HQ currently uses to gauge the effectiveness of its ISM System.

2.0 Integrated Safety Management System Overview

Integrated Safety Management involves the integration of safety awareness and practices into all aspects of work performance. ISM provides a formal process where people plan, perform, assess and improve the safe conduct of work. Safety is integral to the planning and accomplishment of each job. NNSA conducts work in a manner that protects the worker, the public and the environment. The safety management system establishes a hierarchy of six components to facilitate consistent implementation throughout the complex.

DOE established the approach to integrating safety into all aspects of work at its facilities in DOE P 450.4. This Policy describes the safety management system consisting of six components: 1) Objective, 2) Guiding Principles, 3) Core Functions, 4) Mechanisms, 5) Responsibilities, and 6) Implementation. See Figure 1. The Objective, Guiding Principles, and Core Functions of safety management are used consistently in implementing safety management throughout the DOE complex and are

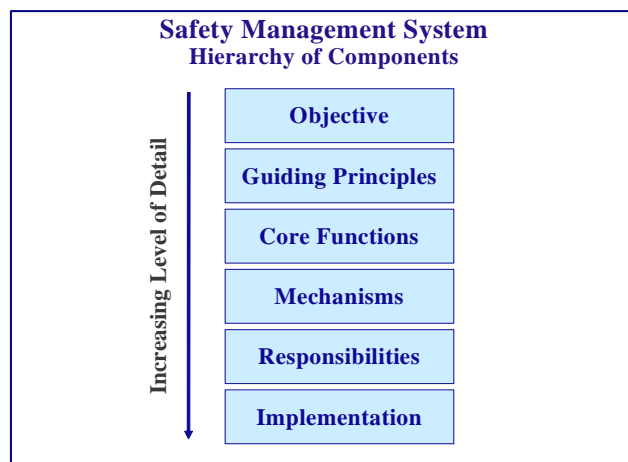


Figure 1. Safety Management System Hierarchy of Components

described in the following sections. The mechanisms, responsibilities, and implementation components are unique to the organization that owns the System, and are established according to the type of work and hazards associated with that work. NNSA HQ ISM mechanisms, responsibilities, and implementation components are more fully described later in Sections 5 and 6.

2.1 Objective of Integrated Safety Management

DOE P 450.4, *Safety Management System Policy*, describes the objective of ISM, which is:

The Department and Contractors must systematically integrate safety into management and work practices at all levels so that missions are accomplished while protecting the public, the worker, and the environment. This is to be accomplished through effective integration of safety management into all facets of work planning and execution. In other words, the overall management of safety functions and activities becomes an integral part of mission accomplishment.

2.2 Guiding Principles and Safety Culture Elements

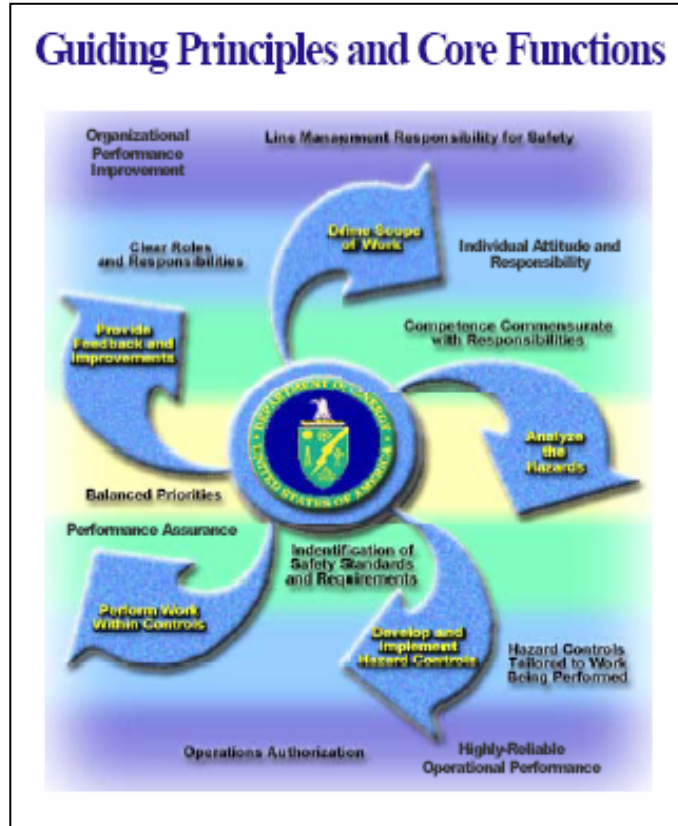
The following Guiding Principles are fundamental policies that guide NNSA HQ actions, from development of plans and procedures to conduct of work:

- (1) Line Management Responsibility for Safety: Line Management is responsible and accountable for protection of the public, workers, and the environment
- (2) Clear Roles and Responsibilities: Clear and unambiguous lines of authority and responsibility for ensuring safety is documented, communicated, and maintained
- (3) Competence Commensurate with Responsibilities: Personnel possess the experience, knowledge, skills, and abilities necessary to discharge their responsibilities
- (4) Balanced Priorities: Resources are effectively allocated to address safety and programmatic and operational considerations. Protecting the public, workers, and the environment is an overriding priority
- (5) Identification of Safety Standards and Requirements: Before work is performed, the associated hazards shall be evaluated, and an agreed-upon set of safety standards and requirements are established, which provide adequate assurance that the public, workers, and the environment are protected from adverse consequences
- (6) Hazard Controls Tailored to Work Being Performed: Administrative and engineering controls to prevent and mitigate hazards are tailored to the work and associated hazards
- (7) Operations Authorization: The conditions and requirements for operations to be initiated and conducted are agreed upon and clearly established.

In addition to these Guiding Principles, with issuance of DOE M 450.4-1, the Department established the following four Safety Culture Elements to be used in concert with ISM Guiding Principles to enhance the effective implementation of ISM. The Safety Culture Elements are:

(8) Individual Attitude and Responsibility for Safety: Every individual accepts responsibility for safe mission performance. Individuals demonstrate a questioning attitude by challenging assumptions, investigating anomalies, and considering potential adverse consequences of planned actions. All employees are mindful of work conditions that may impact safety, and assist each other in preventing unsafe acts or behaviors.

(9) Operational Excellence: Organizations achieve sustained, high levels of operational performance, encompassing all DOE and contractor activities to meet mission, safety, productivity, quality, environmental, and other objectives. High-reliability is achieved through a focus on operations, quality decision-making, open-communications, deference to expertise, and systematic approaches to eliminate or mitigate error-likely situations.



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(10) Oversight for Performance Assurance: Competent, robust, periodic and independent oversight is an essential source of feedback that verifies expectations are being met and identifies opportunities for improvement. Performance assurance activities verify whether standards and requirements are being met. Performance assurance through conscious, directed, independent reviews at all levels brings fresh insights and observations to be considered for safety and performance improvement.

(11) Organizational Learning for Performance Improvement: The organization demonstrates excellence in performance monitoring, problem analysis, solution planning, and solution implementation. The organization encourages openness and trust, and cultivates a continual learning environment.

Figure 2 depicts the ISM Guiding Principles and Core Functions.

2.3 Core Functions

The five ISM Core Functions, established in DOE P 450.4, describe the structure necessary for work activities that pose a hazard to the public, workers, or the environment. The Core Functions are applied as a continual cycle, with the degree of rigor appropriate to control the work hazards. The five Core Functions are:

- (1) Define the Scope of Work: Missions are translated into work, expectations are set, tasks are identified and prioritized, and resources are allocated
- (2) Analyze the Hazards: Hazards associated with the work are identified, analyzed, and categorized
- (3) Develop and Implement Hazard Controls: Applicable standards and requirements are identified and agreed upon, controls to prevent/mitigate hazards are identified, the safety envelope is established, and controls are implemented
- (4) Perform Work within Controls: Readiness is confirmed and work is performed safely
- (5) Provide Feedback and Continuous Improvement: Feedback information on the adequacy of controls is gathered, opportunities for improving the definition and planning of work are identified and implemented, line and independent oversight is conducted and, if necessary, regulatory enforcement actions occur.

2.4 Responsibilities

The NNSA Safety Management Functions, Responsibilities and Authorities Manual (FRAM) Revision 1, dated February 28, 2005, defines NNSA expectations regarding organizational accountability for safety management. These expectations are based on Department of Energy directives listed in DOE M 411.1C, *Safety Management Functions, Responsibilities and Authorities Manual* (DOE FRAM) and assignments and delegations made by the Administrator. Also, additional general safety responsibilities for NNSA HQ Federal workers are included in the NAP-6, *Federal Employee Occupational Safety and Health Program for National Nuclear Security Administration Headquarters Employees*. Section 5 contains a summary of safety management responsibilities.

2.5 Implementation of Integrated Safety Management

Implementation of safety management including the processes and methods by which NNSA HQ managers ensure safety management is effectively implemented are described in detail in Section 6.

3.0 NNSA Management Expectations

NNSA management fully supports the Operating Principles described in the DOE 2006 Strategic Plan which are:

- Ensure safe, secure, and environmentally responsible operations
- Act with a sense of urgency
- Work together
- Treat people with dignity and respect

- Make the tough choices
- Keep our commitments
- Embrace innovation
- Always tell the truth
- Do the right thing.

The National Nuclear Security Administration Strategic Plan, dated November 2004, describes the core values for NNSA. Safety is embedded in the NNSA core values and is necessary for successful achievement of the NNSA mission.

NNSA CORE VALUES

Excellence

We strive for excellence in performing our critical national security missions: scientific exploration and technology development; laboratory and industrial operations; information and materials security; environment, safety, and health activities; and, project and program management.

Integrity

We demand the highest standards of ethical behavior, for each of us is personally entrusted with and accountable for protecting and defending our national security. We meet our commitments.

Respect

We treat our colleagues with dignity, value diversity, provide fair opportunity, and reward achievement.

Teamwork

We accomplish our mission by working cooperatively and respecting the roles of leaders and team members.

- From NNSA Strategic Plan, November 2004

In addition to adopting these core values, NNSA is continuing to take steps to improve safety in NNSA. These steps resulted from the detailed review of the Space Shuttle Columbia Accident Investigation Board Report and the lessons relevant to NNSA, including the following:

- NNSA management must actively encourage a diversity of views, accept outside criticism, and avoid over-simplification of technical information.
- NNSA management must actively and continually review its operations and ensure that the organization does not fall into the trap of being conditioned by past successes.

Also, NNSA implemented the Central Technical Authority (CTA), responsible for reviewing nuclear safety requirements and maintaining operational awareness of the implementation of nuclear safety requirements and guidance, consistent with the principles of Integrated Safety Management across the NNSA complex. The position of Chief of Defense Nuclear Safety

(CDNS) was created to serve as a senior technical advisor to the Administrator and CTA. The CDNS and staff supports the NNSA CTA, including maintaining awareness of complex, high-hazard nuclear operations conducted in the NNSA nuclear complex, through such activities as monitoring of applicable reports and performance metrics, reviewing various site-specific and complex-wide documents, discussing and providing guidance on technical issues, and conducting onsite visits.

The NNSA management commitment to its workforce follows:

- Senior managers will “lead by example” to achieve a safety conscious work environment and an accident free workplace.
- Work is planned, hazards are identified, and actions are taken to mitigate hazards before work begins. ISM principles and functions drive work planning and execution.
- NNSA is self-critical and invites external evaluations to achieve continual improvement.
- NNSA defines clear roles, responsibilities and authorities for each employee.
- NNSA continues to train its workers to ensure demonstrated technical capabilities are in place to fulfill safety responsibilities at all levels of the organization.
- NNSA actively participates in the DOE-wide corporate operating experience program so that we continually “learn from experience.”
- NNSA applies the functions and principles of ISM to prevent the occurrence of low-probability, high-consequence events at nuclear facilities.
- NNSA monitors actual performance against annual safety performance goals and commitments and shares the results with its employees.
- NNSA assesses contractor operations to determine the effectiveness of work planning and work control processes.
- NNSA selects contractors who are committed to implementing an effective safety culture.
- Environmental management considerations (understanding the impact of an action to the environment) are an integral part of the NNSA planning and decision-making process.

NNSA has taken important steps to make its safety culture more open to alternate views and minority opinions, challenging technical positions in the interest of technical integrity. NNSA supports a safety conscious work environment where healthy professional discourse is encouraged. NNSA recently developed a Differing Professional Opinion (DPO) process to formalize roles, responsibilities and requirements to ensure that these DPOs are resolved in a timely, consistent, and fair manner.

4.0 Safety Performance Objectives, Measures and Commitments

NNSA HQ personnel evaluate safety performance results against identified performance goals to determine the success of our safety culture. NNSA uses indicators to measure the effectiveness of its management systems and the overall safety performance of its organization.

Performance objectives are described in DOE M 450.4-1 as long-term management system goals driven by strategic planning or safety processes. NNSA performance objectives and measures are developed through the LOCAS process which continues to be refined.

Performance measures are used to track progress and monitor achievement of the performance objectives. Some performance measures indicate how well the NNSA ISM system is being maintained. They include:

- Quarterly Safety Briefings consistently provided to the Administrator and senior NNSA managers to provide safety data discussed above
- Planned CDNS reviews conducted
- Planned NA-10 oversight activities conducted in accordance with oversight plan
- NNSA FRAM is updated as needed (Note: updating the NNSA FRAM is an action listed in Appendix B)
- NNSA HQ ISM effectiveness reviews occur
- Percentage of NNSA personnel in the Technical Qualification Program fully qualified in their assigned functional area (NNSA Goal: at least 80%).
- Number of NNSA personnel in the Technical Qualification Program overdue in their qualifications (NNSA Goal: 0).
- Delegations of authority are reviewed, as necessary

Other performance measures indicate in a general sense how well the ISM system is achieving a safe work environment. They include:

- Worker Total Recordable Cases (TRC) Rate
- Worker Days Away, Restricted or on Job Transfer (DART) Rate
- Occurrence Reporting and Processing System (ORPS) occurrences in certain focus areas, such as electrical safety and near misses
- Type A & B Accident Investigations
- Correction of past ISM performance deficiencies and resolution of issues identified in annual effectiveness reviews or declarations.

Appendix A lists these performance measures and the periodicity of reporting the information to the NNSA CTA or appropriate PSO. The manner and periodicity of providing this information to NNSA management is reviewed as part of the annual effectiveness review described in Section 8.0. These performance measures represent the initial set and are reviewed updated annually as appropriate. Per DOE M 450.4-1, NNSA Site Offices will annually prepare and submit their safety performance objectives, measures and commitments, and provide these to NNSA HQ for information.

Performance commitments include specific actions that will be taken to achieve objectives. In the area of mission accomplishment, NNSA develops commitments and measures progress as part of the NNSA programming, planning, budgeting and evaluation processes. Currently, in the area of safety, NNSA line management develops annual site specific measures as part of the Contractor Performance Evaluation Plans. For ISM, line management in consultation with NA-3.6 sets schedules and develops expectations for Site Office annual review of ISM safety performance objectives, measures and commitments. The initial set of commitments appears in Appendix B.

5.0 Roles and Responsibilities

To accomplish the mission and strategic goals, the NNSA FRAM describes in detail the specific safety management functions, responsibilities and authorities for the **Administrator, Principal and Deputy Administrators, Central Technical Authority, Chief of Defense Nuclear Safety, Senior Advisor for ES&H, Associate Administrators, Site Office Managers, and Service Center Director.**

Figure 3 below shows the NNSA organization for execution of safety management responsibilities in support of authorized work. Though all offices and employees within NNSA have some responsibility for implementing safety, those organizations in green shaded boxes have Federal line management responsibilities for safety within NNSA (within the scope of DOE M 450.4-1). Offices with an asterisk (*) provide safety support as a primary function. Site contractors have important line management responsibilities in the safe execution of work. These responsibilities are described in each contractor organization's ISM System Description.

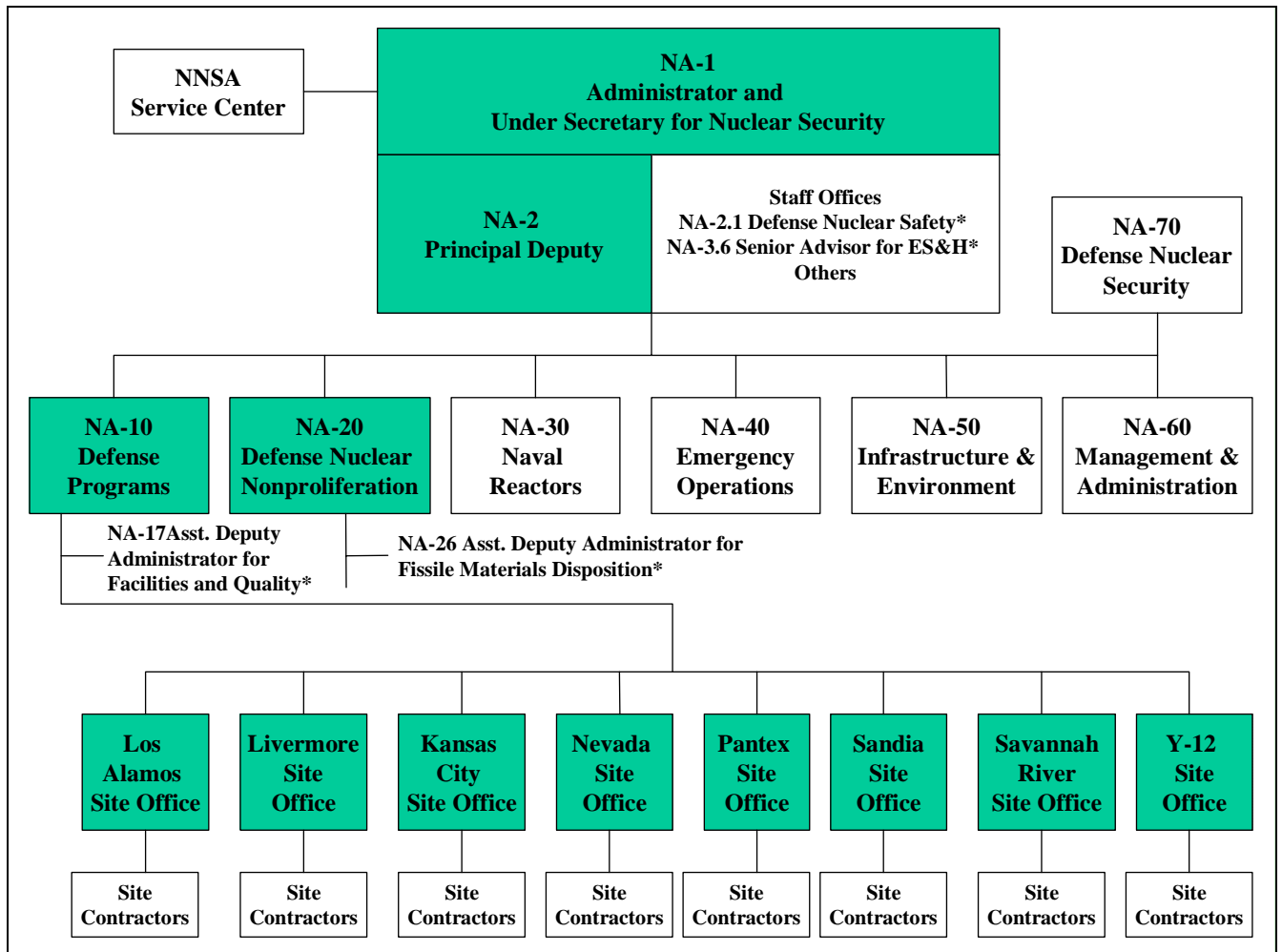


Figure 3. NNSA Organization for Safety Management Responsibilities

The **NNSA Administrator (NA-1)** is the senior line manager responsible for the safety of NNSA operations. NA-1 monitors delegated authorities and the overall performance of safety management implementation within NNSA. The Administrator is the Senior Procurement Executive for NNSA. The **NNSA Principal Deputy Administrator (NA-2) (currently the Central Technical Authority (CTA))** is the second most senior line manager within NNSA, and supports the Administrator by providing a single, authoritative source for NNSA guidance and expectations regarding implementation of nuclear safety requirements by NNSA personnel and contractors. The CTA is responsible for ensuring that NNSA HQ maintains operational awareness of nuclear safety issues and the implementation of nuclear safety requirements and guidance throughout the NNSA complex. The CTA is responsible for ensuring that NNSA maintains adequate numbers of trained federal employees to fulfill NNSA safety responsibilities. The **Chief of Defense Nuclear Safety (CDNS or NA-2.1)** supports the Administrator and the CTA in executing their responsibilities. With primary focus on nuclear safety, the CDNS executes numerous activities in order to establish operational awareness, including conduct of biennial reviews of each field element, review of concurrence requests, and managing the Differing Professional Opinion process for NNSA. The CDNS also supports field element managers, who are line managers with direct responsibility for safety. The **NNSA Senior Advisor for ES&H (NA-3.6)** provides expert advice to the Administrator, the Principal Deputy Administrator, the CTA and other senior NNSA officials on ES&H policy and issues (e.g., worker safety, environmental protection, quality assurance, fire protection, radiological control, and DOE corporate operating experience) which affect safety in nuclear facilities. The Senior Advisor for ES&H is currently designated the ISM Champion for NNSA HQ, although this role is expected to rotate through other NNSA HQ organizations. NA-3.6 maintains the NNSA HQ ISM System Description for the CTA.

The **Deputy Administrator for Defense Programs (NA-10)** has authority for the programmatic and Environment, Safety and Health (ES&H) line oversight aspects of safety management. The Deputy Administrator for Defense Programs (NA-10) has authority for all nuclear safety, nuclear explosive safety (NES) and ES&H matters and is the Lead Program Secretarial Officer as defined in the DOE FRAM and in a Memorandum of June 25, 2003 from the Administrator for all eight NNSA sites.

The **Deputy Administrator for Defense Nuclear Nonproliferation (NA-20)** has authority for nuclear safety and ES&H matters relative to its programmatic responsibilities and exercises that authority in coordination with NA-10. The “Memorandum of Agreement between Deputy Assistant Deputy Administrator for Fissile Materials (NA-26) and the Savannah River Site Office (SRSO) Manager” specifies the respective roles and responsibilities between NA-26 and the SRSO Manager in relation to NA-26 activities performed at the Savannah River Site. NA-26 has also executed an “Agreement on Safety Management at the Savannah River Site” with the Savannah River Operations Office in which NA-26 subscribes to the Operations Office ISM System Description.

The **Associate Administrator for Emergency Operations (NA-40)** is responsible for all aspects of emergency management and response including allocation of resources as related to DOE Emergency Management Systems.

The **Associate Administrator for Infrastructure and Environment (NA-50)** is responsible for corporate integration, development, oversight and execution of NNSA facilities, project, and environmental management policies and programs.

The **Associate Administrator for Management and Administration (NA-60)** has the authority for resource allocation processes, including personnel and funding, with concurrence from the appropriate Deputy Administrator(s), as related to safety management.

The **Associate Administrator for Defense Nuclear Security (DNS or NA-70)** is the Cognizant Security Authority for NNSA. DNS is fully responsible for the overall direction and management of security programs at NNSA facilities, to include line management oversight of security programs. DNS provides engineering, technical, operational, budget and administrative direction to NNSA programs and field elements to assure effective security operations at NNSA facilities, including the physical, personnel, materials control and accounting, classified and sensitive information protection and technical security programs.

NNSA Site Office Managers have the authority for day-to-day execution of the safety management program at their site, including: direct assignments extracted from the DOE FRAM documented in the NNSA FRAM, delegated authorities from NNSA HQ, and alignment of their Site Office FRAM with the NNSA FRAM, and annual ISM reviews and declarations.

The **NNSA Service Center Director** provides safety management support to other NNSA organizations and is responsible for all aspects of safety management for the NNSA Service Center facility in Albuquerque.

6.0 Implementation of ISM in NNSA HQ Work Activities

The NNSA HQ role in assuring safe mission accomplishment differs from contractor and NNSA site offices safety roles, but is nonetheless important. The NNSA HQ role is defined by its work activities, which include the following:

- Establishing the NNSA mission and ensuring it is performed safely
- Acquiring resources
- Developing annual budgets and priorities
- Performing program and project management
- Developing and fulfilling safety management roles, responsibilities and requirements
- Performing Federal oversight and self-assessments
- Setting overall safety performance expectations and objectives
- Monitoring and sustaining an effective safety culture.

This NNSA HQ ISM System Description is focused at the NNSA enterprise level, encompassing activities of two Secretarial Offices (NA-10 and NA-20) and the Administrator, along with supporting NNSA HQ organizations. As the ISM Guiding Principles relate more to establishing the desired environment and the desired safety culture, more attention to implementing the ISM

Guiding Principles is expected at higher levels of the organization (such as the enterprise and site level). Therefore, the specific mechanisms, processes, and methods used by NNSA HQ to implement ISM will focus on the ISM Guiding Principles. Implementation of Safety Culture Elements and Core Functions will be described in relation to the Guiding Principles.

6.1 Implementing ISM Guiding Principles and Safety Culture Elements

The following sections describe the specific ISM implementing mechanisms, processes, and methods by which NNSA implements the ISM Guiding Principles to create an effective environment for ISM implementation. Implementing mechanisms, processes and methods are developed at various levels within the DOE and NNSA organizations to ensure consistent expectations and approaches.

Tables 1-4 (pp. 23-27) list related implementation mechanisms, processes and methods that cover all seven Guiding Principles. These tables lay out how NNSA currently implements ISM within the DOE and NNSA directives structure. As ISM matures in NNSA HQ, these tables may change as a result of gap analyses or annual ISM effectiveness reviews.

Table 1 on page 23-24 lists the applicable DOE-level and NNSA-level mechanisms, processes, and methods for Guiding Principles 1 (Line Management Responsibility for Safety), 2 (Clear Roles and Responsibilities), and 3 (Competence Commensurate with Responsibilities). These Guiding Principles are grouped together because they help ensure the management structure has personnel who focus on safe accomplishment of mission, understand their assignments, and can carry out the core safety management functions correctly and efficiently.

Table 2 on page 25 lists the applicable DOE-level and NNSA-level mechanisms, processes, and methods for Guiding Principle 4 (Balanced Priorities). DOE and the contractor identify and prioritize work and allocate resources. DOE provides performance expectations by strategic plans, goals, and objectives, and through program execution guidance.

Table 3 on page 26 lists the applicable DOE-level and NNSA-level mechanisms, processes, and methods for Guiding Principles 5 (Identification of Safety Standards and Requirements) and 6 (Hazard Controls Tailored to Work Being Performed). These Guiding Principles are grouped together because they are similar in that they deal with identifying applicable safety standards and applying them to tailor hazard controls to the work.

Table 4 on page 27 lists the applicable DOE-level and NNSA-level mechanisms, processes, and methods for Guiding Principle 7 (Operations Authorization). DOE and contractors must establish and agree upon the conditions and requirements to be satisfied for operations to be initiated and conducted. DOE and the contractor identify and implement safety controls before starting to work. Once the work begins, it is performed in accordance with these safety controls.

6.1.1 Guiding Principle 1: Line Management Responsibility for Safety

Line management is directly responsible for the protection of the public, the workers, and the environment.

NNSA line management responsibilities for safety are described in DOE M 411.1-1C, Safety Management Functions, Responsibilities and Authorities Manual, as modified by Secretary Bodman letter of April 26, 2005, the NNSA Safety Management Functions, Responsibilities and Authorities Manual (FRAM) Revision 1, dated February 28, 2005, and are summarized in Section 5.0 of this document. An identified gap is that the NNSA FRAM needs to be updated to reflect current roles and responsibilities. This gap is listed in Appendix B.

Specific mechanisms, processes, and methods are described in Table 1.

6.1.2 Guiding Principle 2: Clear Roles and Responsibilities

Clear and unambiguous lines of authority and responsibility for ensuring safety shall be established and maintained at all organizational levels within the Department and its contractors.

The NNSA Safety Management Functions, Responsibilities and Authorities Manual (NNSA FRAM), Revision 1, dated February 28, 2005, defines NNSA expectations regarding organizational accountability for safety management. These expectations have been derived from appropriate DOE directives listed in DOE M 411.1C, Safety Management Functions, Responsibilities and Authorities Manual and assignments and delegations made by the Administrator.

Some organizations within NNSA HQ have further defined their specific roles and responsibilities. For example, within the CDNS, roles and responsibilities are established in CDNS M 411.1-1, *CDNS Management System Description*. NA-20 is developing a FRAM for its nuclear project work at Savannah River Site. NA-70 is developing a FRAM for its security responsibilities.

Specific mechanisms, processes, and methods are described in Table 1.

6.1.3 Guiding Principle 3: Competence Commensurate with Responsibilities

Personnel shall possess the experience, knowledge, skills, and abilities that are necessary to discharge their responsibilities.

To ensure NNSA HQ personnel possess the experience, knowledge, skill, and abilities necessary to discharge their responsibilities, NNSA HQ has implemented the DOE Technical Qualification Program. The Senior Advisor for ES&H manages implementation of the program within NNSA. Approximately 70 members of NNSA HQ staff are enrolled in the Technical Qualification Program in various functional areas. The single largest functional area is Senior Technical Safety Manager, having approximately 42 persons at NNSA HQ. Also, some members of NNSA HQ staff have professional certifications or licenses. NNSA HQ provides resources for staff development, both within HQ and in the field.

The Deputy Secretary's memorandum dated December 27, 2005, describes the requirements for delegating nuclear safety responsibilities from HQ Cognizant Secretarial Officers to field managers. NNSA HQ is implementing this memorandum and using the criteria described therein. The CDNS developed procedures by which CTA must concur for delegation of certain nuclear safety approval authorities below the level of Site Office Manager or Deputy Site Office Manager. In addition, the NNSA procedures require CTA concurrence for those delegations that have compensatory measures. The CDNS supports the review of concurrence requests and recommends disposition to the CTA.

To ensure personnel possess the experience, knowledge, skill, and abilities necessary to discharge their responsibilities, NNSA HQ has implemented effective human resource management systems which identify needed skills, evaluate the employees' skills, identify skill gaps, and arranges for training to eliminate the gaps. NNSA HQ encourages professional certification and obtaining advanced educational degrees.

Specific mechanisms, processes, and methods are described in Table 1.

6.1.4 Guiding Principle 4: Balanced Priorities

Resources shall be effectively allocated to address safety, programmatic, and operational considerations. Protecting the public, the workers, and the environment shall be a priority whenever activities are planned and performed.

NNSA HQ sets priorities for all of NNSA and leads the annual budget preparation to acquire and allocate the necessary resources to ensure safe mission accomplishment. NA-60 is lead for coordinating NNSA HQ processes associated with budgeting and resource allocation. All NNSA HQ organizations, including those responsible for safety management and safety support, in Figure 3 are represented in the budget process and provide input for the final resource allocation decisions by NA-1. NNSA HQ adheres to DOE directives and NNSA policy letters described in Table 2 for the overall process. For specific guidance to be used each year, NA-60 promulgates NNSA Program and Fiscal Guidance.

The NNSA Planning, Programming, Budgeting and Evaluation (PPBE) process is a continuous cycle for establishing goals, and developing, prioritizing, funding and executing programs, and evaluating performance results to provide feedback for future planning. At NNSA, planning and programming are primarily HQ functions.

Planning and programming are HQ-driven processes to develop, prioritize and integrate NNSA programs. The processes begin with and flow from the NNSA Strategic Plan, coupled with the DOE Strategic Plan, which together provide the overall NNSA mission and set broad goals and themes. The NNSA Strategic Planning Guidance establishes the Administrator's view of the 5-15 year future planning environment, provides his priorities and specific program direction and initiatives for the planning period, and tasks specific analyses with programmatic implications. Periodic updates of several documents, including the Stockpile Stewardship Plan, provide information about accomplishments, challenges, goals and milestones for their respective

programs. NNSA HQ annually reviews budgets against these plans and adjusts to the management concerns and safety priorities affecting NNSA mission work. NNSA requires appropriate allocation of resources to address safety, programmatic, and operational considerations.

NA-10, NA-20 and the CDNS, through their oversight processes, identify needed improvements in nuclear safety for use in achieving appropriate balance with competing requirements and drivers.

Project management systems in DOE O 413.3 are in place to guide, monitor, and evaluate work scope performance on new projects and major modifications. The NNSA ESAAB equivalent process provides the framework by which significant safety concerns and issues are brought to the attention of NNSA HQ management for resolution.

Specific mechanisms, processes, and methods are described in Table 2.

6.1.5 Guiding Principle 5: Identification of Safety Standards and Requirements

Before work is performed, the associated hazards shall be evaluated and an agreed-upon set of safety standards and requirements shall be established which, if properly implemented, will provide adequate assurance that the public, the workers, and the environment are protected from adverse consequences.

DOE has directives and standards that are carefully applied in planning work. NNSA identifies applicable DOE directives. NNSA HQ provides leadership in the directives process, working with the Office of Health, Safety and Security in originating, issuing and revising directives and standards that protect employee health and safety, as well as that of contractors, the general public, and the environment. All of NNSA HQ organizations participate in the DOE Review and Comment process to ensure that NNSA mission needs are addressed. NNSA Source Evaluation Boards review requests for proposals (RFP) prior to issuance to ensure adequate identification of hazards on List B and applicable safety standards and requirements and provides contract reviews. NNSA HQ reviews and recommends approval or disapproval for contractor-submitted variance requests under 10 CFR 851. After considering the recommendation from HSS, the Administrator decides whether to grant a variance to 10 CFR 851 requirements.

The CDNS, along with other NNSA HQ personnel, review implementation of safety standards and requirements through the biennial review process, including authorization agreements, conduct of operations requirements, and development and implementation of safety bases for nuclear facilities under 10 CFR 830. CDNS reviews the implementation of DOE nuclear safety requirements in contracts in support of the CTA concurrence role on those requirements. The CTA, with CDNS support, reviews requests for exemptions and exceptions to nuclear safety requirements and provides advice and concurrence prior to their approval.

Specific mechanisms, processes, and methods are described in Table 3.

6.1.6 Guiding Principle 6: Hazard Controls Tailored to Work Being Performed

Administrative and engineering controls to prevent and mitigate hazards shall be tailored to the work being performed and associated hazards.

NNSA HQ managers typically delegate approval of hazard controls to the field according to specific criteria and procedures. Where not delegated, NNSA HQ personnel participate in the review and approval of DSAs and make recommendations to NNSA HQ managers. NNSA HQ personnel review operating experience data to identify problems in the field. NNSA HQ personnel also perform oversight to evaluate implementation of hazard controls in the field and confirm that work is performed within the scope of the project.

The CDNS reviews the implementation of safety basis controls as part of its biennial reviews. On an as-needed basis, the CDNS analyzes the adequacy of these controls. The CDNS, through its review and recommendation of concurrence/non-concurrence on exemption requests, reviews the adequacy of proposed compensatory measures and controls, and provides recommendations on any additional controls needed.

Specific mechanisms, processes, and methods are described in Table 3.

6.1.7 Guiding Principle 7: Operations Authorization

The conditions and requirements to be satisfied for operations to be initiated and conducted shall be clearly established and agreed upon.

ISM provides a process to confirm adequate preparation, including development and implementation nuclear and other hazard controls at a facility, project, or activity level prior to authorizing operations. DEAR 970.5223-1(b) (7) requires that DOE and the contractor establish and agree upon the conditions and requirements to be satisfied for operations to be initiated and conducted. These conditions and requirements are included in the contract and are therefore binding upon the contractor. The formality and rigor of the review process and the extent of documentation and level of authority for agreement should be based on the hazard and complexity of the work being performed. The process should ensure programs addressing all applicable functional areas are adequately implemented to support safe performance of the work.

For nuclear facilities/activities, NNSA HQ may delegate authority to site office personnel to approve safety basis documents, including documented safety analyses and technical safety requirements. NNSA HQ also may delegate authority for startup and restart of certain nuclear activities. However, these delegations are only made after a thorough review of site office capabilities and processes by NNSA HQ line management. For some site offices, NNSA HQ retains these authorities.

The CDNS reviews and comments on the adequacy of readiness review startup notification reports, plans of action, implementation plans, and readiness review reports. The CDNS provides operational support to readiness review teams by participating as team members or team leaders in support of line requirements. The area of readiness is a topical area specifically examined in the CDNS biennial review process. The NNSA Service Center also provides

significant support in the readiness review process. This will be described in the NNSA Service Center ISM System Description.

Specific mechanisms, processes, and methods are described in Table 4.

6.1.8 Safety Culture Element 8: Individual Attitude and Responsibilities for Safety

Every NNSA employee accepts responsibility for safe mission performance. Individuals demonstrate questioning attitude by challenging assumptions, investigating anomalies, and considering potential adverse consequences of planned actions. All employees are mindful of work conditions that may impact safety, and assist each other in preventing unsafe acts or behaviors.

NNSA management communicates its goals and expectations regularly to all NNSA staff so each staff member understands his/her role in performing NNSA work safely. Every NNSA employee is afforded the opportunity and encouraged to raise concerns about any aspect of achieving the NNSA strategic goals safely. NNSA strongly supports a safety conscious work environment and developed a Differing Professional Opinion process so that concerns receive adequate review and timely resolution. Any immediate threat to health or safety is dealt with expeditiously. Several systems exist for employees to report concerns about work-related hazards, and NNSA tracks these reports to ensure timely resolution. Using this process, NNSA demonstrates its commitment to safety. NNSA HQ personnel participate in the DOE Federal Employee Occupational Safety and Health (FEOSH) Program that includes workplace inspections and safety communications and training for Federal workers (See DOE O 442.1 and NAP-6 cited in Table 1).

NNSA supervisors and managers were tasked to update their performance plans to include specific safety elements to foster increased awareness and responsibility for safety. DOE and NNSA personnel are developing further guidance for inclusion of similar safety elements in performance plans for non-supervisory NNSA personnel.

Specific mechanisms, processes, and methods are described in Table 1.

6.1.9 Safety Culture Element 9: Operational Excellence

NNSA achieves sustained, high levels of operational performance, encompassing all DOE and contractor activities to meet mission, safety, productivity, quality, environmental, and other objectives. High-reliability is achieved through a focus on operations, conservative decision making, open communications, deference to expertise, and systematic approaches to eliminate or mitigate error-likely situations.

NNSA processes foster a culture of safety excellence. Performance is measured and tracked to maintain safe operations and progress.

NNSA Federal staff performance is evaluated with defined measures in performance plans. NNSA awards its staff for exceptional performance. The NNSA Federal Safety Professional of the Year Award recognizes employees who make significant contributions to accomplishing the NNSA strategic goals safely. NNSA also participates in DOE-wide awards such as the DOE Facility Representative of the Year. NA-60 administers the overall award process as described in the NA-1 memorandum dated January 9, 2006, Honor Awards.

NNSA HQ personnel from line organizations and supporting safety organizations (see Figure 3) participate in the evaluation of site contractor performance by reviewing submitted Performance Evaluation Plans. NNSA provides incentives for operational excellence in the contract language it prepares and in the oversight of contractor performance. A major initiative in operational excellence is the development of effective contractor assurance systems. The Line Oversight and Contractor Assurance System (LOCAS) Council is a chartered NNSA group led by NA-10 personnel to support NNSA line management and NNSA contractors in developing, using and sustaining vital, mature line oversight and contractor assurance systems throughout NNSA. The LOCAS Council is described in more detail in Section 7.0.

NNSA also encourages participation in the DOE Voluntary Protection Program to recognize safety excellence.

Specific mechanisms, processes, and methods are described in Table 1.

6.1.10 Safety Culture Element 10: Oversight for Performance Assurance

Competent, robust, periodic and independent oversight is an essential source of feedback that verifies expectations are being met and identifies opportunities for improvement. Performance assurance activities verify whether standards and requirements are being met. Performance assurance through conscious, directed, independent reviews at all levels brings fresh insights and observations to be considered for safety and performance improvement.

NNSA fully supports and implements safety oversight responsibilities described in DOE O 226.1 to ensure that contractor assurance systems and DOE oversight programs are comprehensive and integrated for all aspects of operations essential to mission success. Pilot oversight projects at the Kansas City Plant and Los Alamos National Laboratory meet the intent of the order with respect to safety oversight responsibilities.

NNSA HQ supports independent oversight of its activities by DOE HSS and the DOE IG and outside agencies such as the DNFSB and GAO. NNSA HQ has points of contact designated to interact with these organizations to coordinate various reviews and ensure management attention is focused on the results of the reviews. Senior NNSA HQ managers are periodically briefed on results of these oversight group activities to gain insight into organizational performance and to direct needed corrective actions. An identified gap is the formality with which NNSA HQ reviews and concurs on proposed PAAA enforcement actions. This gap is listed in Appendix B.

NNSA HQ line management organizations with support from safety organizations (see Figure 3), also conduct performance assurance oversight through several mechanisms, including readiness reviews, project reviews, NESS, assessments, DSA reviews, and QA reviews. NNSA HQ fully

supports and expects all employees and contractors to use the ORPS, CAIRS, and NTS reporting systems to provide timely reporting of occurrences and track these to ensure that appropriate action is taken.

Periodic reports detail progress and any problems in project performance. NNSA performance and trends are reported to the PSOs, CTA and Administrator who set priorities for action and funding. NNSA staff provides expertise to field activities to assist in resolving technical issues and to measure progress.

Specific mechanisms, processes, and methods are described in Tables 2, 3 and 4.

6.1.11 Safety Culture Element 11: Organizational Learning for Performance Improvement

NNSA demonstrates excellence in performance monitoring, problem analysis, solution planning, and solution implementation. The organization encourages openness and trust, and cultivates a continuous learning environment.

Performance monitoring is a cornerstone of performance improvement. Information reported to NNSA and gathered by NNSA is analyzed to discover both trends in performance excellence and emerging problems. NNSA partners closely with the Office of Health, Safety and Security to collect and analyze data such as CAIRS, NTS, ORPS, TRC rate, and other safety information. Analyses and summaries are shared throughout NNSA via safety briefings, bulletins, emails, conference calls and newsletters.

NA-40 provides notifications to NNSA personnel of operational situations at NNSA sites that required HQ Emergency Operations Center involvement. NA-40 is responsible for coordinating NNSA emergency management and response capabilities with other federal government agencies, and provides information and training regarding emergency situations that have occurred.

The CDNS issues NNSA Technical Bulletins quarterly to share important information and lessons learned. The NNSA Service Center issues monthly continuing training information with lessons learned and other pertinent safety topics. NA-10 personnel participate in periodic technical seminars on a wide range of topics related to accomplishing the mission. NNSA encourages open communication and provides numerous opportunities for employees to share information and concerns.

Specific mechanisms, processes, and methods are described in Table 4.

6.2 Implementing ISM Core Functions

DOE P 450.4, *DOE Safety Management System Policy*, lists the five Core Functions that provide the necessary structure for any work activity that could potentially affect the public, the workers, and the environment. The functions are applied as a continuous cycle with the degree of rigor appropriate to address the type of work activity and the hazards involved.

In addition to these Guiding Principles, the Department included in DOE M 450.4-1 four Safety Culture Elements to enhance implementation of ISM. Tables 1, 2, 3 and 4 depict the close relationship among the core functions, guiding principles and safety culture elements and the specific implementing mechanisms in NNSA.

6.2.1 Core Function 1: Define Scope of Work

Missions are translated into work, expectations are set, tasks are identified and prioritized, and resources are allocated.

NNSA defines its work through planning documents developed in accordance with the implementing mechanisms, processes or methods described in Tables 1, 2 and 3. The work planning documents, together with finalized budgets, determine the amount and type of work to be accomplished.

Contractors at NNSA sites perform work within the scope of their contract using the set of requirements specified in List A and List B of the contract. The NNSA CTA, NA-10, and NA-20 evaluate directives and guidance in NNSA contracts to ensure that safety is adequately covered. The CDNS assists in this role for the CTA and also evaluates requests from NNSA employees or contractors for waivers, exemptions, or other forms of relief from nuclear safety requirements to support decision-making by the CTA.

NA-10 provides mission assignments and program guidance to Site Office Managers and OST. NA-20 provides mission assignments and program guidance to its programs. NA-10 and NA-20 prepare proposed budgets for the program offices ensuring the adequacy of resources to address nuclear safety and ES&H requirements with elements for long-term planning, landlord activities, and NNSA-wide facility safety. These efforts are coordinated with the Associate Administrator for Management and Administration (NA-60). The weapon quality management system requirements are described in the Weapons Quality Policy (QC-1), the Quality Assurance Procedure Manual, and the Development and Production Manual.

Specific mechanisms, processes, and methods are described in Tables 1, 2, and 3.

6.2.2 Core Function 2: Identify and Analyze Hazards

Hazards associated with work are identified, analyzed, and categorized.

The objective of hazards analysis is to develop an understanding of the potential for the hazard to affect the health and safety of workers, the public, or the environment. Hazard controls are then established based on this understanding and other factors related to the work. For work in Hazard Category 2 and 3 nuclear facilities, NNSA site contractors develop DSAs and TSRs in accordance with 10 CFR 830. These DSAs describe facility hazards and associated controls. If a contractor proposes a methodology not described in 10 CFR 830, NA-10 or NA-20 must approve with CTA concurrence the methodology for the DSA. NA-10 or NA-20 approves contractor DSAs, unless the approval authority has been delegated. For work in other facilities

that do not meet Hazard Category 2 or 3 criteria, NNSA Site Office Managers determine the approval mechanisms based on the potential hazards involved. The DOE General Counsel ruling 1995-1 is an official interpretation of 10 CFR Parts 830 and 835, and it states in part that nuclear or non-nuclear safety deficiencies that affect the safety of nuclear facilities are subject to Price Anderson enforcement. 10 CFR Part 850, Chronic Beryllium Disease Prevention, and Part 851 contain requirements for the identification and assessment of hazards that affect worker safety in all facilities. Earlier Section 6.1.5 describes the review and approval process for variances requested from worker safety requirements in 10 CFR 851.

NA-10 and NA-20 approve requests for exemptions from requirements of DOE nuclear safety regulations listed in DOE M 411.1-1C, Safety Management Functions, Responsibilities and Authorities Manual, as authorized by the provisions of 10 CFR 820 and with concurrence from the CTA. NA-10 ensures that the Site Office Managers maintain the status of safety basis and related documents for Hazard Category 2 and 3 nuclear facilities.

Specific mechanisms, processes, and methods are described in Tables 1 and 3.

6.2.3 Core Function 3: Develop and Implement Hazard Controls

Applicable standards and requirements are identified and agreed on, controls to prevent or mitigate hazards are identified, the safety envelope is established, and controls are implemented.

This Core Function is closely related to Guiding Principle 5: Identification of Safety Standards and Requirements and Guiding Principle 6: Hazard Controls Tailored to Work Being Performed. The same description in sections 6.1.5 and 6.1.6 apply for Core Function 3.

Specific mechanisms, processes, and methods are described in Tables 1 and 3.

6.2.4 Core Function 4: Perform Work Within Controls

Readiness is confirmed and work is performed safely.

NNSA HQ provides overall leadership, direction, and oversight to ensure site programs, operations, and resources are managed in an open, safe, environmentally sound, and cost-effective manner.

NNSA HQ personnel perform assessments of site offices and contractors performance to ascertain facility and program status, determine whether implementation of requirements is effective, and evaluate the effectiveness of the contractor's self-assessment program.

DOE P 450.7, *Department of Energy Environment, Safety and Health Goals* provides expectations for the Department to foster and maintain a work environment that encourages free and open expression of ES&H concerns, and where employees have no fear of reprisal or discrimination for reporting such concerns. NNSA fully supports this goal and encourages every NNSA employee to raise concerns, without the fear of reprisal, when they are convinced a situation may exist that could place them, their coworker(s), or the environment in danger.

Specific mechanisms, processes, and methods are described in Tables 1, 3, and 4.

6.2.5 Core Function 5: Provide Feedback and Continuous Improvement

Feedback information on the adequacy of controls is gathered, opportunities for improving the definition and planning of work are identified and implemented, line and independent oversight is conducted, and, if necessary, regulatory and enforcement actions occur.

Effective and timely feedback is critical to identification of improvement opportunities. NNSA HQ employs various mechanisms to collect feedback and to promote continuous improvement in ISM implementation. Some of these mechanisms are:

- Quarterly Safety Briefings to NNSA Senior Managers
- Contractor Performance Evaluations
- CDNS biennial review reports
- NA Technical Bulletins developed by CDNS
- Weekly call by NA-1 with Laboratory Directors
- Periodic calls with site offices by Deputy NA-10 for Site Operations
- Weekly calls by CDNS with site offices
- Monthly calls between site offices and NA-17 on commitments to the DNFSB and on open CATS items
- Monthly calls between NA-3.6, NA-17 and NNSA Facility Representative Steering Committee members
- Monthly calls between NA-3.6, NA-17 and NNSA Site Office Points of Contact for 10 CFR 851 implementation
- NNSA SC Continuing Training information
- Daily ORPS reports provided by HSS
- Lessons Learned / Operating Experience Program communications
- Annual NNSA HQ FEOSH workplace inspection
- DPO Process.

NNSA HQ monitors other site activities, ranging from surveillances and document reviews to task team participation as feedback sources. Key performance feedback is provided by NNSA site offices as part of the formal contractor award fee and performance evaluation process. The amount of award fee earned by the contractor at the end of a rating period is determined after due consideration of performance and feedback for the period. Contractors are encouraged to self identify and report problems and may reduce fines and penalties in certain areas if they do so (for example, Price-Anderson Amendments Act activities).

In addition to the NNSA feedback mechanisms discussed earlier, NNSA HQ participates in the DOE Lessons Learned/Operating Experience program coordinated by HSS to sort and screen lessons learned pertaining to the operation of NNSA facilities, as well as other sites in the DOE complex.

Specific mechanisms, processes, and methods are described in Table 4.

TABLE 1. Implementing Mechanisms, Processes, and Methods for ISM Guiding Principles 1, 2, and 3

ISM Guiding Principles	Closely Related ISM Core Functions	DOE-Level Implementing Mechanisms, Processes, and Methods	NNSA-Level Implementing Mechanisms, Processes and Methods
<p>1. Line Management Responsibility</p> <p>2. Clear Roles and Responsibilities</p> <p>3. Competence Commensurate with Responsibilities</p> <p>Related ISM Safety Culture Elements</p> <p>8. Individual Attitude and Responsibility</p> <p>9. Operational Excellence</p> <p>10. Oversight for Performance Assurance</p>	<p>1. Define Scope of Work</p> <p>2. Identify and Analyze Hazards</p> <p>3. Develop and Implement Hazard Controls</p> <p>4. Perform Work Within Controls</p> <p>5. Feedback and Continuous Improvement</p>	<ul style="list-style-type: none"> • 2006 DOE Strategic Plan • DOE O 226.1, Implementation of Department of Energy Oversight Policy • DOE O 331.1B Chg 1, Employee Performance Management System • DOE O 360.1B, Federal Employee Training • DOE M 360.1-1B, Federal Employee Training Manual • DOE O 361.1A, Acquisition Career Development Program • DOE M 411.1-1C, Safety Management Functions, Responsibilities and Authorities Manual, as modified by Secretary Bodman letter of April 26, 2005 • DOE O 412.1A, Work Authorization System • DOE O 413.3A, Program and Project Management for the Acquisition of Capital Assets • DOE O 414.1C, Quality Assurance • DOE M 426.1-1A, Federal Technical Capability Manual • DOE O 442.1A, Department of Energy Employee Concerns Program • DOE M 442.1-1, Differing Professional Opinions Manual for Technical Issues • DOE M 450.4-1, Integrated Safety Management System Manual • U.S. DOE Federal Technical Capability Program Corrective Action Plan, Revision 1, January 17, 2007 	<ul style="list-style-type: none"> • NNSA 2004 Strategic Plan • NNSA Safety Management Functions, Responsibilities and Authorities Manual (FRAM) Revision 1, dated February 28, 2005 • NNSA HQ QAP, July 2006 • NA-1 M 411.1-1 Headquarters Biennial Review of Site Office Nuclear Safety Performance • NA-1 SD 442.1-1, NNSA Differing Professional Opinions Manual for Technical Issues Involving Environment, Safety, & Health • NAP-4A, Corporate Performance Evaluation Process for Management and Operating Contractors • NAP-6, Federal Employee Occupational Safety and Health Program for National Nuclear Security Administration Headquarters Employees • BOP-002.02a, NNSA Student Loan Repayment Program • BOP-002.03a, NNSA Recruitment, Relocation and Retention Incentives Program: Interim Policy Pending Issuance by US Office of Personnel Management of Final Regulations • BOP 002.04a, NNSA Competitive Service Merit Promotion Plan • BOP-003.0401A, NNSA Acquisition Career Development • BOP-006.002 NNSA Employee Concerns Program • CDNS 251.1-3, Concurrence with Rules & Directives that Affect Nuclear Safety • CDNS M 360.1N, Nuclear Safety Continuing Education • CDNS M 411.1-1, CDNS Management System Description • CDNS M 442.1-1, CDNS Differing Professional Opinion Process • NA-70 FRAM (under development)

TABLE 1. Implementing Mechanisms, Processes, and Methods for ISM Guiding Principles 1, 2, and 3

ISM Guiding Principles	Closely Related ISM Core Functions	DOE-Level Implementing Mechanisms, Processes, and Methods	NNSA-Level Implementing Mechanisms, Processes and Methods
			<ul style="list-style-type: none"> • NNSA Activity Level Work Planning and Control Processes: Attributes, Best Practices and Guidance for Effective Incorporation of ISM and QA, January 2006 (Sent to Site Office Managers by NA-10 memo, January 23, 2006) • DP Program Management Manual • Initial Headquarters Line Management Oversight Plan for ES&H and Emergency Operations (NA-10) • NNSA Technical Qualification Program Plan, dated June 24, 2004 • NNSA Technical Bulletins • Monthly NNSA Service Center continuing training notifications • NNSA Program and Fiscal Guidance, March 2007 • NNSA PPBE Programming Instructions, March 2007 • DP Program and Resource Guidance • NEPA/EIS Guidance from HS • Annual Planning & Production Document • Annual Stockpile Stewardship Plan (“Green Book”) • NNSA Development & Production Manual, 56XB, Revision 2 • NNSA Quality Assurance Procedures Manual • NNSA Safety Software Quality Assurance Handbook, Rev. A, October 2006 • QC-1, Rev. 10, Weapons Quality Policy • Quality Assurance Procedures Manual, February 2005 • Memorandum dated 1/9/2006 from NA-1, Subject: Honor Awards • Memorandum dated 11/30/2006 signed by NNSA Associate Administrator for Management and Administration and the DOE Deputy Human Capital Officer • NNSA HQ review of site contractor Performance Evaluation Plans

TABLE 2. Implementing Mechanisms, Processes, and Methods for ISM Guiding Principle 4

ISM Guiding Principle	Closely Related ISM Core Function	DOE-Level Implementing Mechanisms, Processes, and Methods	NNSA-Level Implementing Mechanisms, Processes, and Methods
<p>4. Balanced Priorities</p> <p>Related ISM Safety Culture Elements</p> <p>10. Oversight for Performance Assurance</p>	<p>1. Define Scope of Work</p>	<ul style="list-style-type: none"> • DOE O 130.1, Budget Formulation • DOE O 135.1A, Budget Execution Funds Distribution and Control • DOE M 135.1-1A, Department of Energy Budget Execution Funds Distribution And Control Manual • DOE O 226.1, Implementation of Department of Energy Oversight Policy • DOE M 411.1-1C, Safety Management Functions, Responsibilities and Authorities Manual, as modified by Secretary Bodman letter of April 26, 2005 • DOE O 412.1A, Work Authorization System • DOE O 413.3A, Program and Project Management for the Acquisition of Capital Assets • DOE O 414.1C, Quality Assurance • DOE M 426.1-1A, Federal Technical Capability Manual • DOE O 452.3, Management of the Department of Energy Nuclear Weapons Complex • DOE Performance and Accountability Report 	<ul style="list-style-type: none"> • NNSA 2004 Strategic Plan • BOP-001 series on NNSA Programming, Planning, Budgeting and Evaluation processes • NNSA Strategic Planning Guidance • Annual Program & Fiscal Guidance (March 7, 2007) • Annual Programming, Planning, Budgeting and Evaluation (PPBE) Programming Process Instructions (March 21, 2007) • Annual Stockpile Stewardship Plan (“Green Book”) • NNSA Safety Management Functions, Responsibilities and Authorities Manual (FRAM) Revision 1, dated February 28, 2005 • NA-1 M 411.1-1 Headquarters Biennial Review of Site Office Nuclear Safety Performance • NAP-4A, Corporate Performance Evaluation Process for Management and Operating Contractors • BOP-50-003, Establishment of a National Nuclear Security Administration (NNSA) Independent Project Review (IPR) Policy • CDNS M 411.1-1, CDNS Management System Description • DP Program Management Manual • Initial Headquarters Line Management Oversight Plan for ES&H and Emergency Operations (NA-10) • NNSA Technical Qualification Program Plan, dated June 24, 2004 • DP Program and Resource Guidance • NEPA/EIS Guidance from HS • Annual Planning & Production Document • NNSA Development & Production Manual, 56XB, Revision 2 • NNSA HQ review of site contractor Performance Evaluation Plans • Charter for LOCAS Council

TABLE 3. Implementing Mechanisms, Processes, and Methods for ISM Guiding Principles 5 and 6

ISM Guiding Principles	Closely Related ISM Core Functions	DOE-Level Implementing Mechanisms, Processes, and Methods	NNSA-Level Implementing Mechanisms, Processes, and Methods
<p>5. Identification of Safety Standards</p> <p>6. Tailor Hazard Controls to Work</p> <p>Related ISM Safety Culture Element</p> <p>10. Oversight for Performance Assurance</p>	<p>1. Define Scope of Work</p> <p>2. Identify and Analyze Hazards</p> <p>3. Develop and Implement Hazard Controls</p> <p>4. Perform Work Within Controls</p>	<ul style="list-style-type: none"> • 10 CFR 820, <i>Procedural Rules for DOE Nuclear Activities</i> • 10 CFR 830, <i>Nuclear Safety Management</i> • 10 CFR 835, <i>Occupational Radiation Protection</i> • 10 CFR 850, <i>Chronic Beryllium Disease Prevention Program</i> • 10 CFR 851, <i>Worker Safety and Health</i> • DOE O 210.2, DOE Corporate Operating Experience Program • DOE O 226.1, Implementation of Department of Energy Oversight Policy • DOE M 411.1-1C, Safety Management Functions, Responsibilities and Authorities Manual, as modified by Secretary Bodman letter of April 26, 2005 • DOE O 413.3, Change 1, Program and Project Management for the Acquisition of Capital Assets • DOE O 414.1C, Quality Assurance • DOE O 420.1, Facility Safety • DOE O 425.1C, Startup and Restart of Nuclear Facilities • DOE O 440.1B, Worker Protection Management for Federal Employees • DOE HQ O 442.1, Headquarters Occupational Safety and Health Program • DOE O 450.1, Environmental Protection Program • DOE M 450.3-1, DOE Closure Process for Necessary and Sufficient Sets of Standards • DOE O 452.2C, Nuclear Explosive Safety • DOE M 452.2-1, Nuclear Explosive Safety • DOE O 452.3, Management of the DOE Nuclear Weapons Complex 	<ul style="list-style-type: none"> • NNSA Safety Management Functions, Responsibilities and Authorities Manual (FRAM) Revision 1, dated February 28, 2005 • NA-1 SD 251.1-1 CTA Management of Nuclear Safety Requirements • NA-1 SD 251.1-2 Index of Baseline Nuclear Safety Requirements • NA-1 M 411.1-1 Headquarters Biennial Review of Site Office Nuclear Safety Performance • NAP-5, Standards Management • NAP-6, Federal Employee Occupational Safety and Health Program for NNSA Headquarters Employees • BOP-50.001, NNSA ESAAB Equivalent Process • BOP-50-003, Establishment of a National Nuclear Security Administration (NNSA) Independent Project Review (IPR) Policy • Nuclear Weapons Production and Planning Directive • CDNS M 251.1-1, Evaluating Exemptions • CDNS M 251.1-3, Concurrence with Rules and Directives that Affect Nuclear Safety • CDNS M 411.1-1, CDNS Management System Description • CDNS M 411.1-2, Evaluating Requirements in Contracts • CDNS M 411.1-3, Evaluating Delegations of Nuclear Safety Authority • CDNS M 413.3A, ESAAB Equivalent Process

TABLE 4. Implementing Mechanisms, Processes, and Methods for ISM Guiding Principle 7

ISM Guiding Principles	Closely Related ISM Core Function	DOE-Level Implementing Mechanisms, Processes, and Methods	NNSA-Level Implementing Mechanisms, Processes, and Methods
<p>7. Operations Authorization</p> <p>Related ISM Safety Culture Element</p> <p>10. Oversight for Performance Assurance</p> <p>11. Organizational Learning for Performance Improvement</p>	<p>4. Perform Work Within Controls</p> <p>5. Feedback and Continuous Improvement</p>	<ul style="list-style-type: none"> • 10 CFR 850, <i>Chronic Beryllium Disease Prevention Program</i> • 10 CFR 851, <i>Worker Safety and Health</i> • DOE O 210.2, DOE Corporate Operating Experience Program • DOE O 226.1, Implementation of Department of Energy Oversight Policy • DOE M 411.1-1C, Safety Management Functions, Responsibilities and Authorities Manual, as modified by Secretary Bodman letter of April 26, 2005 • DOE O 420.1, Facility Safety • DOE O 413.3A, Program and Project Management for the Acquisition of Capital Assets • DOE O 414.1C, Quality Assurance • DOE O 425.1C, Startup and Restart of Nuclear Facilities • DOE O 452.2C, Nuclear Explosive Safety • DOE M 452.2-1, Nuclear Explosive Safety • DOE O 452.3, Management of the Department of Energy Nuclear Weapons Complex 	<ul style="list-style-type: none"> • NNSA Safety Management Functions, Responsibilities and Authorities Manual (FRAM) Revision 1, dated February 28, 2005 • NA-1 M 411.1-1 Headquarters Biennial Review of Site Office Nuclear Safety Performance • NNSA HQ QAP, July 2006 • NAP-6, Federal Employee Occupational Safety and Health Program for National Nuclear Security Administration Headquarters Employees • BOP-50.001, NNSA ESAAB Equivalent Process • BOP-50-003, Establishment of a National Nuclear Security Administration (NNSA) Independent Project Review (IPR) Policy • Nuclear Weapons Production and Planning Directive • CDNS M 251.1-1, Evaluating Exemptions • CDNS M 411.1-1, CDNS Management System Description • CDNS M 411.1-3, Evaluating Delegations of Nuclear Safety Authority • CDNS M 413.3A, ESAAB Equivalent Process • Initial Headquarters Line Management Oversight Plan for ES&H and Emergency Operations (NA-10) • NNSA Activity Level Work Planning and Control Processes: Attributes, Best Practices and Guidance for Effective Incorporation of ISM and QA, January 2006 (Sent to Site Office Managers by NA-10 memo, January 23, 2006) • NNSA Program and Fiscal Guidance, March 2007 • NNSA PPBE Programming Instructions, March 2007 • DP Program and Resource Guidance • NEPA/EIS Guidance from HS • Annual Planning & Production Document • NNSA Development & Production Manual, 56XB, Revision 2 • NNSA Quality Assurance Procedures Manual • NNSA Safety Software Quality Assurance Handbook, Rev. A, October 2006 • QC-1, Rev. 10, Weapons Quality Policy • Quality Assurance Procedures Manual, February 2005 • NA-10 Technical Seminars • NNSA NA-40 Notifications of EOC Actions

6.3 Integration with Quality Assurance, Environmental Management Systems, and Integrated Safeguards and Security Systems

In general, the development and implementation of the NNSA HQ ISM System requires NNSA HQ to integrate safety into all aspects of work planning and execution, using the Guiding Principles, Safety Culture Elements, and Core Functions set forth in the DOE M 450.4-1. Integration means that all management systems and programs are designed to fit together to enable safe and efficient performance of work. Safety is to be incorporated as a value into all business and operations systems. NNSA has commenced efforts to eventually consolidate critical management systems into one system.

The ways in which other management systems such as the Quality Assurance Program, Environmental Management System, and Integrated Safeguards and Security Management are integrated with ISM are described below.

6.3.1 Integration of Quality Assurance with ISM

NNSA is committed to quality of all mission processes and the elimination of errors. Each NNSA HQ organization has a Quality Assurance Program (QAP). The QAP describes the method by which quality assurance is implemented with ISM and the overall work processes.

To institutionalize programmatic aspects of integrating QAP with ISM within NNSA, the QA Roadmap effort was developed and continues to be refined. This effort coordinates QA and ISM activities between site offices, contractors, NNSA HQ, and other DOE organizations to ensure that closely linked efforts are coordinated.

To further the effective integration of QA with ISM at the work activity level, NNSA developed a guidance document, "NNSA Activity Level Work Planning and Control Processes: Attributes, Best Practices and Guidance for Effective Incorporation of ISM and QA, January 2006." This was sent to NNSA Site Office Managers by NA-10 memorandum dated January 23, 2006. The document provides attributes and best practices/guidance for effectively incorporating ISM core functions and guiding principles, and QA criteria, into activity level work planning and control processes. The attributes were drafted by NNSA Headquarters, Site Office, and contractor personnel involved in work planning and control for the various types of NNSA non-office environment work activities (e.g., construction and modification work, operations activities, research and development, maintenance). The attributes described in the document are intended to be applicable to all types of work and the workers (e.g., scientists, operators, crafts, engineers) who perform the work. Improvements in activity-level work planning and control have resulted from this effort. It is expected that further improvements to ISM systems will result as the activity-level processes are matured and integrated with improved site- and facility-level level ISM processes resulting from implementation of DOE M 450.4-1.

6.3.2 Integration of Environmental Management Systems within ISM

To implement sound stewardship practices which protect the air, water, and land, NNSA HQ adheres to the responsibilities and requirements of DOE O 450.1, *Environmental Protection*

Program, for itself and its contractors. The Environmental Management System (EMS) is implemented to ensure environmental protection actions and measures are integrated into all work planning and performance. In fact, DOE Policy 450.4 incorporates EMS into ISM. NA-50 coordinates with the Office of Environmental Management to execute environmental legacy remediation activities to minimize the potential for human and environmental exposure to hazardous contaminants resulting from nuclear weapons research, production and lifecycle stewardship activities.

NNSA HQ expects site office management to review and evaluate contractor implementation of EMS as part of reviewing the ISM program. NNSA HQ works closely with HSS to gather and analyze data regarding EMS implementation at the NNSA sites. NNSA periodically reports ES&H performance and operating experience information to NNSA senior management. NNSA HQ personnel determine the appropriate actions to assist site offices in correcting any identified weaknesses.

In response to Executive Order 13423, *Strengthening Environmental, Energy, and Transportation Management*, the Secretary expects DOE to exceed the goals in several areas including reduced energy intensity and greenhouse gas emissions, building efficiency, clean energy production and use, and fleet management, and to lead all major Federal agencies in overall environmental, energy, and transportation management. These initiatives are integral to implementation of EMS and ISM throughout NNSA.

6.3.3 Integration of Integrated Safeguards and Security Management with ISM

Just as NNSA directs mission-related work with due consideration for safety, it also fundamentally considers security in accomplishing its work. Safety roles, responsibilities, and authorities of the Office of Defense Nuclear Security, NA-70, are described in the NNSA FRAM. The necessary elements of Integrated Safeguards and Security Management (ISSM) for NNSA HQ are described in the draft DNS FRAM, dated May 2007. Many of the core values and principles of ISM are related to those of ISSM and are reflected in both FRAM documents.

NA-70 personnel are qualified using some elements of the DOE Technical Qualification Program. These elements contain many safety-related competencies. NNSA Defense Nuclear Security (NA-70) and the NNSA site offices have adopted the DOE Training Qualification Program (TQP) (or a site specific modified version of the TQP) as the standard for departmental training to ensure all technical employees involved with providing management direction or oversight that could affect the safe and secure operation of Defense Nuclear Security programs are trained and qualified. The TQP consists of General Technical Base Qualification Standard and Functional Area Base Qualification Standard. The Technical Qualification Program is divided into three levels of technical competence and qualification (familiarity, working, and expert levels). The General Technical Base Qualification Standard establishes the base technical competence required of all Department of Energy Defense Nuclear Security facility technical personnel. The Functional Areas Qualification Standards build on the requirements of the General Technical Base Qualification Standard and establish Department-wide functional competency requirements in each of the identified security functional areas. Office/facility-

specific qualification standards establish unique operational requirements at the Headquarters or Field element, site, or facility level.

7.0 Other Safety-Related Initiatives

Line Oversight and Contractor Assurance System (LOCAS) Integration Council – The Council is a chartered group chaired by the Deputy for Site Operations in NA-10 to support NNSA line management. The LOCAS effort has four teams looking at different elements of improving LOCAS:

- Team 1: Peer Review/CAS Implementation Plan – The team will pull together the collective wisdom on what constitutes a “good” CAS.
- Team 2: Performance Measures Action Plan – The team will analyze key performance measures being used or developed in conjunction with LOCAS implementation.
- Team 3: Portal Design and Implementation Action Plan – The team will examine the potential mechanisms for posting LOCAS information, develop a proposal for implementation, obtain authorization including funding, and oversee the implementation of an electronic, portal-like website or websites.
- Team 4: Policy Integration Implementation Plan – The team will ensure that Line Oversight and CAS policy and requirements are clear.

NNSA Authorization Basis Senior Advisor / Continuous Learning Chair –The NNSA Administrator started this effort in 2006 to achieve confidence in the preparation, review, approval, verification, and maintenance of 10 CFR 830 nuclear facility safety bases. This function will further the NNSA Administrator’s vision by establishing centralized and dedicated leadership to promote corporate excellence and consistency across the NNSA complex, both Federal and contractor elements, in the following safety basis areas:

- Personnel training, qualification, re-qualification, continuous learning, and career progression
- Policy
- Procedures
- Implementation practices
- Organizational behavior.

Electrical Safety Improvement – NNSA HQ and sites have focused attention on the types and causes of occurrences involving electrical safety. A video teleconference on September 26, 2006 with all the NNSA sites and NA-1, NA-10 and others raised awareness of the unacceptably high number of electrical incidents in NNSA and shared lessons learned on local initiatives at each site that can be potentially transferred to other sites. This focused attention continues in Quarterly Safety Briefings to NNSA HQ senior managers as electrical safety occurrences and trends are reported and trends are analyzed. A DOE workshop in July 2007 furthered this focus even though an improving trend at most sites was evident.

Biosurety – NNSA participates in the DOE efforts to improve biosurety. NA-3.6 chairs the DOE Biosurety Executive Team chartered by the Secretary of Energy to develop safety and security policy for DOE facilities engaged in hazardous biological research activities.

Communications from NA-1 to all of NNSA – Frequent, periodic emails are sent from the NNSA Administrator to all NNSA employees on a variety of topics, including safety. These messages communicate expectations and priorities directly to each NNSA employee and are also kept on the NNSA intranet web site.

8.0 Annual ISM System Description Maintenance and Improvement

Annual NNSA HQ and Site Office ISM Effectiveness Review and Declaration – NNSA HQ and each site office performs an annual ISM effectiveness review to develop its annual ISM declaration. NA-3.6 coordinates this annual review. Guidelines for performing annual ISM effectiveness reviews are provided in DOE M 450.4-1, *Integrated Safety Management System Manual*. In addition, the manner and frequency with which performance is measured and reported to the NNSA CTA is part of this review. NNSA HQ annually issues a declaration report of the status of implementation of ISM, including applicable site and contractor operations. NNSA HQ must evaluate applicable NNSA HQ and Site Office activities, and applicable contractor activities; and the Site Offices must evaluate applicable Site Office activities and applicable contractor activities. NNSA HQ line management (NA-17) issues line management expectations and sets the schedule for Site Office annual ISM reviews and declarations.

Annual Review of ISM System Description – The NNSA HQ ISM System Description is reviewed approximately annually and NA-3.6 communicates the results of this review to the Administrator and CTA. This review is part of the Annual ISM Effectiveness Review and Declaration. If no changes are needed to maintain ISM system description complete, accurate, and up-to-date, then no annual update is necessary. Any changes based on any identified gaps from management or self-assessments in NNSA HQ are approved by the NNSA Central Technical Authority and submitted for final approval by the Administrator. NA-3.6 coordinates this annual review.

Annual Performance Expectations and Performance Objectives – NNSA HQ provides safety performance measures and information to the NNSA CTA. This is expected to be done in accordance with Appendix A, which meets the intent of DOE M 450.4-1 to provide this type of information annually. The initial safety objectives, measures, and commitments are described in Section 4.

Line Oversight of ISM Implementation – NNSA HQ performs line oversight of ISM implementation at the next lower tier, consistent with the requirements and guidance of DOE O 226.1, *Implementation of Department of Energy Oversight Policy*. NNSA HQ oversees implementation at the Site Office, with sampling at the contractor level, as needed based on available performance information, to evaluate the effectiveness of the Site Office.

Appendix A

Reporting of NNSA Safety Management Performance Measures

Performance Measure	Periodicity Reported to NNSA CTA	Reporting Mechanism
Quarterly Safety Briefings consistently provided to the Administrator and senior NNSA managers to provide safety data	Quarterly	Briefing
Planned CDNS reviews conducted	According to CDNS schedule	Written Report
Planned NA-10 oversight activities conducted in accordance with oversight plan	Approximately 6 months	Updated oversight plan
NNSA FRAM is updated as needed	As Needed	Updated FRAM
NNSA HQ ISM effectiveness reviews occur	Annually	Written Report
Percentage of NNSA personnel in the Technical Qualification Program fully qualified in their assigned functional area. [NNSA Goal: at least 80%]	Quarterly	Written Report
Number of NNSA personnel in the Technical Qualification Program overdue in their qualifications. [NNSA Goal: 0]	Quarterly	Written Report
Delegations of authority are reviewed, as necessary	As Needed	Written Report
TRC Rate	Quarterly	Briefing
DART Rate	Quarterly	Briefing
ORPS Occurrences in certain focus areas, such as electrical safety and near misses	Quarterly	Briefing
Type A & B Accident Investigations	Quarterly	Briefing

Appendix B

Initial NNSA HQ Actions to Improve Implementation of ISM

Action	Responsible Office	Expected Completion Date
Develop NNSA HQ Differing Professional Opinion Procedure for NA-3.6 and NA-2.1	NA-3.6 / NA-2.1	June 2007 - Completed
Update NNSA FRAM	NA-3.6 / NA-2.1	December 2007
Set schedules and expectations for Site Office annual review of ISM safety performance objectives, measures and commitments	NA-17 / NA-3.6	June 2008
Review NNSA HQ ISM System Description for any needed updates	NA-3.6	August 2008
Review implementation of ISM System at NNSA HQ	NA-3.6	August 2008
Perform a NA-10 Gap Analysis for NNSA HQ ISM implementation	NA-17	January 2008
Develop and implement mechanisms to remedy NA-10 NNSA HQ ISM Gap Analysis results	NA-17	March 2008
Develop line management expectations and schedule for Site Office ISM review and declaration	NA-17	June 2008
Develop PAAA Procedure	NA-3.6	December 2007
Continue to improve NNSA Safety Culture based on results of oversight, management and self assessments, and annual effectiveness review	NA-3.6	Ongoing