

SUPPLEMENTAL DIRECTIVE

NNSA SD 450.2A

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**FUNCTIONS, RESPONSIBILITIES, AND
AUTHORITIES (FRA) FOR SAFETY
MANAGEMENT**



**NATIONAL NUCLEAR SECURITY ADMINISTRATION
Office of Safety, Infrastructure and Operations**

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FUNCTIONS, RESPONSIBILITIES, AND AUTHORITIES (FRA) FOR SAFETY MANAGEMENT

1. PURPOSE. Define, identify, and clarify the National Nuclear Security Administration (NNSA) safety management functions, responsibilities, authorities, and associated delegations within program and functional management organizations, and field offices, to ensure that work is performed safely. This Supplemental Directive (SD) documents NNSA roles and responsibilities in implementing safety management systems.
2. AUTHORITY. This SD is issued to comply with the Secretary's direction concerning safety management responsibilities and assigns safety responsibilities and authorities described in Department of Energy (DOE) Order (O) 450.2, *Integrated Safety Management*. This SD implements and assigns responsibilities established within NNSA by DOE directives, Code of Federal Regulations (CFR), Federal Statutes, Executive Orders, and other authorities.
3. CANCELLATIONS.
 - a. SD 450.2 Admin Change 1, *Functions, Responsibilities, and Authorities (FRA) Document for Safety Management*, dated 1-27-15.
 - b. SD 450.4-1, *NNSA Headquarters Integrated Safety Management System Description (ISMSD)*, dated 10-23-07. The NNSA ISMSD is included as an appendix to this document.
4. APPLICABILITY. This SD identifies safety management functions, responsibilities, and authorities that have been assigned by the Secretary of Energy and the Administrator for NNSA.
 - a. Federal. The provisions of this SD apply to all NNSA federal organizations, effective immediately.
 - b. Contractor. Does not apply to contractors.
 - c. Equivalency. In accordance with the responsibilities and authorities assigned by Executive Order 12344, codified at 50 United States Code (U.S.C.) sections 2406 and 2511, and to ensure consistency throughout the joint Navy/DOE Naval Nuclear Propulsion Program, the Deputy Administrator for Naval Reactors (Director) will implement and oversee requirements and practices pertaining to this directive for activities under the Director's cognizance, as deemed appropriate.
5. SUMMARY OF CHANGES. This SD updates SD 450.2 Admin Change 1, *Functions, Responsibilities, and Authorities (FRA) Document for Safety Management*. SD 450.4-1, *NNSA Headquarters Integrated Safety Management System Description (ISMSD)*, was cancelled and a revised NNSA ISMSD is included as an appendix to this document.

Other changes include:

- Updated responsibilities and language to be consistent with current DOE and NNSA policy documents (e.g., Acquisition Executive was changed to Project Management Executive).
 - Clarified DOE O 450.2, *Integrated Safety Management*, responsibilities (e.g., requirement for program offices that direct operations at locations where more than one DOE program office conducts work, assignment of NNSA ISM Champions, ISM declaration frequency).
 - Added requirements associated with DOE O 458.1, *Radiation Protection of the Public and the Environment*.
 - Added Safety Management Program responsibilities that were not included in NNSA SD 450.2 AC1.
 - Made editorial changes throughout the document.
6. **BACKGROUND.** This SD contains a description of NNSA senior management, Headquarters (HQ) and Field Office Manager (FOM) functions, responsibilities, and authorities related to safety management. This SD lists NNSA requirements regarding organizational accountability for safety management derived from DOE directives or NNSA SDs and other assignments and delegations made by the Administrator. Specific references to such directives found in this SD refer to the latest approved revision of the directive or its successor directive as applicable to NNSA activities. The appendixes contain references, acronyms, and NNSA's ISMSD.

DOE line management refers to the unbroken chain of responsibility that extends from the Secretary of Energy to the Deputy Secretary, to the secretarial officers (Administrator or designee), to the program and functional managers and FOMs who are responsible for mission and program execution (DOE O 226.1, *Implementation of Department of Energy Oversight Policy* and NNSA SD 226.1, *NNSA Site Governance*). The FOMs report directly to the Administrator. The Administrator is supported by NA-50, which maintains operational awareness on safety matters, provides technical support to the FOMs, and assists the FOMs in maintaining a consistent application of nuclear and non-nuclear safety requirements. NA-50 also executes, on behalf of the Administrator, the line management functions of the Central Technical Authority (CTA) and Cognizant Secretarial Officer (CSO) for safety matters. The program interface with the field offices takes place through the appropriate Deputy Administrator or Associate Administrator. Federal oversight of the contractor will be accomplished as close to the work as practical and as required by DOE O 226.1 and NNSA SD 226.1, and with the responsibilities indicated in this SD.

Safety management responsibility for work done by DOE and other non-NNSA tenant activities remains with NNSA line management (a landlord function) and should be communicated by NNSA to non-NNSA tenants. For projects executed through non-Management and Operating (M&O) contracts, the work done at a site must be performed

within the envelope approved by the FOM as delegated/further delegated. Formal *stop work* authority normally resides with the FOM and contracting officer (CO), but all NNSA personnel have authority (and are expected) to stop or pause unsafe or unsecure activities.

Line managers bear full responsibility for achieving assigned program objectives in a manner that is safe and legally, ethically, and fiscally responsible. Primary authority rests with the lowest line manager responsible for directing all of the resources needed to meet a specific requirement or objective. In most cases, this is a FOM, but, consistent with the tiered risk decision-making authority, it may be an HQ line manager. Responsibility is retained by the delegator, and authority may be delegated to the extent feasible, based upon the delegator's discretion, that the receiver has the capability to accomplish the task. Specific directives may limit the extent of re-delegation.

Overall safety of NNSA sites and activities is ensured through site stewardship of nuclear and non-nuclear safety and environment, safety, and health (ES&H). The Administrator delegated most of the line management accountability for ES&H to the field and program offices, but retains responsibility. In the case of nuclear safety, the Administrator retains the line management responsibility for establishing policy and requirements at the HQ level, but delegates the responsibility for implementing standards to the field and programmatic level. Safety is everyone's responsibility.

Each organization within NNSA specifically addressed in this SD is responsible for establishing and documenting how the specific functions and authorities assigned in this SD are properly implemented. Each field office must prepare and maintain a signed FRA document to further define and assign its safety management functions as necessary.

7. CHANGE CONTROL. When organizations reorganize or responsibilities change that affect this SD, the Office of Safety, Infrastructure and Operations (NA-50) must be notified by the affected organization. The affected organization must work with the Policy Division (NA-MB-22) and NA-50 to prepare the required page change documents to update this SD, in accordance with NNSA SD 251.1, *Directives Management*, or successor directive.
8. REQUIREMENTS. NNSA managers assigned safety management functions, responsibilities, or authorities in this SD must develop implementing processes or procedures for their assigned safety management functions. It is recommended that organizations with multi-program secretarial missions establish memoranda of agreement (MOAs) with delegation listings included as needed.
9. RESPONSIBILITIES.
 - a. Administrator. The Administrator has authority over, and is responsible for, all programs and activities within NNSA.

The Administrator is responsible for safety management and its implementation in NNSA and monitors delegated authorities through this SD.

- (1) Provides overall direction within NNSA and establishes delegations of Administrator authorities to other NNSA officers.
- (2) Determines, approves, and issues *Price-Anderson Amendments Act* (PAAA) and Worker Safety and Health enforcement actions.
- (3) Management of Safety Requirements.
 - (a) Approves NNSA Policies, SDs, and other process documents.
 - (b) Establishes a process for the development, review, revision, and approval of NNSA safety-related directives, and for the development of NNSA input to DOE documents, including Orders, Technical Standards, and Rules.
 - (c) Reviews appeals of CSO decisions on exemption requests as appropriate, in accordance with the provisions of 10 CFR 820, *Procedural Rules for DOE Nuclear Activities*.
 - (d) Prioritizes hiring actions to ensure technically qualified federal personnel are available to accomplish mission.
- (4) Project Management.
 - (a) When functioning as the Project Management Executive (PME), approves critical decisions and baseline changes and ensures safety is integrated into design consistent with DOE O 413.3, *Program and Project Management for the Acquisition of Capital Assets*, requirements for nuclear construction projects.
 - (b) As a member of an Energy Systems Acquisition Advisory Board (ESAAB), advises the Chief Executive for Project Management (CE) that critical decisions and baseline change proposals have met integration of safety into design requirements consistent with DOE O 413.3 for nuclear construction projects.
- (5) Facilities Operation/Authorization. Executes startup authorization authority (SAA) for NNSA Hazard Category 2 Nuclear Facilities with a total project cost greater than \$200 million.
- (6) Staffing. Ensures adequate numbers of employees with an appropriate skill mix are available and qualified to perform their assigned safety management functions, including oversight and periodic self-assessments of line oversight responsibilities.

- b. Field Office Managers (FOM). FOMs report directly to the Administrator. In accordance with HQ program direction, field offices are responsible for local federal oversight and administration of the M&O and other direct contracts, except for design and construction contracts issued by the Office of Acquisition and Project Management (NA-APM). NNSA FOMs serve as line management, site-level mission integrators, and as the authorizing officials for activities at the site on behalf of the Administrator. They are responsible for the safe operation of facilities under their purview. Specific FOM safety FRA include the following:
- (1) Execute the responsibilities and authorities for FOMs in DOE and NNSA directives, and those authorities delegated to them. Oversee the M&O contractor's program execution and implementation of safety and quality programs at their site and ensure that M&O contractors operate facilities safely in support of the NNSA mission.
 - (2) FRA documents for program offices that direct operations at locations where more than one DOE program office conducts work must contain applicable memoranda of understanding (MOUs) that define the allocation of safety management functions and responsibilities among the program offices.
 - (3) Prepare a field office FRA document for their site and implement processes and procedures that delineate how the applicable responsibilities and authorities in this SD are performed at the field office. Revise the field office FRA document as delegations, authorities, and responsibilities change with revisions to this SD.
 - (4) Coordinate planned field office and HQ assessments into an integrated site assessment schedule in accordance with BOP-10.003, *Site Integrated Assessment Plan (SIAP) Development, Updating, and Reporting*.
 - (5) Approve contractor radiation protection plans per 10 CFR 835, *Occupational Radiation Protection*.
 - (6) Ensure requirements of DOE O 458.1, *Radiation Protection of the Public and the Environment*, are implemented.
 - (7) Approve maintenance implementation plans or nuclear maintenance management programs (NMMPs) per DOE O 433.1, *Maintenance Management Program for DOE Nuclear Facilities*.
 - (8) Approve contractor emergency management assessments and readiness assurance activities as defined in DOE O 151.1, *Comprehensive Emergency Management System*.
 - (9) Approve contractor nuclear facility training implementation matrices per DOE O 426.2, *Personnel Selection, Training, Qualification, and Certification Requirements for DOE Nuclear Facilities*.

- (10) Concur on contractor's procedures to implement DOE O 425.1, *Verification of Readiness to Start Up or Restart Nuclear Facilities*.
- (11) Approve safety basis and safety design basis documents per 10 CFR 830, Subpart B and associated directives, when delegated.
- (12) Determine the applicability of DOE O 422.1, *Conduct of Operations*, for all facilities other than Hazard Category 1, 2, or 3 nuclear facilities and approve the DOE O 422.1 implementation matrices.
- (13) Approve contractor Worker Safety and Health Plans per 10 CFR 851, *Worker Safety and Health Program*.
- (14) Approve contractor Chronic Beryllium Disease Prevention Plans per 10 CFR 850, *Chronic Beryllium Disease Prevention Program*.
- (15) Approve the initial M&O Contractor Assurance System (CAS) description and review and assess the effectiveness of the CAS per DOE O 226.1, *Implementation of Department of Energy Oversight Policy*. Ensure that contractor requirements for CAS are implemented as specified by contract.
- (16) If delegated as Project Management Executive, approve critical decisions and baseline change proposals and ensure safety is integrated into design in accordance with DOE O 413.3 requirements for nuclear construction projects.
- (17) If designated as a member of an ESAAB, advise the Chief Executive for Project Management that critical decisions and baseline change proposals have met the integration of safety into design requirements of DOE O 413.3 for nuclear construction projects.
- (18) Approve the M&O contractor ISMSD and submit the field office ISMSD to the NNSA CSO for information. Ensure that contractor requirements for ISM are implemented via the Department of Energy Acquisition Regulation (DEAR) requirements where prescribed. Provide the NNSA CSO input on the need for, and frequency of, ISM declarations for field element and contractor facilities and activities based on hazard, risk, and performance history. Submit field office declaration to CSO on a frequency not to exceed three years. (DOE O 414.1, *Quality Assurance*)
- (19) Approve the field offices' quality assurance program (QAP) as required by DOE O 414.1, as well as the contractor's QAP, and the safety software graded approach as required by the version of DOE O 414.1 in the contract and 10 CFR 830, Subpart A, *Quality Assurance Requirements*.
- (20) Ensure adequate numbers of employees with an appropriate skill mix are available and qualified to perform their assigned safety management

functions, including oversight and periodic self-assessments of line oversight responsibilities.

- (21) Implement a Federal Employee Occupational Safety and Health (FEOSH) Program to ensure safe and healthful working conditions for federal employees per DOE O 440.1, *Worker Protection Program for DOE (Including the National Nuclear Security Administration) Federal Employees*.
 - (22) Designate a field element ISM Champion per DOE O 450.2.
 - (23) Implement an Employee Concerns Program and designate an Employee Concerns Program Manager per DOE O 422.1, *Department of Energy Employee Concerns Program*.
 - (24) Approve contractor Fire Protection Program per DOE O 420.1, *Facility Safety*.
 - (25) Approve contractor Nuclear Criticality Safety Program per DOE O 420.1.
 - (26) Approve contractor Safety Design Strategy and other supporting documents for design of nuclear facilities per DOE STD 1189 as invoked by DOE O 420.1.
 - (27) Approve field element and contractor's Authorities Having Jurisdiction, e.g., Explosive Safety, Electrical Safety, etc.
 - (28) Oversee contractor Safety Management Program implementation.
- c. Associate Administrator for Safety, Infrastructure and Operations (NA-50). NA-50 has the responsibility for the sustainment of infrastructure, and the execution of nuclear safety and ES&H programs within NNSA.
- (1) Project Management.
 - (a) When designated as a member of an ESAAB, advises the Chief Executive for Project Management that critical decisions and baseline change proposals have met the integration of safety into design requirements of DOE O 413.3 for nuclear construction projects.
 - (b) Appoints a safety basis approval authority no later than Critical Decision-0 (CD-0) for design and construction of Hazard Category 1, 2, and 3 nuclear facilities or for projects including major modifications thereto, to approve safety design basis documents listed in DOE O 413.3 and BOP 07.01, *Delegations of Nuclear Safety Authority*.

- (c) Provides nuclear safety support for the design and construction of NNSA facilities and activities.
- (2) Integrated Safety Management (ISM).
- (a) Monitors effectiveness of ISM systems at NNSA sites and HQ.
 - (b) Appoints the NNSA ISM Champion (should be at least at the level of Deputy Associate Administrator or equivalent). Develops, maintains, and updates the NNSA ISM System Description.
 - (c) Working with the NNSA ISM Champion, periodically reviews the effectiveness of NNSA's ISM implementation at HQ, establishing ISM leadership, direction, and alignment within NNSA.
- (3) Nuclear Safety Research.
- (a) Evaluates proposed nuclear safety research and development projects and integrates funded projects with ongoing program activities within NNSA.
 - (b) Identifies and prioritizes safety research and development needs across NNSA and incorporates the prioritized list of projects into the annual budget and planning cycle.
 - (c) Seeks resolution of competing safety-related research initiatives from the Administrator.
- (4) Quality Assurance (QA).

This function includes the management and oversight of QA requirements, including 10 CFR 830, Subpart A; 10 CFR 71, Subpart H, *Quality Assurance*; DOE O 414.1; Nuclear Quality Assurance (NQA)-1; and International Organization for Standardization (ISO) 9001.

- (a) Ensures QA requirements are planned and implemented by Integrated Project Teams, prior to CD-1 approval, for all line-item nuclear facility projects.
- (b) Ensures the implementation of QA requirements for infrastructure nuclear facility construction projects in conceptual and design phases.
- (c) Ensures the implementation of QA requirements for programmatic and infrastructure nuclear facilities during operations and the remaining lifecycle.
- (d) After review and concurrence by the applicable FOM, approves NNSA QA programs for Type B and fissile radioactive material

packages in accordance with 10 CFR 71 Subpart H, unless delegated.

- (5) Packaging and Transportation. Serves as the NNSA Certifying Official authority to review and grant or deny requests for NNSA exemptions to other NNSA elements from the requirements of DOE O 460.1, *Hazardous Materials Packaging and Transportation Safety*.

Serves as the NNSA Certifying Official for Packaging and Transportation Safety (DOE O 460.1) and DOE O 461.1, *Packaging and Transportation for Offsite Shipment of Materials of National Security Interest*, for the following, unless delegated:

- (a) Certify NNSA Type B and fissile radioactive material packages;
 - (b) Recertify NNSA Type B and fissile radioactive material packages, as needed;
 - (c) Curtail and suspend the use of NNSA Type B and fissile radioactive material packages, if warranted;
 - (d) Issue Offsite Transportation Certificates (OTCs), Certificates of Compliance (CoCs), and Offsite Transportation Authorizations (OTAs) and Offsite Transportation Direction (OTD); and
 - (e) Audit and approve QA programs of NNSA contractors that participate in the design, fabrication, procurement, use, or maintenance of Type B and fissile radioactive material packages for compliance with 10 CFR 71 Subpart H.
- (6) Criticality Safety. Manages the Department's Nuclear Criticality Safety Program (NCSP) to provide sustainable expert leadership, direction, and the technical infrastructure necessary to develop, maintain, and disseminate the essential technical tools, training, and data required to support safe, efficient, fissionable material operations within DOE.
- (a) Coordinates the activities of the DOE Criticality Safety Support Group supporting the NCSP Manager.
 - (b) Provides expert nuclear criticality safety technical support to FOMs as requested to solve problems in criticality safety, and support continuous improvement.
 - (c) Provides expert nuclear criticality safety support in developing policy, rules, orders, and standards involving criticality safety.
 - (d) Coordinates field office input and provides expert nuclear criticality safety support to address policy questions.

- (e) Prepares the annual report on criticality safety for the Defense Nuclear Facilities Safety Board (DNFSB).
 - (f) Represents the NCSP within DOE and to external stakeholders (e.g., DNFSB, Nuclear Regulatory Commission (NRC), Congressional committees, etc.) on matters related to criticality safety.
- (7) Performance Improvement.
- (a) Monitors contractor reporting of potential nuclear safety violations and non-compliances with nuclear safety rules under the provisions of 10 CFR 820.
 - (b) Provides information, supports investigations, and participates in enforcement conferences with DOE Office of Independent Enterprise Assessment (DOE/EA), and other audit and investigative entities including NNSA Internal Affairs, the Inspector General, and the Government Accountability Office.
 - (c) Conducts biennial and other types of onsite safety program reviews of NNSA sites and activities, as required by DOE directives or as needed based on specific issues, to ensure that nuclear safety requirements and guidance are implemented appropriately and effectively.
- (8) Nuclear Explosives Safety. Provides independent oversight of federal responsibilities for Nuclear Explosive Safety as implemented by the Chief of Defense Nuclear Safety (NA-51).
- (9) Serve as the Office of Primary Interest for DOE explosives safety directives.
- (10) Federal Technical Capabilities Panel (FTCP). Serves as NNSA HQ agent for the DOE FTCP, unless delegated, leading NNSA Technical Qualification Program (TQP) implementation regarding NNSA defense nuclear facilities, and providing training for nuclear safety professionals. Formulates a Safety Basis Professional program to train adequate numbers of safety basis professionals in the skills needed to develop, review, and maintain safety basis documents.
- (11) Staffing. Ensures adequate numbers of employees with an appropriate skill mix are available and qualified to perform their assigned safety management functions, including oversight and periodic self-assessments of line oversight responsibilities.
- (12) Technical Support. Provides nuclear and ES&H specialized support across NNSA in areas that include radiological protection, industrial

safety, occupational health, industrial hygiene, bio-safety, environmental management, accident investigations, non-weapons QA, recording injuries and illnesses, analysis for indoor air quality, safety (or subject matter expert) inspections, ergonomic evaluations, and hazard communication. Supports field office responsibilities for oversight of safety management programs.

- (13) Serves as the DOE Primary Hazard Classifier for Department of Transportation Permanent Hazard Classifications and the approval of Interim Hazard Classification for the shipment of explosive substances and articles.
- (14) Technical Standards Program. Manages non-nuclear safety and health policy, requirements, guidance, and expectations. Serves as NNSA Technical Standards Manager. Coordinates all aspects of the rulemaking process related to ES&H management and acts as the point of contact between DOE Office of Environment, Health, Safety and Security (AU), DOE/EA, and NNSA. In conjunction with the representative from Management and Budget (NA-MB), participates as a representative member of the Directives Review Board to verify safety is considered in the development and vetting of directives.
- (15) Safety Regulations. Coordinates NNSA status/issues regarding the implementation of 10 CFR 830, 10 CFR 835, 10 CFR 851, and 10 CFR 850 across the complex.
- (16) Corporate Safety Programs. Represents and manages NNSA interests regarding Accident Investigations, Differing Professional Opinions (DPO), Human Subjects Protection, *Price-Anderson Amendments Act* and worker safety and health enforcement actions, Occurrence Reporting and Processing of Operations Information (ORPS), Computerized Accident/Illness Reporting System (CAIRS), Non-Compliance Tracking System (NTS), and the Federal Employee Occupational Safety and Health program. Serves as the NNSA liaison with Government Accountability Office and Inspector General regarding investigations and complaints on safety matters.
- (17) As CTA, the Associate Administrator for Safety, Infrastructure and Operations is designated responsibility for core nuclear safety and some non-nuclear functions. The CTA reports directly to the Administrator in this capacity. The existence of the CTA responsibilities does not diminish or otherwise affect the responsibility of other line managers for safety in the execution of their mission. Key functions include the following.

Note: For the purposes of CTA roles and responsibilities, *nuclear safety requirement* has a specific meaning, which is described in DOE O 410.1, *Central Technical Authority Responsibilities Regarding Nuclear Safety Requirements* and SD 410.1, *Implementation of National Nuclear Security*

Administration Central Technical Authority Responsibilities Regarding Nuclear Safety Requirements.

- (a) Concurs with the DOE/NNSA approval authority (Cognizant Secretarial Officer) in circumstances where no viable control strategy exists in an existing facility to prevent or mitigate the offsite dose consequence of one or more accident scenarios from exceeding the Evaluation Guideline.
- (b) Concurs with the determination of the applicability of DOE directives involving nuclear safety included pursuant to DEAR 970.5204-2(b) in contracts for the management and operation of nuclear facilities for which the Administrator is responsible (referred to subsequently as simply *contracts*).
- (c) Concurs with nuclear safety requirements included in contracts pursuant to DEAR 970.5204-2(c).
- (d) Concurs with all exemptions or equivalencies to nuclear safety requirements that were added to the contract pursuant to DEAR 970.5204-2.
- (e) Recommends to DOE issues and proposed resolutions concerning DOE safety requirements, concurs in the adoption or revision of nuclear safety requirements (including supplemental requirements), and provides expectations and guidance for implementing nuclear safety requirements as necessary for use by the Administrator's employees and contractors.
- (f) Maintains operational awareness of the implementation of nuclear safety requirements and guidance, consistent with the principles of ISM, at NNSA sites (e.g., reviewing Documented Safety Analyses, Authorization Agreements, and Readiness Review recommendations, as necessary, to evaluate the adequacy of safety controls and implementation).
- (g) Periodically reviews and assesses whether NNSA sites are maintaining adequate numbers of technically competent personnel to fulfill nuclear and non-nuclear safety requirements.
- (h) Provides inputs to, reviews and concurs with, DOE-wide nuclear safety related research and development activities.
- (i) Directs the identification and prioritization of nuclear-safety related research and development activities as necessary at NNSA sites.

- (j) Concurs with nuclear safety delegations for those individuals below the most senior line officer or deputy at a field office or below the Deputy/Associate Administrator or deputy at HQ.
 - (k) Concurs with nuclear safety delegations when compensatory measures are required.
- d. Principal Deputy Associate Administrator for Safety, Infrastructure and Operations (NA-50).
- (1) Fulfills the responsibilities of the CSO. As the CSO reports directly to the Administrator.
 - (a) Delegates safety authorities, consistent with DOE O 450.2. Approves Safety Evaluation Reports in circumstances where no viable control strategy exists in an existing facility to prevent or mitigate the offsite dose consequence of one or more accident scenarios from exceeding the Evaluation Guideline.
 - (b) Maintains a current list of delegated nuclear safety authorities.
 - (c) Provides line oversight of delegated safety authorities, conducts nuclear safety program reviews, and reports oversight results encompassing the requirements of DOE O 226.1.
 - (d) Approves exemptions, with CTA concurrence, to 10 CFR 830, *Nuclear Safety Management*, in compliance with 10 CFR 820, *Procedural Rules for DOE Nuclear Activities*, requirements. Where necessary, establishes conditions of approval and other terms for implementing approved exemptions.
 - (e) Approves exemptions to 10 CFR 835, *Occupational Radiation Protection* in compliance with 10 CFR 820, *Procedural Rules for DOE Nuclear Activities*, requirements.
 - (f) Ensures requirements of DOE O 458.1, *Radiation Protection of the Public and the Environment*, are implemented.
 - (g) Reviews and determines the adequacy of an M&O contractor's application, desiring a variance from a 10 CFR 851, *Worker Safety and Health Program*, requirement and, if adequate, provides to the Associate Under Secretary for Environment, Health, Safety and Security.
 - (h) Reviews and concurs on proposed DOE directives that may apply to the NNSA.
 - (2) Facility Operations/Authorization. The NNSA CSO approves Documented Safety Analyses (DSAs), Technical Safety Requirements

(TSRs), Unreviewed Safety Question (USQ) procedures, and Safety Evaluation Reports (SERs) for Hazard Category 1, 2, and 3 nuclear facilities, unless delegated.

- (a) Reviews and approves DSA methodologies, with CTA concurrence, used by contractors that differ from those described in 10 CFR 830 for Hazard Category 1, 2, and 3 nuclear facilities.
 - (b) Reviews and approves nuclear safety design criteria, with CTA concurrence, for preparing preliminary DSAs when contractors use design criteria that differ from those in DOE directives.
 - (c) Serves as Startup Approval Authority for new Hazard Category 2 nuclear facilities with a total project cost less than \$200M, restarts of nuclear facilities and, as allowed by DOE O 425.1 and approved Start-up Notification Reports (SNRs), or as designated.
 - (d) Is responsible and accountable for the safety of work funded by other organizations (e.g., Office of Environmental Management or Department of Defense) at NNSA sites unless a specific written agreement is approved by the affected Program Secretarial Officers (PSOs) or their equivalent at other agencies.
- e. Deputy Administrator for Defense Programs (NA-10). The NA-10 mission is to maintain a safe, secure, and effective U.S. nuclear stockpile without the need for underground nuclear testing. NA-10 has the primary responsibility of partnering with the Department of Defense to provide a safe, secure, and effective arsenal for the Nation's nuclear deterrent. To carry out this mission, NA-10 has responsibility for assuring effective integration of programs across the nuclear security enterprise. NA-10 has responsibility for the execution of nuclear explosives safety (NES) related to defense program matters within NNSA.
- (1) Participates in the annual development and updating of integrated assessment plans for NNSA sites with NA-50 and the field offices.
 - (2) When functioning as a Project Management Executive, approves critical decisions and baseline change proposals, and ensures safety is integrated into designs consistent with DOE O 413.3 requirements for nuclear construction projects.

When designated as a member of an ESAAB or ESAAB-E, advises the Chief Executive for Project Management that critical decisions and baseline change proposals have met the integration of safety into design requirements of DOE O 413.3 for nuclear construction projects.
 - (3) Nuclear Explosives Operations.

- (a) Ensures that NES, nuclear explosive and weapon surety programs are effective at NNSA's nuclear explosives facilities, in accordance with DOE O 452.1, *Nuclear Explosive and Weapon Surety Program*.
 - (b) Conducts NES evaluations, in accordance with SD 452.2, *Nuclear Explosive Safety Evaluation Processes*.
 - (4) Secure Transportation.
 - (a) Ensures safety management to safely and securely transport nuclear weapons, weapons components, special nuclear materials, and other national security interests to meet DOE, Department of Defense, and other customer requirements, in accordance with DOE Orders 452.2, 460.1, and 461.1.
 - (b) Provides overall management and policy direction for Transportation Safeguards System (TSS) operations.
 - (c) Designates other special materials or items to receive the physical security protection afforded by the TSS.
 - (d) Chairs the Secure Transportation Asset Advisory Board.
 - (5) Quality Assurance.
 - (a) For programmatic nuclear facility construction projects in conceptual and design phases, provides policy guidance and direction to implement QA requirements for line item construction of facilities assigned to NA-10 in accordance 10 CFR 830 Subpart A, DOE O 414.1, and the American Society of Mechanical Engineers (ASME) NQA-1.
 - (b) Develops policy and requirements and implements Quality Programs to assure weapons product quality in accordance with NAP-24A, *Weapon Quality Policy*.
 - (6) Staffing. Ensures adequate numbers of employees with an appropriate skill mix are available and qualified to perform their assigned safety management functions, including oversight and periodic self-assessments of line oversight responsibilities.
- f. Deputy Administrator for Defense Nuclear Nonproliferation (NA-20). NA-20 coordinates with NA-50 and affected field offices for all nuclear safety and ES&H matters related to site nonproliferation program efforts at NNSA sites. For programs and projects at non-NNSA facilities, NA-20 coordinates nuclear safety and ES&H requirements with Field Office Manager (FOM) landlord and other

organizations, as appropriate. NA-20 exercises those responsibilities primarily through FOMs as well as M&O Contractor Assurance Systems.

- (1) Coordinates nuclear safety and ES&H requirements with NA-50 and FOMs for M&O nonproliferation programs and projects performance, including CAS coverage. Coordinates with the CTA through the Chief of Defense Nuclear Safety.
 - (2) For nonproliferation work performed under NA-20's direction in facilities under the operational authority of the FOMs, NA-20 is the line manager for the programmatic execution of the work. The line management responsibility for compliance with nuclear safety and ES&H requirements for the work is a FOM landlord or NA-50 responsibility.
 - (3) Savannah River Site (SRS) Construction Project. NA-20 and NA-APM share responsibility for the design and construction of the Mixed Oxide Fuel Fabrication Facility. The Savannah River Field Office (SRFO) is responsible for the eventual operation of this facility in support of the plutonium disposition mission.
 - (4) The SRFO Manager fulfills the role of the FOM for matters related to nuclear safety and ES&H requirements and possesses the responsibilities and authorities of the FOM as they pertain to the Mixed Oxide Fuel Facility Project.
 - (5) Staffing. Ensures adequate numbers of employees with an appropriate skill mix are available and qualified to perform their assigned safety management functions, including oversight and periodic self-assessments of line oversight responsibilities.
- g. Associate Administrator and Deputy Under Secretary for Emergency Operations (NA-40). NA-40 provides program and line management responsibility for all aspects of emergency management and response. NA-40 ensures that capabilities are in place to respond to any NNSA and DOE facility emergency. It is also the Nation's premier responder to any nuclear or radiological incident within the United States or abroad and provides operational planning and training to counter both domestic and international nuclear terrorism.
- (1) Headquarters Emergency Operations.
 - (a) Manages and controls HQ emergency management systems and teams, radiological response assets, related operational functions and activities, and HQ emergency response operational functions and activities.
 - (b) Implements emergency management responsibilities, including coordination by NA-40 with FOMs and NA-50.

- (c) Assists the HQ Program Secretarial Officer in interpreting the requirements as delineated in DOE O 151.1, *Comprehensive Emergency Management System*, through routine communication with the NNSA field offices.
 - (d) Coordinates and implements NNSA HQ aspects of emergency management planning, preparedness, training, and response. Ensures appropriately trained HQ representatives and subject matter experts support the Unified Coordination Group (UCG) and coordinates information flow among NNSA, the Office of Public Affairs, and the Office of Emergency Operations.
 - (e) Develops and implements, for DOE, a comprehensive and effective continuity capability to ensure the preservation of the U.S. Government and the continuing performance of DOE/NNSA essential functions.
 - (f) Coordinates and implements NNSA HQ aspects of continuity planning, preparedness, training, devolution, and response.
- (2) Assessment and Performance Improvements.
- (a) Develops NA-40's emergency management input for Site Integrated Assessment Plans (SIAPs) and the Contractor Performance Evaluation Program (CPEP); coordinates with FOMs and NA-50 on requests for technical assistance, site visits, and HQ participation in site annual exercises.
 - (b) Monitors and evaluates contractor's performance for NA-40's emergency management and response programs in coordination with FOMs and NA-50.
 - (c) Monitors Emergency Readiness Assurance Plan (ERAP) commitments and coordinates emergency management readiness assurance activities with FOMs and NA-50.
 - (d) In coordination with NA-50 and FOMs, supports site requests for technical assistance, NA-40 site visits, HQ UCG participation in site exercises, assistance with training and responses to emergency management program assessments by the DOE Office of Enterprise Assessments and the Defense Nuclear Facilities Safety Board.
 - (e) Monitors Continuity Readiness Assurance Report (CRAR) commitments and coordinates emergency management readiness assurance activities with FOMs and NA-50.

- (3) Staffing. Ensures adequate numbers of employees with an appropriate skill mix are available and qualified to perform their assigned safety management functions, including oversight and periodic self-assessments of line oversight responsibilities.
- h. Associate Administrator for Acquisition and Project Management (NA-APM). NA-APM is responsible for corporate integration, development, oversight, and execution of NNSA's acquisition and project management policies and programs. The Office of Acquisition and Project Management serves as the Head of Contracting Activity.
- (1) Project Management.
 - (a) Ensures NNSA's projects meet mission and safety requirements and the early identification and mitigation of risks and challenges.
 - (b) Provides line management direction and support of Federal Project Directors (FPDs) assigned to active projects.
 - (c) Oversees the FPD's execution of nuclear safety responsibilities as specified by DOE O 413.3 to ensure appropriate approvals and concurrences are identified. Provides independent oversight and analysis of construction project management and reports directly to the NNSA Project Management Executives and the Administrator.
 - (d) Performs independent project reviews (IPRs), peer reviews, and technical independent project reviews (TIPRs) that include evaluation of safety in design for NNSA construction projects.
 - (e) Supports evaluation of project safety plans, procedures, and issues as part of the ESAAB and IPR processes.
 - (2) Quality Assurance.
 - (a) Is responsible for QA for programmatic and infrastructure nuclear facility construction projects upon approval of CD-1 and in construction phases.
 - (b) Provides policy guidance and direction to implement QA requirements for line item construction in accordance with DOE O 414.1 and ASME NQA-1.
 - (3) Staffing and Competency. Ensures NNSA's federal and contractor project organizations have the necessary capability and capacity for the design and construction of safe nuclear facilities.
- i. Associate Administrator for Management and Budget (NA-MB). NA-MB has the authority for resource allocation processes, including personnel and funding,

when related to safety management with concurrence from the appropriate Deputy or Associate Administrator(s).

- (1) Manages the NNSA Employee Concerns Programs (ECP). The DOE ECP provides an independent avenue for DOE/NNSA federal, contractor, and subcontractor employees to report concerns related to such issues as the environment, safety, health, security, fraud, waste, abuse, or mismanagement of DOE/NNSA contractor-managed activities, and without fear of reprisal for having reported such concerns.
- (2) Supports the Technical Qualification Program (TQP). NA-MB administers the NNSA TQP in conjunction with NNSA HQ and field offices, the DOE FTCP, and other DOE stakeholders.
- (3) NNSA TQP Manager. In support of the implementation of DOE O 426.1, *Federal Technical Capability Program*, within NNSA, and in order to effectively support offices with responsibility for oversight of nuclear safety as detailed in NNSA SD 360.1, *Federal Employee Training*.

10. ACRONYMS. See Appendix 1.

11. REFERENCES. See Appendix 2.

12. CONTACT. Questions concerning this revision should be addressed to the Associate Administrator for Safety, Infrastructure and Operations (NA-50), at (202) 586-2371.

BY ORDER OF THE ADMINISTRATOR:


Lisa E. Gordon-Hagerty
Administrator

Appendixes

1. Acronyms
2. References
3. NNSA Integrated Safety Management System Description

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APPENDIX 1: ACRONYMS

1. ASME: American Society of Mechanical Engineers
2. BOP: Business Operating Procedure
3. CAS: Contractor Assurance System
4. CD: Critical Decision
5. CFR: Code of Federal Regulations
6. CPEP: Contractor Performance Evaluation Plan
7. CTA: Central Technical Authority
8. CSO: Cognizant Secretarial Officer for Safety
9. DEAR: U.S. Department of Energy Acquisition Regulation
10. DNFSB: Defense Nuclear Facilities Safety Board
11. DOE: U.S. Department of Energy
12. DSA: Documented Safety Analysis
13. DPO: Differing Professional Opinion
14. ECP: Employee Concerns Program
15. ES&H: Environment, Safety and Health
16. ESAAB: Energy Systems Acquisition Advisory Board
17. FRA: Functions, Responsibilities, and Authorities
18. HQ: Headquarters
19. ISM: Integrated Safety Management
20. M&O: Management and Operating (Contract model)
21. NCSP: Nuclear Criticality Safety Program
22. NES: Nuclear Explosive Safety
23. NNSA: National Nuclear Security Administration
24. NAP: NNSA Policy

25. PAAA: *Price-Anderson Amendments Act*
26. QAP: Quality Assurance Program
27. TQP: Technical Qualification Program

APPENDIX 2: REFERENCES

1. 5 U.S.C. 500 et seq., *Administrative Procedure Act (APA)*
2. 42 U.S.C. 2011 et seq., *Atomic Energy Act of 1954 (AEA)*
3. 42 U.S.C. 2011 et seq. (P.L. 100-408), *Price-Anderson Amendments Act of 1988 (PAAA)*
4. 42 U.S.C. 4321 et seq. (P.L. 91-190), *National Environmental Policy Act (NEPA)*
5. 50 U.S.C. 2731, *Worker protection at nuclear weapons facilities*
6. Public Law (P.L.) 93-438, *Energy Reorganization Act of 1974*
7. P. L. 95-91, *Department of Energy Organization Act*
8. P. L. 94-163, *Energy Policy and Conservation Act*
9. P. L. 106-65, as amended by P.L. 106-377, *National Nuclear Security Administration Act (NNSA) Act in the National Defense Authorization Act for FY 2000*
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11. P. L. 97-425 as amended by P. L. 100-202 and P.L. 100-203, *Nuclear Waste Policy Act of 1982 (NWPA)*
12. P. L. 104-303, *Water Resources Development Act of 1996*
13. P. L. 109-58, *Energy Policy Act of 2005*
14. P. L. 110-140, *Energy Independence and Security Act of 2007*
15. 10 CFR Part 71, *Packaging and Transportation of Radioactive Material*
16. 10 CFR Part 707, *Workplace Substance Abuse Programs at DOE Sites*
17. 10 CFR Part 708, *DOE Contractor Employee Protection Program*
18. 10 CFR Part 712, *Human Reliability Program*
19. 10 CFR Part 820, *Procedural Rules for DOE Nuclear Activities*
20. 10 CFR Part 830, *Nuclear Safety Management*
21. 10 CFR Part 835, *Occupational Radiation Protection*
22. 10 CFR Part 850, *Chronic Beryllium Disease Prevention Program*
23. 10 CFR Part 851, *Worker Safety and Health Program*

24. 10 CFR Part 1021, *National Environmental Policy Act Implementing Procedures*
25. 29 CFR Part 1910, *Occupational Safety and Health Standards*
26. 29 CFR Part 1960, *Basic Program Elements for Federal Employee Occupational Safety and Health Programs and Related Matters*
27. 40 CFR Part 61, *National Emission Standards for Hazardous Air Pollutants*
28. 40 CFR Part 191, *Environmental Radiation Protection Standards for Management and Disposal of Spent Nuclear Fuel, High-Level and Transuranic Radioactive Wastes*
29. 48 CFR 970.0309, *Whistleblower Protection of Contractor Employees*
30. 48 CFR 970.5204-2, *Laws, Regulations, and DOE Directives*
31. 48 CFR 970.5215-3, *Conditional Payment of Fee, Profit, and other Incentives-Facility Management Contracts*
32. 48 CFR 970.5223-1, *Integration of Environment, Safety and Health into Work Planning and Execution*
33. 48 CFR 970.5223-3, *Agreement Regarding Workplace Substance Abuse Programs at DOE Sites*
34. 48 CFR 970.5223-4, *Workplace Substance Abuse Programs at DOE Sites*
35. 49 CFR, *Transportation*
36. Executive Order (E.O.) 12196, *Occupational Safety and Health Programs for Federal Employees*
37. E.O. 12564, *Drug-Free Federal Workplace*
38. E.O. 12699, *Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction*
39. E.O. 12941, *Seismic Safety of Existing Federally Owned or Leased Building(s)*
40. E.O. 13148, *Greening the Government Through Leadership in Environmental Management*
41. E.O. 13327, *Federal Real Property Asset Management*
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43. E.O. 13693, *Planning for Federal Sustainability in the Next Decade.*

44. Presidential Directive/NSC 25, *Scientific or Technological Experiments with Possible Large-Scale Adverse Environmental Effects and Launch of Nuclear Systems into Space*
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51. DOE P 226.2, *Policy for Federal Oversight and Contractor Assurance Systems*, dated 08-09-2016
52. DOE P 420.1, *Department of Energy Nuclear Safety Policy*, dated 02-08-11
53. DOE O 100.1E, *Secretarial Succession, Threat Level Notification, and Successor Tracking*, dated 01-28-13
54. DOE O 130.1, *Budget Formulation*, dated 09-29-95
55. DOE O 135.1A, *Budget Execution Funds Distribution and Control*, dated 01-09-06
56. DOE M 140.1-1B, *Interface with the Defense Nuclear Facilities Safety Board*, dated 03-30-01
57. DOE O 151.1D, *Comprehensive Emergency Management System*, dated 08-11-16
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59. DOE O 226.1B, *Implementation of Department of Energy Oversight Policy*, dated 04-25-11
60. DOE O 231.1B Chg 1, *Environment, Safety, and Health Reporting*, dated 06-27-11
61. DOE O 232.2, *Occurrence Reporting and Processing of Operations Information*, dated 01-17-17
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74. DOE O 426.1A, *Federal Technical Capability*, dated 01-17-17
75. DOE O 426.2 Chg 1, *Personnel Selection Training, Qualification and Certification Requirements for DOE Nuclear Facilities*, dated 07-29-13
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78. DOE M 435.1-1 Chg 2, *Radioactive Waste Management Manual*, dated 06-08-11
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80. DOE O 436.1, *Departmental Sustainability*, dated 05-02-11
81. DOE O 440.1B Chg. 2, *Worker Protection Program for DOE (incl. NNSA) Federal Employees*, dated 03-14-13
82. DOE O 440.2C Chg 1, *Aviation Management and Safety*, dated 06-22-11
83. DOE M 441.1-1 Chg 1, *Nuclear Material Packaging Manual*, dated 02-24-16
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92. DOE O 460.2A, *Departmental Materials Transportation and Packaging Management*, dated 12-22-04
93. DOE O 461.1, *Packaging and Transportation for Offsite Shipment of Materials of National Security Interest*, dated 07-20-16
94. DOE O 461.2, *Onsite Packaging and Transfer of Materials of National Security Interest*, dated 11-01-10
95. DOE O 541.1C, *Appointment of Contracting Officers and Contracting Officer Representatives*, dated 01-17-17
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99. Memorandum for the Deputy Administrator for Defense Programs: *Delegation of Authority Regarding Environment, Safety and Health at NNSA Facilities*, effective June 25, 2003
100. Memorandum from Secretary Bodman to the NNSA Principal Deputy Administrator and the Assistant Secretary for Environment, Safety and Health, *Revised Safety Functions, Responsibilities and Authorities*, dated April 26, 2005

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104. Memorandum from NNSA Administrator, *Approve Designation of Exemptions and Equivalencies Approval Authority*, dated January 8, 2010
105. Memorandum from NNSA Administrator to Deputy Associate Administrator for Infrastructure and Operations, *Realignment of Nuclear Safety Responsibilities and Authorities within NNSA*, dated November 8, 2012
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107. BOP-06.06, *Energy System Acquisition Advisory Board Equivalent (ESAAB-E) Process*, dated 09-30-16
108. SD 226.1-1A, *Headquarters Biennial Review of Nuclear Safety Performance*, dated 12-16-11
109. SD 450.4-1, *NNSA HQ Integrated Safety Management Description*, dated 10-23-07
110. SD 226.1B, *NNSA Site Governance*, dated 08-12-16
111. SD 251.1A, *Directives Management*, dated 1-17-18
112. NAP-24A, *Weapon Quality Policy*, dated 11-24-15
113. NAP-26B, *Quality Management System*, dated 01-10-17
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APPENDIX 3: NNSA INTEGRATED SAFETY MANAGEMENT SYSTEM DESCRIPTION

1. INTRODUCTION.

National Nuclear Security Administration (NNSA) Leadership's expectations for safety and performance are established in policies, directives, and implementing guidance documents. The requirements for a documented Integrated Safety Management (ISM) System Description are established in DOE Order 450.2, *Integrated Safety Management*.

Appendix 4, of NAP-26B, *Quality Management System (QMS)*, provides a high level description of the NNSA Management System. Consistent with the approach used in the QMS, this document provides a high level description of NNSA Management Systems without reproducing the information provided in the policies, directives, or implementing guidance documents; applicable requirements will be referenced as necessary.

2. PURPOSE.

The NNSA Integrated Safety Management System Description (ISMSD) identifies the NNSA Headquarters (HQ) role in establishing expectations and accomplishing work in a safe and environmentally sound manner while executing the NNSA mission and strategic objectives.

This NNSA ISMSD accomplishes the following:

- Emphasizes the strong support and personal commitment of NNSA senior managers to implementation of the Policy and Principles of ISM;
- Describes how NNSA HQ defines its work activities related to achieving the ISM objective of safe mission accomplishment;
- Describes the specific NNSA Management Systems that ensure ISM core functions and guiding principles are effectively implemented; and
- Recognizes the Contractor Performance Evaluation Plan (CPEP) process as the method to set performance objectives, measures, and commitments that NNSA HQ currently uses to gauge the effectiveness of its ISM System.

3. SCOPE.

The scope of this ISMSD includes the unbroken chain of responsibility (NNSA Line Management) that extends from the NNSA Administrator to the Program and Functional Managers and Field Office Managers who are responsible for mission and program execution.

4. ORGANIZATION.

NNSA maintains and enhances the safety, security, and effectiveness of the U.S. nuclear weapons stockpile without nuclear testing; works to reduce the global danger from weapons of mass destruction; provides the U.S. Navy with safe and effective nuclear propulsion; and responds to nuclear and radiological emergencies in the U.S. and abroad.

NNSA manages the mission from Headquarters organizations in Washington, DC; Germantown, MD; and Albuquerque, NM; and field offices across the country. The following chart illustrates the NNSA organizational structure (figure 1).

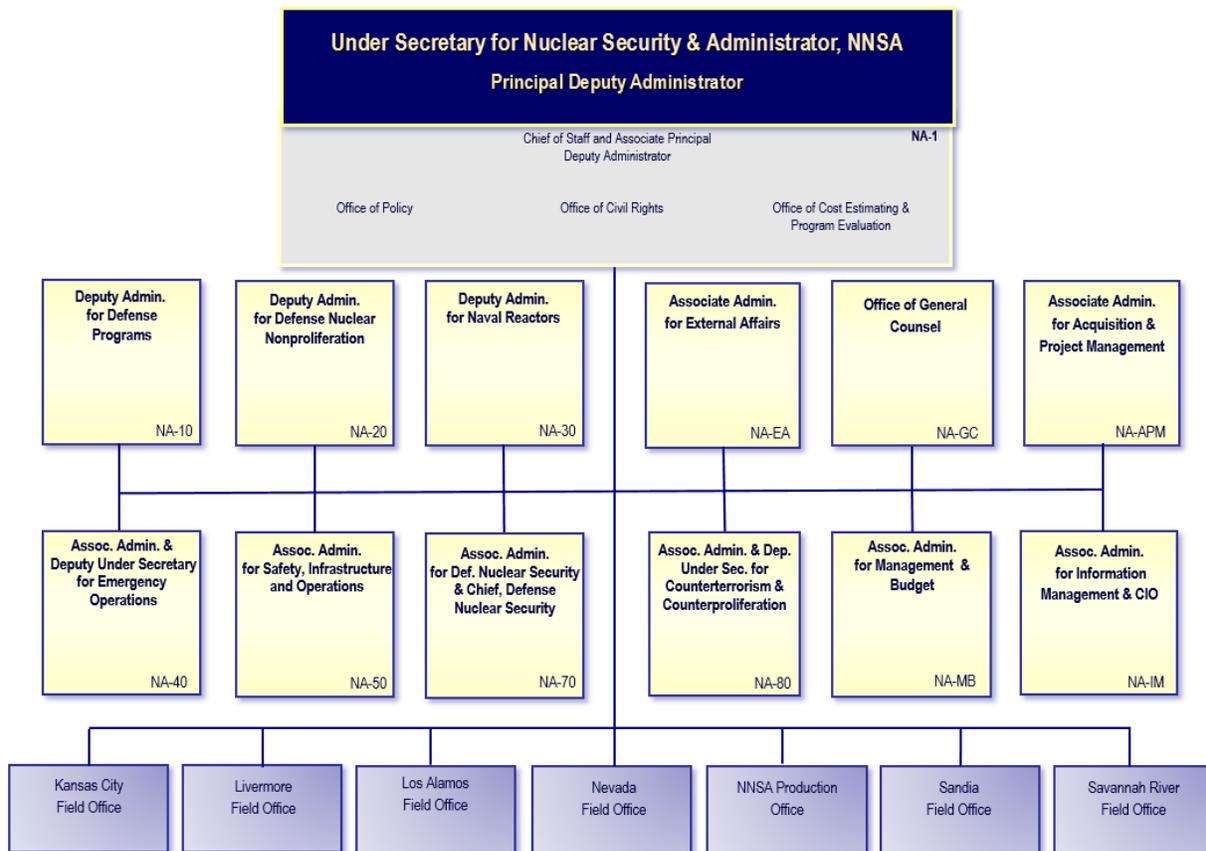


Figure 1

5. NNSA FEDERAL FUNCTIONS.

NNSA management’s role in assuring safety is defined in the mission and function statements of the Line Management Organizations (as defined in DOE O 450.2, *Integrated Safety Management*) and is carried out by the federal staff so that it is incorporated into all work activities. Examples of federal work activities to assure safety is defined and measured in mission activities include the following:

- Prioritizing and acquiring resources and executing contracts;

- Assigning safety management roles, responsibilities, and requirements;
- Developing annual budgets and reviewing field work priorities;
- Developing performance baseline incentives for contractor performance;
- Implementing management systems for federal operations;
- Establishing mission priorities and reviewing the mission plans of field elements;
- Establishing a positive safety environment through effective ISM implementation;
- Establishing quality program requirements;
- Establishing performance metrics and evaluating the field and contractor safety performance goals;
- Establishing and implementing feedback and improvement programs and processes to facilitate a culture that promotes ongoing examination and learning;
- Reviewing project baseline plans and evaluating cost and schedule performance;
- Reviewing field and contractor ISM readiness declarations;
- Performing operational readiness reviews;
- Performing assessments, self-assessments, and management observations;
- Performing ISM effectiveness reviews;
- Ensuring safe and healthful working conditions for federal employees;
- Promoting a healthy safety culture;
- Performing issues management and overseeing corrective action closure; and
- Recruiting highly qualified, technical federal personnel.

6. NNSA MANAGEMENT SYSTEMS.

The NNSA management systems are the primary instruments for implementing the ISM guiding principles. The management systems define the practices, techniques, and tools used by NNSA to meet any given project requirements. The systems are adjusted over time to accommodate new or revised requirements, lessons learned, and feedback for improvement. As such, the systems discussed in this section are being continuously enhanced, which, in turn, maximizes ISM implementation.

The following is a list of currently identified NNSA management systems grouped into functional areas, which are found on the NNSA Portal page for current NNSA Policies (<https://nnsaportal.energy.gov/intranet/NA-MB/Active%20Policies/Forms/By%20Functional%20Area.aspx>). The management systems are grouped into functional areas to facilitate their assignment to the guiding principles, as illustrated in Table 1 (to demonstrate implementing mechanisms for each guiding principle). If a functional area is assigned as executing a guiding principle, then all the associated management systems are also assigned to that guiding principle, but some management systems are specifically identified as executing a guiding principle, e.g., the NNSA FRA for Guiding Principle 2 (Clear Roles and Responsibilities). The functional areas applicable to the guiding principles are identified in Table 1 of Section 7. The five core safety management functions provide the necessary framework for any NNSA work activity that could affect the workers, the public, and the environment. The core functions are applied as a continuous cycle with the degree of rigor appropriate to address the type of work activity and hazards involved. In Table 1, the core functions are illustrated as being applicable to all guiding principles.

- Acquisition
- Budget and Finance
- Business and Support Services
 - NNSA Directives System
- Defense Nuclear Nonproliferation
- Defense Nuclear Security
 - Nuclear Security Federal Oversight Process
 - Enterprise Mission Essential Task List – Based Protective Force Training Program
- Defense Programs
 - Weapons and Strategic Materials Program
 - Annual Assessment of the National Nuclear Stockpile
 - Site Integrated Assessment Plan
- Emergency Operations
 - Lines of Succession
- Human Resources and Training
 - Annual Workforce Planning
 - Succession Planning
 - Federal Employee Training

- Leadership Development
- Employee Concerns Program
- NNSA Recruitment, Relocation, and Retention Incentives Program
- Federal Technical Capabilities Program
- Technical Qualification Program
- Information Management
 - Project Oversight for Information Technology
 - Baseline Cybersecurity Program
 - Records Management Program
- Leadership, Management, and Planning
 - Senior Leadership Councils
 - Quality Management System
 - NNSA Site Governance
 - Stewardship and Long-term Strategic Planning for the Laboratories
- Project Management
 - Program Requirements Document for Construction Projects
 - Project Reviews
- Safety and Health Management
 - NNSA Functions, Responsibilities, and Authorities (FRA)
 - Federal Employee Occupational Safety and Health Program (FEOSH)
 - Biennial Reviews of Nuclear Safety Performance
 - Central Technical Authority (CTA) Responsibilities regarding Nuclear Safety Requirements
 - Real Property Asset Management
 - Differing Professional Opinions (DPO) Process
 - Integrated Safety Management Effectiveness Reviews, Declarations, and Updates
 - Quality Assurance Program
 - Delegations of Nuclear Safety Authority
 - Nuclear Explosive Safety Evaluation Process

7. NNSA ISM IMPLEMENTATION.

ISMS		Safety Culture (DOE G 450.4-1C, Att. 10)	Management Systems to Execute Guiding Principles
Guiding Principles	Core Functions		
1. Line Management Responsibility for Safety	The Guiding Principles are applied to the following five core functions for performing work: 1. Define Scope of Work 2. Analyze Hazards 3. Develop and Implement Hazard Controls 4. Perform work within controls 5. Provide feedback and continuous improvement	<ul style="list-style-type: none"> • Demonstrated safety leadership • Risk-informed, conservative decision making • Management engagement and time in field • Open communication and fostering an environment free from retribution • Personal commitment to everyone's safety • Credibility, trust, and reporting errors and problems 	<ul style="list-style-type: none"> • Leadership, Management, and Planning • Safety and Health Management <ul style="list-style-type: none"> ◦ NNSA FRA • Defense Programs • Project Management
2. Clear Roles and Responsibilities	The Guiding Principles are applied to all five core functions for performing work.	<ul style="list-style-type: none"> • Demonstrated safety leadership • Risk-informed, conservative decision making • Clear expectations and accountability • Personal commitment to everyone's safety • Credibility, trust, and reporting errors and problems 	<ul style="list-style-type: none"> • Leadership, Management, and Planning • Safety and Health Management <ul style="list-style-type: none"> ◦ NNSA FRA • Defense Programs • Project Management
3. Competence Commensurate with Responsibilities	The Guiding Principles are applied to all five core functions for performing work.	<ul style="list-style-type: none"> • Demonstrated safety leadership • Risk-informed, conservative decision making • Staff recruitment, selection, retention, and development • Clear expectations and accountability • Personal commitment to everyone's safety • Mindful of hazards and controls • Credibility, trust, and reporting errors and problems • Questioning attitude 	<ul style="list-style-type: none"> • Safety and Health Management • Human Resources and Training
4. Balanced Priorities	The Guiding Principles are applied to all five core functions for performing work.	<ul style="list-style-type: none"> • Risk-informed, conservative decision making • Mindful of hazards and controls • Performance monitoring through multiple means • Use of operational experience 	<ul style="list-style-type: none"> • Leadership, Management, and Planning • Defense Programs • Defense Nuclear Nonproliferation • Defense Nuclear Security • Acquisition • Budget and Finance • Business and Support Services • Safety and Health Management • Emergency Operations • Project Management • Human Resources and Training • Information Management
5. Identification of Safety Standards and Requirements	The Guiding Principles are applied to all five core functions for performing work.	<ul style="list-style-type: none"> • Clear expectations and accountability • Mindful of hazards and controls • Performance monitoring through multiple means 	<ul style="list-style-type: none"> • Leadership, Management, and Planning • Defense Programs • Defense Nuclear Security • Acquisition • Business and Support Services • Safety and Health Management • Project Management
6. Hazard Controls Tailored to Work Being Performed	The Guiding Principles are applied to all five core functions for performing work.	<ul style="list-style-type: none"> • Clear expectations and accountability • Mindful of hazards and controls • Performance monitoring through multiple means 	<ul style="list-style-type: none"> • Leadership, Management, and Planning • Defense Programs • Safety and Health Management • Project Management
7. Operations Authorizations	The Guiding Principles are applied to all five core functions for performing work.	<ul style="list-style-type: none"> • Clear expectations and accountability • Mindful of hazards and controls • Performance monitoring through multiple means 	<ul style="list-style-type: none"> • Leadership, Management, and Planning • Defense Programs • Safety and Health Management • Project Management

Table 1. NNSA ISM Execution

8. NNSA SAFETY GOALS AND PERFORMANCE OBJECTIVES.

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 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 the following:

- Chief, Defense Nuclear Safety biennial reviews of field offices and NNSA HQ that include ISM and other areas important to ensuring nuclear safety delegations are planned and executed;
- NA-50 oversight activities conducted in accordance with an oversight plan;
- 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);
- NNSA FRA and ISMSD are reviewed annually and updated as needed to capture changes in organizational structure or directives;
- Delegations of authority are reviewed and revised as necessary to maintain clear roles and responsibilities.

NNSA HQ is actively developing a system of measures with field office involvement to ensure safety management areas are adequately assessed with respect to the core elements of ISM. 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 (CPEP). For ISM, line management, in consultation with NNSA's Central Technical Authority (CTA) and Cognizant Secretarial Officer (CSO), develops expectations for field office review of safety performance objectives, measures, and commitments.

NNSA performance objectives and measures for NNSA management and operating contractors are developed through the CPEP process.

9. NNSA ISM CHAMPIONS COUNCIL.

The NNSA representative on the DOE line management ISM Champions Council is the Deputy Associate Administrator for Safety.

10. NNSA ISM EFFECTIVENESS REVIEWS AND DECLARATION.

NNSA HQ ISM effectiveness reviews shall be performed to develop NNSA HQ ISM declarations at a frequency not to exceed 3 years.

NNSA field offices shall determine the need for, and frequency of, ISM effectiveness reviews to develop ISM declarations for field offices and for their contractors, with ISM declarations from the contractors being completed at an interval not to exceed 3 years. The field office declaration shall be submitted to the CSO at an interval not to exceed 3 years.

Consideration by each field office should include the guidelines listed in DOE G 450.4-1C, *Integrated Safety Management System Guide*, or its successor for determining the need for, and frequency of, contractors' ISM declarations. This consideration includes factors such as hazard, risk, and contractor performance history.

11. ISMSD CHANGE CONTROL.

The Deputy Associate Administrator for Safety (NA-51) is responsible for maintaining the NNSA ISMSD. The NNSA ISMSD shall be maintained in accordance with SD 251.1, *Directives Management*. The NNSA ISMSD is reviewed annually and updated, as necessary, to reflect changes in HQ functions dictated by DOE/NNSA directives or changes in organizational structure.