

SAFETY BASIS (SB)

OBJECTIVE

SB.1: NNSA Site Office has oversight procedures and mechanisms in place and has ensured that hazards associated with nuclear activities and nuclear facilities are formally and appropriately analyzed, actions to prevent or eliminate the hazards are taken, and controls are developed, implemented, and verified. Authorization Agreements and authorization basis documents are maintained current.

CRITERIA

1. NNSA Site Office procedures and mechanisms address and implement 10 CFR 830 Subpart B requirements including effective oversight of contractor performance in this functional area (, DOE-STD-1104-96, 29 CFR Part 1910, DOE O 226.1A, NNSA FRAM, NA-1 SD 226.1A, NNSA memorandum to Site Offices dated June 9, 2008).
2. NNSA Site Office procedures and mechanisms are in place and implemented to develop, review, approve, maintain, and utilize Authorization Agreements (DOE FRAM.).
3. The Site Contractor has submitted, and the Site Office has approved, a compliant USQ Determination (USQD) process. The Site Office has conducted assessments of the USQD program and found it to be effectively implemented (10 CFR 830 Subpart B, NNSA FRAM).
4. Site Office procedures and mechanisms ensure that Site Contractor processes and mechanisms are effectively implemented for preparing and submitting fully Rule-compliant DSAs for each Hazard Category 2 and 3 nuclear facility (10 CFR 830 Subpart B).
5. Site Office procedures and mechanisms ensure that Site Contractor processes require appropriate competence through education, training, experience, and qualification to analyze nuclear activities and conduct safety analysis, and to prepare Safety Analysis Reports, including DSAs (10 CFR 830 Subpart B).
6. Site Office procedures and mechanisms ensure that Site Contractor procedures and mechanisms verify the effective implementation of each approved DSA, TSR, and associated controls, (including Specific Administrative Controls (SACs)). Procedures provide for assessment of continued effective implementation and maintenance of all approved DSAs for nuclear facilities (10 CFR 830 Subpart B).
7. Safety basis delegations continue to remain valid and satisfy delegation criteria (BOP-10.002).
8. Issues identified during previous reviews (e.g. CDNS Biennial Reviews, HSS reviews, self-assessments) have been appropriately resolved, corrective actions have been completed and are adequate, or a clear path to completion is indicated (DOE O 226.1A, NA-1 SD 226.1A).

9. The Site Office has sufficient staff, and assigned personnel have adequate technical competence, to oversee the performance of the contractor in this functional area (NA-1 SD 411.1-1C).

APPROACH

References:

- 10 CFR Part 830, *Nuclear Safety Management*, Subparts A and B
- 29 CFR 1910, *Occupational Safety and Health Standards*
- DOE O 226.1A *Implementation of DOE Oversight Policy*
- DOE O 420.1B, *Facility Safety*
- Assistant Deputy Administrator for Nuclear Safety and Operations memorandum dated June 9, 2008, to Site Office Managers; Subject: DNFSB Recommendation 2002-3, *Requirements for the Design, Implementation, and Maintenance of Administrative Controls*
- DOE G 450.4-1B, *Integrated Safety Management System Guide*, Volumes 1 and 2
- DOE-STD-1104-96, *Review and Approval of Nuclear Facility Safety Basis Documents*
- NA-1 SD 411.1-1C, *NNSA Safety Management Functions, Responsibilities and Authorities Manual (FRAM)* (NNSA FRAM)
- NA-1 SD 226.1A, *NNSA Line Oversight and Contractor Assurance System Supplemental Directive*
- BOP-10.002, *Delegations of Nuclear Safety Authority*

Record Review:

- Review Site Office processes and procedures for oversight of Site Contractor's activities and procedures for developing, submitting, implementing, and maintaining nuclear safety documentation and programs for nuclear facilities. Review Site Office task plans for oversight of DSA and hazard control development and reviews and records of reviews from recent submittals. Determine whether:
 - NNSA Site Office personnel are assigned responsibility to verify the adequate development of Preliminary Documented Safety Analyses (PDSAs) for new nuclear facilities or major modifications to nuclear facilities.
 - NNSA Site Office personnel are assigned responsibility to review and approve the Documented Safety Analyses (DSAs) prepared by the Site Contractor for Hazard Category 2 and 3 nuclear facilities.

- NNSA Site Office personnel have developed and implemented criteria for evaluating the classification of nuclear safety structures, systems, and components (SSCs).
- NNSA Site Office personnel have developed and implemented evaluation criteria to ensure that the analysis provided by the contractor:
 - properly covers the hazards associated with the work,
 - is consistent with the Integrated Safety Management System Description,
 - adequately traces the hazards identified to the control selected to address the hazard, and
 - identifies adequate safety functions, performance characteristics, and functional requirements to ensure an adequate degree of safety.
- Safety Evaluation Reports (SERs) meet the guidance in DOE-STD-1104-96 and are submitted to the approval authority (Site Office Manager or Cognizant Secretarial Officer, depending on delegation).
- NNSA Site Office personnel are assigned responsibility for verifying complete and accurate implementation of approved DSAs, including any conditions for approval in SERs.
- NNSA Site Office personnel are assigned responsibility for assessing continued effective implementation of all approved DSAs and Technical Safety Requirements (TSRs) for nuclear facilities, including all associated controls and initial conditions.
- NNSA Site Office personnel are assigned responsibility for assessing DSA annual updates and DSA and TSR change control, and for overseeing the Site Contractor's Unreviewed Safety Question (USQ) process.
- NNSA Site Office personnel properly satisfied the requirement related to Specific Administrative Controls (SACs) as directed in the NNSA memorandum to Site Offices dated June 9, 2008

- . Review Site Office assessments of USQD program implementation.
- Review associated SERs for nuclear facilities. Review the Site Office development and oversight of Authorization Agreements. Review NNSA Site Office records of authorization bases for all nuclear facilities to determine whether the status is current. Review records of positive USQD-related requests for approval and Site Office responses.
- Review Site Office requirements for the competence and assignment of personnel who implement processes and oversee activities associated with nuclear safety basis implementation in compliance with 10 CFR 830 Subpart B.
- Review Site Office assessments of the sufficiency and technical experience and qualification of the Site Contractor staff who manage, develop, and review nuclear safety basis

documentation in compliance with 10 CFR 830 Subpart B.

Interviews:

- Interview NNSA Site Office personnel responsible for oversight of the Site Contractor activities for coordinating DSA and hazard control reviews for nuclear operations and for developing and reviewing DSA and TSR documentation.
- Interview NNSA Site Office safety basis review managers. Interview NNSA Safety Basis Review Team members and Facility Representatives. Interview Site Office personnel responsible for acting on positive USQD-related requests for approvals.

Observations:

- Observe interactions between the NNSA Site Office Managers, Safety Basis Review Team leaders, Safety Basis Review Team members, and Site Contractor safety staff. Observe Site Office oversight of Site Contractor implementation of DSA and TSR requirements, including surveillances and assessments.