# Nuclear Facility Safety Basis

**FUNCTIONAL AREA GOAL:** A fully compliant Nuclear Facility Safety Basis. Program is implemented and maintained across the site.

**REQUIREMENTS:**

- 10 CFR 830 Subpart B

**Guidance:**

- DOE STD 3009
- DOE STD 1104
- DOE STD
- DOE G 421.1-2 Implementation Guide For Use in Developing Documented Safety Analyses To Meet Subpart B Of 10 CFR 830
- DOE G 423.1-1 Implementation Guide For Use In Developing Technical Safety Requirements
- DOE G 424.1-1 Implementation Guide For Use In Addressing Unreviewed Safety Question Requirements

**Performance Objective 1: Contractor Program Documentation**

The site contractor has developed an up-to-date, comprehensive, compliant, documented nuclear facility safety basis and associated implementing mechanisms and procedures for all required nuclear facilities and activities (10 CFR 830B).

Criteria:

1. The requirements for developing and implementing a nuclear facility safety basis is included in contract documents and includes all applicable requirements in 10 CFR 830B

2. The contractor has identified and categorized all nuclear facilities and activities (CAT 1, CAT 2, CAT 3, and below Hazcat 3 ) per 830 subpart B using the current version of DOE STD 1027

3. The contractor has prepared and submitted for approval an authorization agreement that identifies all nuclear facilities/activities and the approved safety basis for these facilities/activities.

4. The contractor has submitted a Documented Safety Analysis (DSA) for each nuclear facility/activity that complies with the requirements of 10 CFR 830B.

5. The contractor has submitted Technical Safety Requirements (TSRs) for each nuclear facility/activity that complies with the requirements of 10 CFR 830B.

6. The contractor has submitted a compliant Unreviewed Safety Question (USQ) process that meets the requirements of 10 CFR 830.

7. The contractor has a process in place to develop Documented Safety Analysis for each nuclear facility/activity that complies with the requirements of 10 CFR 830 Subpart B and DOE/NNSA-directed standards. (10 CFR 830 Subpart B, DOE-STD-1186, NSTP 2003-1)

8. The contractor has a process in place to develop Technical Safety Requirements for each nuclear facility/activity that complies with the requirements of 10 CFR 830 Subpart B and DOE/NNSA-directed standards. (10 CFR 830 Subpart B, DOE-STD-1186, NSTP 2003-1)

9. The contractor has a process in place to ensure safety basis documentation is updated in accordance with the requirements of 10 CFR 830 Subpart B and NNSA-directed standards.

Suggested Lines of Inquiry

**Performance Objective 2: Contractor Program Implementation**

Contractors responsible for operation of nuclear facilities have effectively implemented processes/procedures to comply with the requirements of 10 CFR 830 subpart B.

Criteria:

1. The contractor is staffed with adequate numbers of technically competent, experienced, fully qualified personnel safety basis personnel to analyze nuclear activities, conduct safety analyses, prepare and maintain DSAs and TSRs, and to provide effective oversight of the implementation of safety basis controls and the USQ process.

2. Site contractor processes and mechanisms are effectively implemented to prepare and submit fully rule compliant DSA and TSR for each nuclear facility/activity.

3. Site contractor procedures and/or mechanisms are in place and implemented to develop, maintain, and utilize Authorization Agreements.

4. Site contractor procedures and mechanisms provide for the periodic verification of effective implementation of each approved DSA, Technical Safety Requirements (TSRs) and associated controls. Procedures provide for assessment of continued effective implementation and maintenance of all approved DSAs for nuclear facilities (10 CFR 830 B).

5. Site contractor assessments periodically verify continued effective implementation of the USQ process for each nuclear facility/activity.

6. Safety Basis issues are identified, tracked and resolved in a manner to ensure satisfactory correction and to prevent reoccurrence (ISM, QA)

Suggested Lines of Inquiry

**Performance Objective 3: DOE Line Management Oversight**

Field/Site Offices have assigned personnel and developed and implemented processes/procedures for the activities they must conduct in support of the development, review, approval, implementation, and oversight of the requirements of 10 CFR 830 subpart B for nuclear facilities and activities under their cognizance. These processes are used consistent with field/site office functions, responsibilities, and authority (FRA) documents and functions, responsibilities, and authority manual (FRAM) requirements.

Criteria:

1. The appropriate level of resources and formal expectations for the review, approval, and oversight of implementation of nuclear facility safety basis documents has been determined. (10 CFR 830B, DOE/NNSA FRAM)

2. Nuclear safety specialist personnel are technically competent, trained, and qualified to review, approve, and conduct oversight of the implementation of nuclear facility safety basis documents (FRAM; DOE M 426.1)

3. Procedures and/or mechanisms are in place that direct the site contractor preparation of safety basis documentation, and for the contractor to evaluate the effective implementation of approved safety basis documentation (FRAM)

4. Procedures and/or mechanisms are in place and implemented to develop, review, approve, maintain, and utilize Authorization Agreements (DOE/NNSA FRAM).

5. Processes and/or mechanisms are in place to review and approve the Documented Safety Analysis (DSA) and TSR prepared by the contractor for nuclear facilities, including the following (10 CFR 830 Subpart B, FRAM)

6. Criteria for evaluating that the analysis properly addresses the hazards associated with the work.
    - Criteria for evaluating that the analysis provides sufficient information for the selection of safety standards and controls.
    - Criteria for evaluating the selection and evaluation of Safety SSCs, DFs, and specific administrative controls.
    - Criteria for verifying derivation of appropriate TSR controls for SSCs and DFs
    - Criteria for preparation and approval of safety evaluation reports (SERs) where authority has been delegated. If not delegated, SERs are submitted to the CSO for approval.

7. Procedures and/or mechanisms are in place and implemented to provide for satisfactory maintenance of the safety basis for all nuclear facilities. For nuclear facilities this would include review and approval of annual updates and oversight of the contractor's Unreviewed Safety Question (USQ) process (DOE/NNSA FRAM).

8. Oversight procedures and/or mechanisms include periodic verification of the effective implementation of DSA and TSR controls such as LCO SRs, SACs, and DFs (FRAM, QA Criteria)

9. Oversight of the nuclear facility safety basis is being effectively conducted as evidenced by the following (O 226.1)
    - Completion of scheduled formal assessments, operational surveillances, and other oversight activities
    - Evaluation and communication of assessment results including expected actions for resolution of identified issues
    - Development, tracking, and closure of corrective actions
    - Evaluation of effectiveness of specific corrective actions
    - Evaluation of effectiveness of the overall nuclear facility safety basis program.

10. Implementation of oversight of the contractor nuclear facility safety basis program includes an evaluation of the effectiveness of integration and application of appropriate functions and principles of the DOE/NNSA and Contractor Site Integrated Safety Management System (P 450.4, New ISM Manual).

Suggested Lines of Inquiry