*Background: Under DNFSB Recommendation 2004.1, the DOE committed to developing a Oversight Manaul that included Criteria and Review Documents (CRADS) in a host of areas, including Startup and Restart of Nuclear Facilities.  The development of this CRAD was well underway when the manual was placed on hold. Given the effort that went into its development, we have posted this CRAD to the web site with the intention of building upon it to produce a consensus CRAD that can be used by all Departmental elements.*

Startup and Restart of Nuclear Facilities (SNF)

**FUNCTIONAL AREA GOAL:** DOE/NNSA Headquarters and Field organizations and their contractors responsible for the startup and operation of nuclear facilities have defined and implemented contractual requirements to manage, , evaluate, and approve the startup and restart of nuclear facilities and activities.

**TOPICAL AREA:** Startup and Restart of Nuclear Facilities

Requirements:

* DOE Order 425.1C; Startup and Restart of Nuclear Facilities
* DOE P 450.4; Safety Management System Policy
* DOE/NNSA Safety Management Functions, Responsibilities and Authorities Manual Guidance:
* DOE-STD-3006-2000; Planning and Conduct of Operational Readiness Reviews
* DOE-HDBK- 3012-2003; Operational Readiness Review Team Leaders Handbook
* DOE G 4504-1B; Integrated Safety Management System Guide

**Performance Objective SNF.1**

Contracts between DOE/NNSA and the contractors who operate DOE/NNSA Nuclear facilities contain adequate requirements concerning management, evaluation and approval of the startup and restart of the nuclear facilities and the contractors have developed comprehensive processes/procedures for performing these requirements.

Criteria:

1. The contracts with contractors who operate DOE/NNSA nuclear facilities contain requirements for the startup and restart of nuclear facilities. Contract management processes require periodic review to ensure the contracts are accurate and define requirements for all work associated with startup and restart of nuclear facilities. (DEAR, 10 CFR 830, DOE P 450.4)
2. DOE/NNSA contractors who operate nuclear facilities have a formal process to flowdown contract requirements into implementing processes/procedures to ensure that the contract requirements for startup and restart of nuclear facilities are fully met. (DOE O 425.1C, DOE P 450.4)
3. DOE/NNSA contractors who operate nuclear facilities have developed implementing processes/procedures for startup and restart of nuclear facilities that fully comply with contract requirements including: (DOE O 425.1C)
   * Planning to achieve readiness to commence nuclear operations
   * Preparation and submittal of a Startup Notification Report (SNR) including required information such as level of Readiness Review Required
   * Achieving readiness to commence nuclear operations, including conduct and review of the management self assessment
   * Planning and conduct of Contractor Readiness Review Activity
   * Requesting and obtaining approval to start nuclear operations
4. The Contractor Readiness Review processes/procedures incorporate appropriate functions and principles of the Site Integrated Safety Management System.

Approach:

Record Review:

Review the contract list A/B for inclusion of the required orders, standards and laws to meet the requirements for startup and restart of nuclear facilities. Review the contractor implementing mechanisms to flow the contract requirements into effective implementation of all requirements and expectations for safe startup and restart of nuclear facilities and activity operations. Review the contractor documents that demonstrate implementation of the requirements including development and submittal of the SNR, preparation and conduct of the contractor readiness review, preparation and submittal of the readiness to proceed memorandum, etc.

Interviews:

Interview contractor managers and supervisors who are responsible for any aspect of the process to manage, evaluate, or approve the startup and restart of nuclear facilities and activities.

Observations:

In conjunction with PO SNF.3, observe contractor and DOE/NNSA activities that implement requirements for startup and restart of nuclear facilities and activities including readiness review processes, and DOE/NNSA staff readiness verification processes.

Proposed Lines of Inquiry:

Coming Soon

**Performance Objective SNF.2**

DOE/NNSA Contractors responsible for operation of nuclear facilities have effectively implemented processes/procedures to control the startup and restart of nuclear facilities and activities in accordance with contract requirements.

Criteria:

1. The contractor has implemented processes/procedures that provide for thorough and comprehensive planning to achieve readiness to start nuclear facility or activity operations. (DOE O 425.1C, DOE P 450.4)
2. The contractor has implemented processes/procedures to prepare and submit SNRs, Plans of Action (POA), Readiness to Proceed memorandum, and other documentation associated with requirements for startup and restart of nuclear facilities. (DOE O 425.1C)
3. The contractor has implemented effective processes/procedures to verify readiness including conduct of management self assessments and readiness reviews prior to startup or restart nuclear facility or activity operations. (DOE O 425.1C; 10 CFR 830)
4. The contractor has implemented effective processes/procedures to resolve issues and assess continued resolution of issues associated with activities to achieve and verify readiness to commence nuclear operations. (DOE O 425.1C, 10 CFR 830, DOE P 450.4)
5. Implementation of the contractor's Readiness Review processes/procedures demonstrates effective integration and application of appropriate functions and principles of the Site Integrated Safety Management System

Approach:

Record Review:

Review documentation and records that result from the implementation of the requirements for startup and restart of nuclear facility and activity operations. Review contractor readiness review reports including corrective action closure packages. Review SNR and POAs including resolution of comments. Review startup planning and readiness assessment plans and reports.

Interviews:

Interview contractor personnel who are responsible for planning, achieving, or verifying readiness. Interview managers, supervisors and operators in nuclear facilities. Interview contractor readiness review team members and team leaders.

Observations:

As available observe selected activities across all aspects of achieving and verifying readiness to commence nuclear facility and activity operations. Observe readiness review activities including preparations, oversight, and closure actions for findings.

Proposed Lines of Inquiry:

Coming Soon

**Performance Objective SNF.3**

DOE/NNSA HQ and Field/Site Offices have developed processes/procedures for the activities they must conduct in support of the startup and restart of nuclear facilities under their cognizance. DOE/NNSA has established and implemented effective oversight processes to ensure that the contractor responsible for nuclear operations has implemented and maintains effective processes to achieve and verify readiness and gain approval to startup or restart nuclear facility or activity operations.

Criteria:

1. DOE/NNSA HQ procedures provide for accomplishment of specified actions to implement the requirements for startup and restart of nuclear facilities including: (DOE O 425.1C, FRAM)
   * Evaluation of Startup Notification Reports (SNR)
   * Evaluation of POAs and Implementation Plans (IP) when required
   * Authorization to start nuclear operations when required
   * Support for Operational Readiness Review (ORR) and Readiness Assessment (RA) Teams when requested and as appropriate
   * Verification that Field/Site Office processes and personnel are in place to effectively manage the readiness review process prior to delegating Authorization Authority responsibilities to the Field/Site Office
2. DOE/NNSA Field/Site Office procedures effectively implement the requirements for startup and restart of nuclear facilities including (DOE O 425.1C, FRAM):
   * Processes for requiring, reviewing, and approving SNRs including determining the appropriate level of readiness review required
   * Processes for forwarding documents such as SNRs, POAs, and IPs to HQ for review when required
   * Processes to oversee the contractor readiness activities including responding to the contractor Readiness to Proceed Memorandum.
3. DOE/NNSA has implemented effective processes to verify Federal line management readiness to oversee contractor nuclear operations (DOE O 425.1C).
4. DOE/NNSA has developed and implemented effective processes/procedures for the conduct of the assigned ORR and RA (DOE O 425.1C).
5. DOE/NNSA routine operational awareness and oversight processes include nuclear operations activities associated with startup and restart of nuclear facilities (DOE O 425.1C, DOE P 450.4, DOE P 450.5).
6. The records of DOE/NNSA routine operational awareness and oversight processes indicate effective oversight of the contractor processes and procedures for startup and restart of nuclear facilities (DOE O 425.1C, DOE P 450.4, DOE P 450.5).
7. Implementation of DOE/NNSA Readiness Review Activities includes an evaluation of the effectiveness of integration and application of appropriate functions and principles of the DOE/NNSA and Contractor Integrated Safety Management System (DOE O 425.1C and DOE P 450.4)

Approach:

Record Review:

Review DOE/NNSA HQ and Field/Site Office procedures assessment results to evaluate the effectiveness of the oversight of contractor startup and restart processes. Review ORR and RA reports including finding closure verification records. Review Facility Representative operational awareness and routine surveillance records. Review other records that demonstrate the effectiveness of the oversight processes to ensure the contractor maintains a compliant and robust program to achieve and verify readiness to startup or restart nuclear facility or activity operations.

Interviews

Interview facility representative and other HQ/site office personnel including line managers responsible for oversight of the contractors processes for achieving and verification of readiness to startup or restart nuclear operations. Interview Federal personnel responsible for planning and conduct of DOE ORR or RA.

Observation

Observe Federal staff in the performance of oversight activities associated with contractor achieving and verification of readiness to startup or restart nuclear facility activity operations. Observe DOE ORR or RA activities including the conduct of the reviews as well as planning and follow-up activities.

Proposed Lines of Inquiry:

Coming Soon