

# **Independent Oversight Review of the NNSA Production Office Readiness Review Program**



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**Office of Safety and Emergency Management Evaluations  
Office of Enforcement and Oversight  
Office of Health, Safety and Security  
U.S. Department of Energy**

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## Acronyms

CAS	Contractor Assurance System
CDNS	Chief of Defense Nuclear Safety
DOE	U.S. Department of Energy
FY	Fiscal Year
HSS	Office of Health, Safety and Security
IP	Implementation Plan
IVR	Implementation Verification Review
M&O	Management and Operations
NNSA	National Nuclear Security Administration
NPO	NNSA Production Office
OFI	Opportunity for Improvement
POA	Plan of Action
RA	Readiness Assessment
RR	Readiness Review
SAA	Startup Approval Authority
SIAP	Site Integrated Assessment Plan
SME	Subject Matter Expert
SNR	Startup Notification Report
SSTA	Senior Scientific Technical Advisor
STSM	Senior Technical Safety Manager

# **Independent Oversight Review of the NNSA Production Office Readiness Review Program**

## **1.0 PURPOSE**

The DOE Office of Enforcement and Oversight, within the Office of Health, Safety and Security (HSS), examined the procedures and mechanisms used by the National Nuclear Security Administration (NNSA) Production Office (NPO) to implement a readiness review (RR) program that complies with U.S. Department of Energy (DOE) Order 425.1D, *Verification of Readiness to Start Up or Restart Nuclear Facilities*. In addition, the review evaluated whether NPO has implemented an effective oversight approach to ensure that site contractors maintain effective and compliant processes to achieve and verify readiness.

This review was conducted as part of a broader ongoing Independent Oversight program of oversight reviews of nuclear facilities that focus on the processes used to ensure that nuclear safety is implemented and maintained. NPO requested that Independent Oversight review the NPO's RR program implementation as part of its broader review of nuclear safety across DOE.

## **2.0 BACKGROUND**

The DOE independent oversight program is implemented by HSS's Office of Enforcement and Oversight (Independent Oversight), which has no line management or policy-making responsibilities or authorities. The independent oversight program is designed to enhance DOE safety and security programs by providing DOE and contractor managers, Congress, and other stakeholders with an independent evaluation of the adequacy of DOE policy and requirements, and the effectiveness of DOE and contractor line management performance in safety, security, and other critical functions as directed by the Secretary. The independent oversight program is described in and governed by DOE Order 227.1, *Independent Oversight Program*, and a comprehensive set of internal protocols, operating practices, inspector guides, and process guides.

Independent Oversight evaluates safety policies and programs throughout DOE, with a particular emphasis on evaluating worker and public protection from the nuclear hazards that exist at many DOE sites. Independent Oversight accomplishes its mission through two primary mechanisms: (1) a network of staff site leads who are assigned to monitor the activities at DOE sites with nuclear facilities or activities and to coordinate office appraisal activities at those sites; and (2) a program of targeted reviews that evaluate selected functional or topical areas at multiple sites across the DOE complex. Appraisal activities are selected, prioritized, and planned based on such factors as risk to workers and the public, facility operational status, and performance history.

## **3.0 SCOPE**

This Independent Oversight review focused on RR activities conducted since the June 2012 Independent Oversight review of the effectiveness of NPO's management processes in implementing DOE Order 425.1D, as well as the effectiveness of NPO's oversight processes for the site contractor's RR program. The current review examined the procedures and processes that NPO uses to demonstrate continued implementation of the RR program and evaluated a sample of completed RR activities.

## 4.0 METHODOLOGY

Independent Oversight evaluated the effectiveness of the NPO management process in implementing the RR program and managing the startup and restart of nuclear facilities. Onsite interviews were held with NPO personnel qualified in the implementation of RR program requirements to enhance understanding of the processes and procedures, to obtain clarification where necessary, and to obtain NPO's perspective on potential issues identified during the review.

Independent Oversight based the review on the objective and criteria from the criteria, review and approach document provided in Appendix C of this report. This review included the following activities:

- Observation of contractor and/or field office personnel during facility walkthroughs and follow-up actions associated with RR activities
- Detailed review of NPO's and the contractor's RR program documentation.

Supplemental information on the review, including the members of the Independent Oversight team, the Quality Review Board, and HSS management, is provided in Appendix A. A list of documents reviewed, personnel interviewed, and observations are provided in Appendix B.

## 5.0 RESULTS

DOE Order 425.1D, *Verification of Readiness to Start Up or Restart Nuclear Facilities*, establishes the Department's requirements for NPO to implement an RR program to verify readiness for startup of new hazard category 1, 2, and 3 nuclear facilities, activities, and operations, and for the restart of existing hazard category 1, 2, and 3 nuclear facilities, activities, and operations that have been shut down. A DOE Order 425.1D compliant RR program is intended to ensure demonstration of reasonable assurance of adequate protection of workers, the public, and the environment from the potential adverse consequences from a hazard category 1, 2, or 3 nuclear facility, activity, or operation.

*Review/Inspection Criteria:*

*NPO has developed procedures and mechanisms for startup and restart activities for nuclear facilities. NPO has established and implemented effective oversight procedures and mechanisms to ensure that the site contractor has implemented and maintains effective processes to achieve and verify readiness.*

### 5.1 Written Procedures

DOE Order 425.1D requires the NPO to develop a procedure that defines the processes and documents the requirements for startup and restart of nuclear facilities. To meet this expectation, NPO prepared and approved procedure NPO-3.4.3, *Startup and Restart of Plant Activities*, Revision 0, dated November 19, 2013.

With this procedure, NPO implements the applicable requirements of DOE Order 425.1D at the Pantex and Y-12 sites. The procedure clearly identifies the authorities and responsibilities for each NPO position that participates in the RR process (e.g., NPO Manager, Assistant Managers) and clearly identifies the NPO Manager as the Start-up Authorization Authority (SAA), unless approval authority for the RR resides at NNSA Headquarters. The procedure also provides in-depth guidance on the roles and responsibilities of RR team leaders and team members. Furthermore, the procedure identifies when the RR process must be invoked for a given facility or activity based on the circumstances that resulted in the

suspension of operations or the startup of a new activity. In addition, the NPO procedure outlines the processes for conducting and reporting the results of an RR activity.

The NPO procedure identifies action steps that require the NPO management and operations (M&O) contractors – B&W Pantex and B&W Y-12 – to submit quarterly start-up notification reports (SNRs) for NPO review and approval. The NPO procedure also requires preparation of a plan of action (POA) that includes verification of conformance with DOE Order 425.1D before the start of an RR activity. Additionally, the procedure requires the RR team leader to prepare an implementation plan (IP), with input from the review team members, consistent with the requirements of DOE-STD-3006, *Planning and Conducting Readiness Reviews*.

Some aspects of NPO-3.4.3 are not consistent with the expectations of DOE Order 425.1D. The procedure specifies that the NPO Senior Scientific and Technical Advisor (SSTA) reviews and approves the contractors' quarterly SNRs, but DOE Order 425.1D and DOE-STD-3006 state that each SNR is to be approved by the field element manager. None of the quarterly SNRs have been formally approved by the SSTA. Based on the site's anticipated RR needs at the time, the SNR is revised by the NPO contractor and submitted to NPO for approval by the SSTA. The Quarterly SNR submittals occur in addition to the separately approved SNRs, and the NPO RR SME reviews the SNR's for adequacy. Based on the individual SNR approvals, no formal approval is provided for the quarterly SNR's. It is contrary to the requirements of DOE Order 425.1D and DOE-STD-3006, to not approve the quarterly SNR's and to delegate the NPO approval authority for SNRs to a position below the NPO Manager (see **Finding F-NPO-1**). An additional deviation from DOE Order 425.1D expectations is that the procedure designates the Assistant Manager for Programs and Projects to authorize the start of an RR activity, whereas DOE Order 425.1D gives this responsibility to the SAA; at NPO, the SNR identifies the NPO Manager as the SAA. It is contrary to the requirements of DOE Order 425.1D, to delegate the approval authority for the start of RRs to a position below the NPO Manager (see **Finding F-NPO-2**).

Several administrative errors were identified in the procedure (see **OFI-NPO-1**). For example:

- The Attachment 1 table identifying RR levels incorrectly specifies “N/A” for the need to conduct a readiness assessment (RA) for initial startup of a weapon or special nuclear material operation in an existing nuclear facility. Also, the table identifies several notes that are not actually referenced in the table.
- The procedure identifies an NNSA Headquarters organization as NA-171.2, which is now called NA-00-10.
- The Attachment 2 table identifying the startup/restart approval authorities identifies a “Note Two” that is not referenced in the table. In addition, the NPO Manager's name is misspelled.

Interviews with the NPO staff and management showed that they were knowledgeable of the NPO procedure and the requirements for conducting an RR. The NPO Startup Manager provided various examples of documents (RR reports, SNRs, approval letters, etc.), indicating active engagement in implementing the expectations of the NPO procedure. Furthermore, the NPO procedure appears adequate to flow down the expectations of DOE Order 425.1D within NPO, and to result in proper application of the RR methodology to the startup or restart of an NPO facility or activity.

## 5.2 NPO Operational Awareness and Oversight Processes

NPO has assigned a subject matter expert (SME) as the NPO Startup Manager to ensure implementation of DOE Order 425.1D requirements for RR, both at NPO and by the M&O contractor at the Pantex and Y-12 sites. NPO's oversight activities to ensure continued implementation of RR requirements are documented in procedure NPO-3.4.3, which states that the SME will:

- Review the contractor's submitted SNRs and POAs for adequacy
- Prepare the POAs for NPO RR activities
- Document validation of closure of contractor RR pre-start corrective actions
- Document validation of closure of NPO RR pre-start corrective actions
- Recommend startup/restart to the SAA
- Periodically conduct performance assessments of the contractor's RR process.

If properly implemented, the NPO oversight expectations documented in NPO-3.4.3 should provide sufficient oversight of all elements of the contractor's RR activities. When interviewed, the NPO RR SME was knowledgeable of the oversight expectations of NPO-3.4.3 and provided e-mails, reports, and memoranda indicating adequate performance of oversight activities to meet procedural expectations. Furthermore, NPO generally maintains operational awareness of site activities and status through frequent, routine interactions with the site contractor.

To ensure continued implementation of NPO-3.4.3 and DOE Order 425.1D, the RR SME conducts oversight of the contractor's RR program implementation by reviewing the POA for completeness and the RR reports for adequacy, and by examining the disposition of identified issues. Furthermore, before an NPO RR activity begins, the RR SME verifies that all prerequisites are satisfied. The NPO integrated assessment schedule for fiscal year (FY) 2014 indicates that the RR SME has scheduled an assessment of RR program implementation during the second quarter. Further discussions of assessments of the RR program are discussed in Section 5.4.

As required by DOE Order 425.1D, the NPO contractors submit quarterly SNRs to NPO for review and approval. If the submitted quarterly SNR has changed since the previous quarter's SNR, NPO-3.4.3 specifies that the NPO SSTA must review and approve the SNR. If the quarterly SNR has no changes from the previous quarter's SNR, the RR SME reviews the SNR and documents the results of the review and approval in an e-mail to the contractor. As noted in Section 5.1, this approach for SNR approval by the SSTA or RR SME is not consistent with the expectations of DOE Order 425.1D and DOE-STD-3006 (see **F-NPO-1**).

During the onsite data collection activities for this review, the Pantex contractor conducted an RA on the startup of a major modification to the high pressure fire loop, and Independent Oversight observed the contractor RA exit briefing as part of this review. During this briefing, the RR SME engaged the contractor on the basis for the RA conclusions and identified issues. The RR SME's interactions with the contractor were of appropriate depth in discussion on the adequacy of the RA conclusions.

### 5.3 Implementation of NNSA Procedures

To determine whether the NPO RR activities demonstrate effective implementation of DOE Order 425.1D, Independent Oversight examined the adequacy of the documentation of the completed NPO RR activities since the June 2012 review:

- Readiness Assessment for the Restart of B61-7 Rebuild Operations, August 2012
- Readiness Assessment for the Restart of Mass Properties Operations in Building 12-84, Bay 12, March 2013
- Readiness Assessment for the Restart of W84 Permissive Action Link Operations at the Pantex Plant, June 2013.

The NPO RR documentation for each of the RA activities indicated that NPO-3.4.3 expectations for conducting RR activities are adequately implemented and formally documented. As required by DOE Order 425.1D and NPO-3.4.3, the contractor's prerequisites are verified to be met before the RA activity begins. In addition, the assigned team members were well qualified, the RA covered the applicable core requirements specified in the POA, and the justification for meeting the review criteria was satisfactory and supported the conclusion provided by the RR report.

### 5.4 Line Oversight

To ensure effective oversight of the NPO contractor's contractor assurance system (CAS), the NPO has implemented an assessment planning procedure NPO-3.2.1, *NPO Oversight Planning Process*. This process examines past identified issues to determine the contractor's performance in the RR functional area. Based on the contractor's performance and the associated impact of that performance on meeting the site's mission, a risk ranking is assigned that establishes a prescribed assessment activity to be conducted and included in NPO assessment planning.

The NPO contractor's assessment planning is conducted with input from its CAS. The contractor's CAS evaluation considers internally identified issues as well as the NPO-identified issues that are communicated through the quarterly issues management meeting. NPO contractors use the results of the CAS evaluations to determine the nuclear safety functional areas to be assessed for the upcoming fiscal year.

The results of the NPO and NPO contractor's assessment planning are combined to produce a site integrated assessment plan (SIAP), which is reviewed and approved by NPO. The first and most basic oversight of the contractor's CAS in the RR functional area occurs when NPO approves the SIAP, since NPO's review and approval process verifies that the contractor's proposed RR assessments are commensurate with the contractor's recent performance. Additional opportunities for CAS oversight occur when NPO performs its assessment planning and when a Level 3 assessment is identified in the SIAP (i.e., when the contractor's performance results in a high risk impact to the mission). An NPO Level 3 assessment evaluates the contractor's performance and the adequacy of its CAS assessment of the RR functional area. Previous reviews of the NPO RR program by the Chief of Defense Nuclear Safety (CDNS) and Independent Oversight indicated that the NPO contractors have consistently performed adequately since 2011 in the RR functional area, so it is appropriate that the FY 2014 SIAP does not include any NPO Level 3 assessments.

## **5.5 Startup and Restart Delegations**

NNSA Headquarters formally delegated startup and restart authority to the NPO Manager in a November 26, 2012, memorandum, *Approval of Nuclear Safety Delegation for NPO*. The delegation applies to startup of hazard category 3 nuclear facilities and restart of hazard category 2 and 3 nuclear facilities. This delegation is consistent with the requirements of DOE Order 425.1D. The NPO Manager has completed senior technical safety manager (STSM) qualification, and the NPO organization has implemented the management processes and personnel capabilities to support this delegation of authority. NPO also maintains a cadre of qualified personnel to conduct RR activities.

## **5.6 Resolution of Previously Identified Issues**

The most recent Independent Oversight and CDNS reviews were conducted in June 2012 and March 2011, respectively. The reviews identified no issues (findings or weaknesses), so no corrective actions were required to be completed. The June 2012 Independent Oversight report identified one observation: to include in the NPO RR procedure, as a prerequisite in the POAs, a reference to any applicable implementation verification review (IVR) documentation that demonstrates implementation of safety basis documentation. Between the June 2012 review and this current review, the NPO RR procedure was changed from Pantex Site Office (PXSO) 425.1D to the current NPO-3.4.3, which now incorporates specific verbiage requiring POA documentation to reference IVR documentation applicable to the RR activity being conducted.

NPO used the results of the March 2011 CDNS and June 2012 Independent Oversight reviews to satisfy the expectations for conducting self-assessments. Therefore, no additional issues from self-assessment reports are available for review.

## **5.7 NPO Oversight Staffing**

NPO has developed a qualification card to document and establish a consistent qualification level for NPO personnel who lead or participate in RR activities. The qualification card requirements are implemented through NPO-3.4.3. NPO has qualified approximately 20 personnel to participate in RR activities, and 5 personnel are specifically trained to serve as RR team leaders. NPO has assigned one of the personnel qualified as a team leader to be the NPO Startup Manager to ensure implementation of DOE Order 425.1D requirements for RR at NPO and by the M&O contractors at the Pantex and Y-12 sites. To determine whether NPO has sufficient staff, Independent Oversight reviewed the most recent SNRs for Pantex and Y-12. Three RR activities are scheduled for FY 2014, each one in a different quarter. NPO has sufficient staff to support the three scheduled NPO RR activities. If additional resources are ever required, NPO can call on additional qualified NNSA personnel at the Albuquerque Complex.

## **6.0 CONCLUSIONS**

Independent Oversight found that NPO has prepared and implemented procedures that establish effective oversight processes for monitoring and assessing the NPO contractor's performance in the area of RR. Specifically, the review found that the NPO procedure adequately describes a DOE Order 425.1D compliant RR program for implementation, and NPO provided evidence indicating continued implementation of the procedure. In addition, NPO staff demonstrated knowledge of the NPO RR program requirements, and provided documentation indicating effective implementation of the NPO RR program requirements. Independent Oversight noted two findings associated with delegations of approval authority within the NPO organization to a management level below that stated in the DOE order. These findings identify administrative deficiencies in procedures but do not indicate a systemic issue with the

implementation of the RR program. The results of this review are consistent with the results of the June 2012 Independent Oversight review of NPO RR program implementation, indicating sustained adequate performance by NPO.

## **7.0 FINDINGS**

Findings indicate significant deficiencies or safety issues that warrant a high level of attention from management. If left uncorrected, findings could adversely affect the DOE mission, the environment, the safety or health of workers and the public, or national security. Findings may identify aspects of a program that do not meet the intent of DOE policy or Federal regulation.

**F-NPO-1:** Contrary to the requirements of DOE Order 425.1D and DOE-STD-3006, the NPO approval authority for SNRs has been delegated to a position below the NPO Manager. In addition, the quarterly SNRs are not receiving formal approval.

**F-NPO-2:** Contrary to the requirements of DOE Order 425.1D, the approval authority for the start of RRs has been delegated to a position below the NPO Manager.

## **8.0 ITEMS FOR FOLLOW-UP**

Independent Oversight plans to follow up with further review of the POA, IP, and RR report documentation for the NPO RAs scheduled during FY 2014.

## **9.0 OPPORTUNITIES FOR IMPROVEMENT**

This Independent Oversight review identified one opportunity for improvement (OFI). This potential enhancement is not intended to be prescriptive or mandatory, and does not require formal resolution through the corrective action process. Rather, it represents an opportunities to advance the project through positive change in conditions or performance; these suggestions from the Independent Oversight review team may assist site management in implementing best practices or provide potential solutions to minor issues identified during the review. In some cases, OFIs address areas where program or process improvements can be achieved through minimal effort. It is expected that responsible line management organizations will evaluate the OFIs and accept, reject, or modify them as appropriate, in accordance with site-specific program objectives and priorities.

**OFI-NPO-1:** NPO procedure NPO-3.4.3 should be reviewed and updated to correct administrative errors.

## **10.0 REFERENCES**

- *Plan for the Independent Oversight Review of the National Nuclear Security Administration Production Office Readiness Review Program Implementation*, December 2013

- DOE Order 425.1D, *Verification of Readiness to Start Up or Restart Nuclear Facilities*, Change 1, April 2013
- DOE-STD-3006, *Planning and Conducting Readiness Reviews*, May 2010

## **Appendix A Supplemental Information**

### **Dates of Review**

December 16-19, 2013

### **Office of Health, Safety and Security Management**

Glenn S. Podonsky, Chief Health, Safety and Security Officer

William A. Eckroade, Principal Deputy Chief for Mission Support Operations

John S. Boulden III, Director, Office of Enforcement and Oversight

Thomas R. Staker, Deputy Director for Oversight

William E. Miller, Deputy Director, Office of Safety and Emergency Management Evaluations

### **Quality Review Board**

William A. Eckroade

John S. Boulden III

Thomas R. Staker

William E. Miller

Michael A. Kilpatrick

### **Independent Oversight Site Lead**

J. Dyke

### **Independent Oversight Reviewers**

J. Dyke - Lead

**Appendix B**  
**Key Documents Reviewed, Interviews, and Observations**

**Documents Reviewed**

- NPO Procedure, NPO-3.4.3, *Startup And Restart of Plant Activities*, Revision 0, 11/19/13
- NPO Procedure, NPO-SD-3.4.3, *Conducting Readiness Review of Hazardous Non-Nuclear Facilities and Activities*, Revision 0, 11/19/13
- NPO RA Final Report, *RA for the Startup of Permissive Action Link (PAL) Operations*, 6/28/13
- NPO RA Final Report, *RA for the Restart of Mass Properties Operations*, 3/26/13
- NPO RA Final Report, *RA for the Restart of Rebuild Operations*, 8/13/12
- NPO Plan of Action, *RA for the Startup of PAL Operations*, 4/30/13
- NPO Plan of Action, *RA for the Restart of Mass Properties Operations*, 6/22/12
- NPO Plan of Action, *RA for the Restart of Rebuild Operations*, 4/17/12
- NPO Implementation Plan, *RA IP for the Restart of Mass Properties Operations*, 1/14/13
- NPO Shadow Assessment, *MSA RA-12-01 Shadow Assessment*, 3/21/12
- NPO Shadow Assessment, *PXSO Shadow Assessment of B&W Assessment RA-11-01 Compliance With DOE O 425.1D (Contractors Requirements Document Verification of Readiness to Startup or Restart Nuclear Facilities)*, 5/19/11
- NNSA Letter, *Approval of Nuclear Safety Delegations for NPO*, 11/26/12
- NPO Letter, *Transmittal of the NNSA RA Final Report for the Restart PAL Operations*, 7/1/13
- NPO Letter, *Startup/Restart Notification Report NA-YSO-BWXTY12-2014-001*, 10/24/13
- NPO Letter, *Authorization to Restart Permissive Action Link Operations*, 7/02/13
- NPO Letter, *Transmittal of the NNSA RA Final Report for the Restart of Mass Properties Operations*, 3/28/13
- NPO Letter, *Transmittal of the NNSA RA Final Report for the Restart of Rebuild Operations*, 8/16/12
- NPO Letter, *Request for Authorization to Restart Rebuild Operations*, 12/13/12
- NPO Letter, *Approval of B&W Pantex RA Plan of Action for the Restart of Mass Properties Operations*, 6/15/12
- NPO Memorandum, *Authorization to Commence the NPO RA to Restart PAL Operations*, 6/17/13
- NPO Memorandum, NPO Startup Manager, *Prerequisites for the NNSA RA for the Restart of Permissive Action Link Operations*, 6/17/13
- NPO Memorandum, *Authorization to Commence the NPO RA for the Restart of Mass Properties Operations*, 1/31/13
- NPO Memorandum, NPO Startup Manager, *Prerequisites for the NNSA RA for the Restart of Mass Properties Operations*, 1/30/13
- NPO Memorandum, *Authorization to Commence the NPO RA for the Rebuild Operations*, 7/5/12
- NPO Memorandum, *PXSO Readiness Assessment Team Leaders/Members*, 2/14/11
- NNSA-HQ CDNS Biennial Review Final Report, *Sections Pertaining to Readiness Review Area*, March 2011
- NPO CAS Site Wide Assessment Schedule, 12/02/13
- B&W Y12 Management Assessment, *Readiness Assurance Program Implementation in Production Facilities*, Revision 0, 7/13
- B&W Pantex Management Assessment, *Compliance With DOE O 425.1D (Contractors Requirements Document Verification of Readiness to Startup or Restart Nuclear Facilities)*, 3/20/13
- B&W Y12 Letter, *Addendum to the Fiscal Year 2014 Quarterly SNR, First Quarter*, 12/05/13
- B&W Pantex Letter, *Quarterly SNR*, 10/03/13

- B&W Pantex Presentation, *Contractor Exit Briefing for RA for The Startup of New High Pressure Fire Loop Pumps and Tanks*, 12/12/13
- B&W Pantex RA Final Report, *Mass Properties Operations*, 1/14/13

### **Interviews**

B&W Pantex and B&W Y-12

- Y-12 Startup Manager
- Pantex Startup Manager

NPO

- Assistant Manager for Programs and Projects
- Deputy Assistant Manager for Environment, Safety, Health and Quality
- NPO Startup/Restart Manager (SME for Readiness Review Program Implementation)
- Qualified NPO Readiness Review Team Leader
- Qualified NPO Readiness Review Team Members (multiple)

### **Observations**

- B&W Pantex High Pressure Fire Loop Readiness Assessment Exit Briefing

**Appendix C**  
**NPO Readiness Review Program Implementation**  
**Criteria, Review and Approach Document**

OBJECTIVE

NPO has developed procedures and mechanisms for startup and restart activities for nuclear facilities. NPO has established and implemented effective oversight procedures and mechanisms to ensure that the Site Contractor has implemented and maintains effective processes to achieve and verify readiness.

CRITERIA

1. NPO has developed written procedures that capture the requirements for startup and restart of nuclear facilities. (DOE O 425.1D, NA-1 SD 411.1-1C)
2. NPO operational awareness and oversight processes include interactions throughout the process of achieving readiness and Site Contractor verification of readiness and indicate effective oversight of Site Contractor processes and procedures for startup and restart of nuclear facilities (DOE O 226.1B, DOE O 425.1D, NA-1 SD 226.1A).
3. NPO readiness review activities demonstrate effective implementation of NNSA procedures for startup and restart of nuclear facilities (DOE O 226.1B, DOE O 425.1D, NA-1 SD 226.1A).
4. NPO processes and procedures ensure effective line oversight of the Contractor Assurance System (CAS) in this functional area.
5. Startup and restart delegations continue to remain valid and satisfy delegation criteria (NNSA Delegation Procedure).
6. 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 226.1B; NA-1 SD 226.1A).
7. The NPO 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:

- DOE O 226.1B, *Implementation of Department of Energy Oversight Policy*
- DOE P 226.1B, *Department of Energy Oversight Policy*
- DOE O 425.1D, *Verification of Readiness to Start Up or Restart Nuclear Facilities*
- DOE-HDBK-3012-2003, *Guide To Good Practices For Operational Readiness Reviews (ORR), Team Leader's Guide*
- DOE-STD-3006-2010, *Planning and Conducting Readiness Reviews*
- NA-1 SD 411.1-1C, *NNSA Safety Management Functions, Responsibilities and Authorities Manual (FRAM)*
- NA-1 SD 226.1A, *NNSA Line Oversight and Contractor Assurance System Supplemental Directive*

### Record Review:

- Review NPO procedures and assessment results to evaluate oversight of Site Contractor startup and restart processes. Review Site Contractor procedures to validate the results of NPO oversight with respect to implementing requirements.
- Review Operational Readiness Review (ORR) and Readiness Assessment (RA) reports and related documentation, including finding closure verification records.
- Review other records that demonstrate the effectiveness of the oversight processes to ensure that the Site Contractor maintains a compliant and robust program to achieve and verify readiness to start up or restart nuclear facility or activity operations.

### Interviews:

- Interview NPO personnel, including line managers responsible for overseeing the Site Contractor's processes for achieving and verifying readiness to start up or restart nuclear operations.
- Interview NPO personnel responsible for planning and conducting ORRs or RAs.

### Observations:

- Observe NPO performing oversight activities associated with verifying the Site Contractor's readiness to start up or restart nuclear facility activity operations, if available during review period.
- Observe NPO ORR or RA activities, including conducting reviews as well as planning and follow-up activities, if any reviews are scheduled during review period.