

DIRECTIVES CONTROL FORM - ORO O FINAL DIRECTIVE

PART A (To be completed by the Division of Primary Interest (DPI))

1. **NUMBER AND TITLE OF DIRECTIVE:** **ORO O 420, Chapter IX, Chg. 3, STARTUP AND RESTART OF NUCLEAR FACILITIES**
2. **PURPOSE OF TRANSMITTAL:** New Directive Revised Directive Page Change
3. **THIS DOCUMENT MAY AFFECT THE WORK PERFORMED BY THE FOLLOWING CONTRACTORS:** (Check appropriate boxes)

No (all contractors)

Yes If yes, whom? BWXT Y-12 UT-B ORAU SURA
 Bechtel Jacobs Company

Other contractors (list by type)

Many ORO contractors have approved S/RIDs or WSS sets that may affect applicability of contractor requirements from this directive. Applicability of contractor requirements must take into account the approved standards set for each particular contract.

4. **SIGNIFICANT PROVISIONS:** Are there any significant changes or impact?
 No Yes If yes, describe: To reflect current policies and procedures the entire chapter has been revised throughout.
5. **CONTACT POINT:** Tyrone Harris Nuclear Safety Division, SE-33 576-0953
Name Organization Telephone

PART B (To be completed by the Directives Management Group (DMG)):

6. **FILING INSTRUCTIONS:**

<u>Remove</u>	<u>Dated</u>	<u>Insert</u>	<u>Dated</u>
ORO O 420, Chapter IX, Chg. 2, Pages IX-1 through IX-9	04/30/1999	ORO O Control Form ORO O 420, Chapter IX, Chg. 3, Pages IX-1 through IX-15	10/30/2000 10/30/2000

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7. **APPROVED FOR DISTRIBUTION IN ACCORDANCE WITH THE OFFICIAL DIRECTIVES DISTRIBUTION LIST:**

Original signed by

Kenneth W. Warden, AD-440
Signature Management Analyst, AD-440

10/30/2000
Date

INSTRUCTIONS TO ADDRESSEES: THIS FORM IS TO BE FILED WITH THE DIRECTIVE AND RETAINED

Rev. 10/12/2000

U.S. Department of Energy

Oak Ridge Operations

ORO O 420 Chapter IX Change 3

DATE: 10/30/2000

SUBJECT: STARTUP AND RESTART OF NUCLEAR FACILITIES

1. PURPOSE. This Chapter correlates to DOE O 425.1A, STARTUP AND RESTART OF NUCLEAR FACILITIES, dated December 28, 1998, by assigning responsibility and accountability and providing administrative and/or contractual guidance to Oak Ridge Operations (ORO) and its contractors. Nothing in this issuance changes any requirements contained in any DOE Order.
2. CANCELLATION. This Chapter cancels and replaces ORO O 420, Chapter IX, Chg. 2, STARTUP AND RESTART OF NUCLEAR FACILITIES, dated April 30, 1999.
3. APPLICABILITY. The provisions of this Chapter apply to ORO Principal Staff. Although the Contractor Requirements Document (CRD) attached to DOE O 425.1A is applicable to contractors to the extent set forth in their contract, no additional contractor requirements are imposed in this ORO Order.
4. RESPONSIBILITIES. Many ORO contractors have developed Standards/Requirements Identification Documents (S/RIDs) or Work Smart Standards (WSS) sets that may not include requirements referenced or included in DOE O 425.1A, its attached Contractor Requirements Document (CRD), or this Chapter. Interpretation and performance of Federal responsibilities outlined below must take into account the approved standards set for each particular contract.
 - a. Manager/Deputy Manager.
 - (1) As indicated on Table 1 (Attachment 1 of this Chapter) and supplemental memorandums of delegation, the Manager will serve as the Startup/Restart Approval Authority unless otherwise specified. The Manager may delegate this responsibility to an Assistant Manager, a Contracting Officer's Representative (COR), another DOE official, and, for Readiness Assessments (RAs), to the contractor. Any delegation must be in writing or as specified in Table I.
 - (2) As delineated in DOE M 251.1-1A, approves exemptions from applicable provisions of DOE O 425.1A.
 - (3) As startup/restart approval authority, approves both contractor and DOE plans-of-action and startup notification reports (SNRs).
 - b. Assistant Manager for Environment, Safety, Health and Emergency Management (AMESH).
 - (1) Provides support to line management in implementation of RAs and Operational Readiness Reviews (ORRs).

- (2) Ensures that ORO nuclear facility startup or restart procedures conform to the requirements of DOE O 425.1A, and that modifications needed to conform to approved alternate contractual requirements will provide for adequate safety.
- (3) Advises line management on the adequacy of proposed contractual requirements relating to startup and restart.
- (4) Provides recommendation, upon request, to DOE line management for selection of team leaders for ORRs and RAs.
- (5) Receives and reviews SNRs from line management.

c. DOE Line Management.

- (1) Perform those tasks identified in DOE O 425.1A, subparagraphs 5a and b. Where contractors use S/RIDs or WSS sets to identify safety requirements, ensure that provisions relating to startup and restart of nuclear facilities are sufficient to ensure adequate safety.
- (2) For a DOE ORR or RA, prepares the DOE plan-of-action and recommends a team leader to the Approval Authority. Ensures that the team leader is independent of the of the line organization (i.e., Environmental Management (EM), Laboratory Management (LM), etc.) for ORRs and independent of the work being performed for RAs.
- (3) Ensures that SNRs are submitted quarterly by the contractor(s) and are accurate and complete.
- (4) Reviews and approves each SNR and forwards the SNR, through the ORO Manager, to the Program Secretarial Officer (PSO) and the site Lead Program Secretarial Officer (LPSO).
- (5) Verify to the Manager that the contractor's preparations for startup or restart are completed, ORO is ready to oversee operations, and the facility is ready for the ORR or RA.
- (6) As designated by the Manager, serve as the Startup/Restart Approval Authority.

d. Operational Readiness Review/Readiness Assessment Team Leader.

- (1) Coordinates the selection of the ORR or RA team members. Ensures that team members are independent of the work being reviewed and have the required qualifications and training.
- (2) Prepares and approves the ORR implementation plan or RA review plan.

- (3) Plans, directs, and performs the ORR or RA in accordance with DOE-STD-3006-2000 and DOE-HDBK-3012-96, or applicable alternative requirements included in the approved contractual requirements set.
- (4) Prepares the ORR or RA report and submits a final copy to the Startup/Restart Approval Authority. In addition, a final copy must be provided to EH-2 for review and comment.
- (5) As directed by the Startup/Restart Approval Authority, assist line management in verifying closure of pre-start findings.

e. Operational Readiness Review/Readiness Assessment Team Members.

- (1) Assist in preparation of the implementation plan.
- (2) Conduct the review in accordance with DOE O 425.1A and DOE-STD-3006-2000 or applicable alternative requirements included in the approved contractual requirements set.
- (3) Assist in preparing the ORR/RA final report.
- (4) As directed, assist line management in the verification of the closure of pre-start findings.

f. ORO Staff, as assigned, conduct an ORR or RA in accordance with the provisions of DOE O 425.1A, DOE-STD-3006-2000, and this Chapter.

5. REQUIREMENTS AND PROCEDURES.

a. ORR and RA - General.

- (1) Cognizant DOE line management may request an ORR or a RA at any time for any activity or operation. Contractors, with DOE line management concurrence, use established contractual standards and Table 1 (Attachment 1 of this Chapter) to determine which Category 1, 2, and 3 startups or restarts will require an ORR or RA. For Category 3 nuclear facilities with extended shutdowns of twelve (12) months, a RA is required.
- (2) On a quarterly basis, the contractor develops and transmits to the cognizant COR a SNR as defined in DOE-STD-3006-2000, or provides alternative notification if specified in the approved set of contractual requirements. As a minimum, the SNR should include a description of the facility or program work; reason for non-operation (e.g., a maintenance or modification outage, no program work, new facility, shutdown for safety concerns, decontamination and decommissioning (D&D), etc.); the approximate date operations were last conducted (for restarts) and the projected date for the startup; proposed type of readiness review; basis or justification for proposed type of readiness review; proposed

startup or restart authority. The SNR should be approved by cognizant DOE line management.

- (3) Using Table 1 and supplemental memorandums of delegation, DOE line management ensures that the type of readiness review and the Startup/Restart Approval Authority proposed in the SNR is appropriate. Furthermore, a recommendation is made as to the approval of the SNR. At this time, delegation of the Startup/Restart Approval Authority should be considered. Delegation of Startup/Restart Approval Authority will be in writing.
- (4) DOE line management recommends the selection of the DOE ORR or RA Review Team Leader to the Startup/Restart Approval Authority.
- (5) DOE line management develops implementing procedures to address how the requirements of this procedure will be implemented or writes DOE line management readiness review plans for each ORR or RA performed. Contractors develop startup or restart procedures to implement the requirements for readiness reviews, and DOE line management ensures that these procedures adequately capture these requirements.

b. Operational Readiness Review Procedure.

NOTE: This procedure assumes that the DOE Order 425.1A and its CRD are included in the contract. This procedure provides further detail to address requirements and interfaces with the contractor at the Operations Office level.

- (1) The contractor's management and DOE line management coordinate the development of their plans-of-action.
- (2) DOE line management ensures that contractor and DOE plans-of-action (POAs) are forwarded to Office of the Assistant Secretary of Environment, Safety, and Health (EH-2). A record of the transmittal of the POAs to EH-2 will be maintained by line management.
- (3) Based on the draft plans-of-action, the ORR Review Team Leader coordinates the selection of the team members.
- (4) The plans-of-action are approved by the Approval Authority and returned to the respective team leaders.
- (5) DOE line management continues oversight of contractor preparations for startup/restart and oversight of the operation or activity, when started.
- (6) Using the approved plans-of-action, the contractor and DOE ORR teams develop implementation plans.

- (7) DOE line management forwards the contractor and DOE implementation plans to EH-2 for review and comment. A record of the transmittal of the implementation plans to EH-2 will be maintained by line management.
 - (8) Contractor line management completes all of the ORR prerequisites listed in the contractor's approved plans-of-action and declares its readiness to start/restart the activity or operation.
 - (9) The contractor ORR team performs its ORR. The contractor line management develops corrective action plans for all findings.
 - (10) The contractor issues a readiness to proceed memo (RTP) to DOE line management stating that the prerequisites listed in the DOE POA have been met. In addition, DOE line management verifies the contractor's preparations for startup/restart.
 - (11) The DOE ORR team conducts its independent ORR and writes a final report, which is sent to the Approval Authority, with a copy to EH-2 for review and comment.
 - (12) DOE line management transmits the DOE ORR Final Report to the contractor.
 - (13) The contractor develops a corrective action plan and schedule for the findings from the DOE ORR and transmits them to DOE line management.
 - (14) The contractor documents the completion of all prestart corrective actions from the DOE ORR and notifies DOE line management.
- c. Readiness Assessment Procedure.
- (1) General Requirements
 - (a) The line manager ensures that the DOE Order 425.1A and its CRD, and this procedure are included in the contract. The CRD documents those specific requirements for contractors in implementing readiness reviews contained in DOE O 425.1A. This procedure provides further detail to address RA requirements and interfaces with the contractor at the Operations Office level. DOE Order 425.1A and DOE-STD-3006-2000 identify criteria to be used in determining what review type is to be used for confirming readiness. Specific guidance on determining the type of review to be conducted is contained in the attachment to this procedure.
 - (b) When a RA is required, the level of readiness review is intended to be graded or tailored to a degree that is consistent with the circumstances, changes, duration, and confidence since the operations were last conducted. The type of facility work should also be considered such as decontamination and decommissioning (D&D). When a

RA is not necessary, the contractor's standard operating procedures may be used to support the routine startup or restart of the activity.

- (c) The RA may be as complex as for an ORR, or as simple as a pre-approved checklist.
 - (d) Consideration should be given to delegate the approval authority to the contractor for RAs based upon the significance of the new hazards introduced, the operating history of the contractor, and the demonstrated performance of the contractor's RA process. The justification for this delegation will be in writing.
 - (e) DOE line management may delegate the approval authority to the contractor for RAs categorized as Other Startups and Restarts.
- (2) Startup/Restarts requiring a DOE Readiness Assessment:
- (a) The contractor and DOE line management develop the RA POAs. The POA will include as a minimum the following elements:
 - 1 The breadth of the assessment;
 - a The RA should evaluate, as a minimum, the modifications to equipment, procedures, training, and safety limits that have changed since operations were stopped.
 - b For new program work associated within an operating process or facility, a review of the authorization basis documents, to include a review of any unreviewed safety question determinations should be included in the breadth of the review.
 - c The minimum core requirements identified in the DOE O 425.1A should be used as a guide for determining the appropriate breadth for the RA.
 - 2 Team Leader designation;

The selection of DOE and contractor RA team leaders will ensure that team leaders are independent of the work being started/restarted. The team leader is responsible for ensuring that RA team members are also independent of the work being reviewed.

3 Prerequisites for initiating the Readiness Assessment.

The prerequisites to the readiness assessment will be specified by the contractor in the plan-of-action. The completion of a line management self assessment must be completed before declaring readiness to operate.

- (b) The contractor line management and DOE line management submit their plans-of-action to the Startup/Restart Approval Authority for approval.
- (c) The contractor and DOE RA Team Leaders develop and approve the RA review plan or the RA review checklist and provide a copy to the Startup/Restart Approval Authority, the team members and others as directed by the Approval Authority. The RA review plan or review checklist should identify how the review will be done, how the review will be documented, and the depth of the review.
- (d) The contractor line management completes prerequisites to commence the readiness assessment and notifies contractor senior management and DOE line management of readiness to proceed.
- (e) The contractor line management notifies the contractor RA Team Leader to proceed with the RA.
- (f) The contractor RA team performs the RA in accordance with the approved RA review plan.
- (g) The contractor RA team prepares a readiness assessment report, which includes a recommendation for startup/restart of the activity or facility and sends it to the contractor line management.
- (h) The contractor line management develops corrective action plans for any RA findings. All pre-start findings must be closed and verified as complete, with the exception of a manageable list that have a well-defined scope and schedule, prior to starting the DOE RA.
- (i) The contractor issues an RTP memorandum to DOE line management specifying that the prerequisites in the contractor POA have been met.
- (j) DOE line management verifies the contractor's preparations for startup/restart. DOE line management will identify the verification process in their line management procedure or in an oversight plan for the startup/restart activity.

- (k) DOE line management verifies that all DOE RA prerequisites have been completed. DOE line management forwards the contractor's RTP memo, and its concurrence, to the Startup/Restart Approval Authority.
- (l) The Startup/Restart Authority then notifies the DOE RA Team Leader to proceed with the DOE RA.
- (m) The DOE RA team performs the RA in accordance with their approved RA review plan.
- (n) The DOE RA team prepares a final RA report, which contains a recommendation for startup or restart.
- (o) The DOE RA team leader sends the final DOE RA report to the Approval Authority with a copy to DOE line management. DOE line management then transmits the report to the contractor, directing the development of a corrective action plan for any findings. If there are findings against DOE line organizations, DOE line management coordinates development of a corrective action plan for those findings.
- (p) The contractor develops a corrective action plan and schedule for the findings from the DOE RA report and transmits them to the DOE line management for approval. If required, the DOE corrective action plan is forwarded to the Startup/Restart Approval Authority for approval.
- (q) The contractor documents the completion of all pre-start findings from the DOE RA report and notifies DOE line management.

Note: If requested by the Approval Authority, the DOE RA Team Leader verifies the completion of the corrective actions for all pre-start findings. Verification of completion of pre-start findings is sent to the Approval Authority.

- (r) DOE line management verifies closure of all pre-start findings, and notifies the Approval Authority that all pre-start actions have been completed.
 - (s) The Approval Authority grants approval to startup activities.
- (3) Startup/Restart not requiring a DOE Readiness Assessment:
- (a) The contractor line management develops the RA POA. The POA will include as a minimum the following elements:
 - 1 The breadth of the assessment;

- a The RA should evaluate, as a minimum, the modifications to equipment, procedures, training, and safety limits that have changed since operations were stopped.
- b For new program work associated with an operating process or facility, a review of the authorization basis documents, to include a review of any unreviewed safety question determinations, should be included in the breadth of the review.
- c The minimum core requirements identified in the DOE O 425.1A can be used as a guide for determining the appropriate breadth for the RA.

2 Team Leader designation;

The selection of a contractor RA team leader will ensure that the team leader is independent of the work being started/restarted. The RA team leader, is responsible for ensuring that RA team members are also independent of the work being reviewed.

3 Prerequisites for initiating the Readiness Assessment.

The prerequisites to the readiness assessment will be specified in the contractor plan-of-action. As a minimum, the completion of a line management self assessment must be completed prior to starting the RA.

- (b) The contractor line management will submit their plan-of-action to the Startup/Restart Approval Authority for approval.
- (c) The contractor RA Team Leader develops and approves the RA review plan or the RA review checklist and provides a copy to the Startup/Restart Approval Authority, the team members and others as directed by the Approval Authority. The RA review plan or review checklist should identify how the review will be done, how the review will be documented, and the depth of the review.
- (d) The contractor line management completes prerequisites to commence the readiness assessment and notifies contractor senior management and DOE line management of readiness to proceed.
- (e) The contractor line management notifies the contractor RA Team Leader to proceed with the RA.
- (f) The contractor RA team performs the RA in accordance with the approved RA review plan.

- (g) The contractor RA team prepares a readiness assessment report, which includes a recommendation for startup/restart of the activity or facility and sends it to the contractor line management.
- (h) The contractor line management develops corrective action plans for any RA findings. All pre-start findings must be closed and verified as complete prior to the approval authority granting approval to startup/restart.
- (i) The contractor line management issues an RTP memorandum to the Approval Authority specifying that all pre-start actions have been completed.
- (j) The Approval Authority grants approval to startup activities, and notifies DOE line management.

6. REFERENCES.

- a. DOE M 251.1-1A, DIRECTIVES SYSTEM MANUAL, dated January 30, 1998.
- b. DOE-STD-3006-2000, PLANNING AND CONDUCT OF OPERATIONAL READINESS REVIEWS (ORR), dated June 2000.
- c. DOE-HDBK-3012-96, GUIDE TO GOOD PRACTICES FOR OPERATIONAL READINESS REVIEWS (ORR), TEAM LEADER'S GUIDE, dated June 1996.
- d. DOE 5480.23, NUCLEAR SAFETY ANALYSIS REPORTS, dated April 10, 1992.
- e. DOE-STD-1027-92, HAZARD CATEGORIZATION AND ACCIDENT ANALYSIS TECHNIQUES FOR COMPLIANCE WITH DOE 5480.23, NUCLEAR SAFETY ANALYSIS REPORTS, dated December 1992.
- f. DOE-EM-STD-5502-94, HAZARD BASELINE DOCUMENTATION, dated August 1994.

7. DEFINITIONS.

- (1) **Facility** - an activity or operation that involves radioactive and/or fissionable materials in such form and quantity that a nuclear hazard potentially exists to the employees or the general public. Included are activities or operations that:
 - a. Produce, process, or store radioactive liquid or solid waste, fissionable materials, or tritium;
 - b. Conduct separations operations;

- c. Conduct irradiated materials inspection, fuel fabrication, decontamination, or recovery operations;
 - d. Conduct fuel enrichment operations;
 - e. Perform environmental remediation or waste management activities involving radioactive materials.
- (2) **Other Startups and Restarts** - A startup following a planned shutdown lasting less than the 180 days (for Category I), less than one year (Category II and III), or a startup following a modification that does not meet the definition of a significant modification (see below).
- (3) **Routine Startup** - A startup or restart following a planned shutdown of less than 90 days. Examples include routine maintenance outages or facilities that operate on an as-needed basis (e.g., operate only two or three times a quarter based on program requirements) or perform startup on a routine basis (e.g., operate for only one or two shifts and startup each day).
- (4) **Readiness Assessment** - A review that is conducted to determine a facility's readiness to startup or restart program work when an ORR is not required or when the contractor's standard operating procedures are not adequate. Any startup or restart not meeting the ORR criteria or the routine startup definition by default will require a Readiness Assessment.
- (5) **Program Work** - Work in a reactor or nonreactor nuclear facility that is accomplished to further the goals of the facility mission and/or the program for which the facility is operated. Program work is not accomplished when a facility is shutdown. Program work does not include work that would be required to maintain the facility in a safe shutdown condition, minimize radioactive material storage, or accomplish modifications and correct deficiencies required before program work can recommence.
- (6) **Operational Readiness Review** - A disciplined, systematic, documented, performance-based examination of facilities, equipment, personnel, procedures, and management control systems to ensure that a facility will be operated safely within its approved safety envelope as defined by the facility safety basis. An ORR is required to determine that program work within a reactor or nonreactor nuclear facility is ready to be safely started or restarted. The ORR scope is defined based on the specifics of the facility and/or the reason for the shutdown as related to a minimum set of core requirements. A graded approach is used in defining the depth of the ORR based on these core requirements.
- (7) **Significant Modification** - fundamental modifications to a process operation which increase the bounding risk already approved by DOE for the activity. An increased risk would be adding new controls (engineered or administrative) unless the control strategy is extremely simplistic or nearly identical to already existing controls.

(8) **Line management readiness validation plan** - The plan for how DOE line management verifies that the contractor has achieved the necessary level of readiness to startup/restart the facility/activity.

8. CONTRACTOR REQUIREMENTS DOCUMENT. None.

9. ATTACHMENTS.

Attachment 1 - Review Needs Determination

REVIEW NEEDS DETERMINATION

A. Startup/Restart Review Needs Determination for Nuclear Facilities

Step 1: Ensure that the action is considered a “startup” or “restart.”

As defined in the DOE Standard, DOE-STD-3006-2000, a startup is “the initial operation of a facility or process to perform program work” and a restart is “the recommencement of program work.” The standard further defines program work as “Work in a reactor or nonreactor nuclear facility that is accomplished to further the goals of the facility mission and/or the program for which the facility is operated.” Program work is not accomplished when a facility is shutdown. Program work does not include work that would be required to maintain the facility in a safe shutdown condition, minimize radioactive materials storage, or accomplish modifications and correct deficiencies required before program work can recommence.

Step 2: Ensure that the facility/activity is a nuclear facility/activity and determine its hazard category.

NOTE: An activity conducted within a nuclear facility *does not necessarily mean that it is a nuclear activity*. One must evaluate the actual risks and quantities of nuclear materials involved in the specific activity. DOE-STD-1027-92; Hazard Categorization and Accident Analysis Techniques For Compliance With DOE Order 5480.23, Nuclear Safety Analysis. Reports should be consulted for guidance in determination if the facility is a nuclear facility and, if so, its hazard category.

Step 3: Determine if the facility/activity startup/restart is a New Facility/Activity Startup, a Restart following a Modification to an Existing Facility/Activity, or a Restart Following a Shutdown. This step will require some interpretation and professional judgement.

NOTE: The start of a new unit process or a new operation does not necessarily mean that the startup action is a New Facility/Activity startup action. If the facility being started is a new unit process that is a component or part of a larger operating system (e.g., a new treatment unit on an existing wastewater treatment system), the startup may be considered a Facility Modification. Similarly, if the startup of a new activity is part of a larger existing field operation or program, it may also be an Activity Modification (e.g., a new enriched uranium removal process that is part of an existing uranium deposit removal program). However, if the facility/activity involves a new contractor, new management system, new physical components/structures, and new safety authorization basis, the facility/activity startup will likely be considered as a New Facility/Activity.

If the facility/activity is a New Facility/Activity, go to Table 1 below for determination of review need and startup authority.

If the startup/restart is a Modification to an Existing Facility/Activity, go to Step 4.

If the startup/restart is a Restart Following a Shutdown go to Step 5.

Step 4: Determine if the Facility Modification is a significant modification. Significant modifications could include, but are not limited to:

- (1) Substantial changes that would create new and unreviewed risks to worker/public safety,
- (2) Changes that would result in a substantial public or regulatory relations risk,
- (3) Substantial increase in risks to worker/public safety even though the risk scenario has been previously reviewed and included in facility safety documents,
- (4) Major organizational or management system changes for the operation of a nuclear facility/activity (e.g., the operation of a nuclear facility is turned over to a new contractor who chooses to have a large scale change of staffing and procedures).

Modifications that are not significant could include but are not limited to:

- (1) Changes that create no new and unreviewed risks and that do not substantially result in an increase in risk.
- (2) Addition of new processes or activities to an existing facility/activity that are covered under the existing safety authorization basis.
- (3) Modifications that are similar to previous modifications that have been successfully implemented.

If the facility/activity involves a significant modification, go to Table 1 below to determine review need.

If the facility/activity involves a modification that is not significant, it will be considered in the category of *Other Startups/Restarts and* a Readiness Assessment will be required.

Step 5: If a facility/activity is being restarted, determine if the shutdown was caused by a safety-related issue. If the shutdown, was due to normal planned cessation of operations (e.g., maintenance outage), determine the length of time that the operation has been shut down. If the maintenance outage or planned shutdown can be considered a routine startup as defined in Section 7, no RA or ORR is required.

Go to Table 1 below to determine review need.

Table 1

Category and Classification of Facility/Activity	TYPE OF STARTUP OR RESTART (APPROVAL AUTHORITY)					
	New Facility or Activity	DOE MGT Directed, Unplanned Shutdown	Restart after extended shutdown ***	Restart with Significant Modifications	Restart after operations outside the Safety Basis	Other Startup / Restarts
Nuclear, Hazard Category I	ORR (S-1)*	ORR (Shutdown Official)	ORR (SO)	ORR (SO)*	ORR (Approval Authority**)	RA (M-1)*
Nuclear, Hazard Category II	ORR (S-1)*	ORR (Shutdown Official)	ORR (SO)	ORR (SO)*	ORR (Approval Authority**)	RA (AM)*
Nuclear, Hazard Category III	ORR (SO)*	ORR (Shutdown Official)	RA (M-1)	RA (M-1)	ORR (Approval Authority**)	RA (AM)*

* Or designee.

** The authority responsible for the approval of the facility safety basis. The authority may also be delegated.

*** Extended shutdown for a Category I facility is 6 months. Extended shutdown for Category II and III Nuclear Facilities is 12 months.