

**No.: Y15-190**

**Subject: Readiness Manual**

**Title: Planning and Achieving Operational Readiness**

**Vol. 1, Chapter 1.0: Identifying Scope and Review Level**

**Revision Date: 01/09/07**

**This chapter provides instruction for:**

**Identifying startups or restarts of FACILITIES, ACTIVITIES or OPERATIONS either located in or that are hazard category 2 and 3 nuclear FACILITIES or hazardous non-nuclear FACILITIES that will require further reviews (assessments) and approvals as outlined in this Manual.**

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## PURPOSE

This chapter provides instruction for:

- Identifying startups or restarts of FACILITIES, ACTIVITIES or OPERATIONS either located in or that are hazard category 2 and 3 nuclear FACILITIES or hazardous non-nuclear FACILITIES that will require further reviews (assessments) and approvals as outlined in this Manual.
- Defining and documenting the scope and requirements of an ACTIVITY or OPERATION. The scope defining process will include drafting a description of the ACTIVITY or OPERATION; the projected date for the start or restart of operations; and for restarts the reason for non-operation and the approximate date operations were last conducted
- Evaluating a new or changed ACTIVITY, or OPERATION, and determining the level of required formal readiness confirmation reviews or assessments.

The breadth and depth of the readiness reviews depends on the increase in risk assumed by the National Nuclear Security Administration (NNSA) for changes to an ACTIVITY, or OPERATION and on the extent and complexity of changes to ACTIVITY or OPERATION. Reviews to approve a new startup or restart are based on several factors. There are two types of readiness confirmation reviews:

- Readiness Assessment (RA)
- Operational Readiness Review (ORR)

Consistent with the NNSA requirements, contractor readiness reviews apply a graded approach using one of two levels of RAs (Level I RA and Level II RA) plus the ORR (for the most complex of startups or restarts). DOE Order 425.1 requires that where an ORR or RA is not required, the contractor's standard startup procedures are to be used. At Y-12 the BWXT Y-12 standard startup or restart process is described in Y15-190, Volume I, Chapter 3, and makes use of a Standard Operations Checklist (SOC). The Standard Operations Checklist is not considered to be a RA. When a BWXT Y-12 RA is required, NNSA may elect to perform a separate RA.

The Contractor RA/ORR has a breadth consistent with the complexity and risks of the new or restarted FACILITY, ACTIVITY, or OPERATION.

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## APPLIES TO

This Chapter applies to the startup or restart of FACILITIES, ACTIVITIES or OPERATIONS that are either located in or are hazard category 2 and 3 nuclear FACILITIES or hazardous non-nuclear FACILITIES administratively controlled by the Y-12 National Security Complex. (See Y14-001, "Conduct of Operations Manual" Chapter 1.0, "Organization and Administration")

This chapter does not apply to process/operations that have maintained operability via a Continuing Operations Plan (UCN-21695).

## OTHER DOCUMENTS NEEDED

- UCN-21679, *Readiness Applicability and Review Level Determination*

## REFERENCES

- DOE Order 425.1, *Startup and Restart of Nuclear Facilities*
- DOE Order 251.1, *Departmental Directives Program*
- DOE-STD-1027-92, *Hazard Categorization and Accident Analysis Techniques for Compliance with DOE Order 5480.23, Nuclear Safety Analysis Reports*
- DOE-STD-3009-94, *Preparation Guide for U.S. Department of Energy Nonreactor Nuclear Facility Safety Analysis*
- Memorandum from Linton F. Brooks to Principle Deputy Administrator and Deputy Administrator for Defense Programs, dated April 20, 2005, *Delegation of Authority for Order 425.1C, Startup and Restart of Nuclear Facilities*
- Y14-190, *Safety Basis Implementation Plans and Implementation Validation Reviews*
- Y15-312, *Issues Management*
- Y71-930, *Environmental Aspect / Impact Identification and Significance Determination*
- Y73-045, *Job Hazard Analysis Manual*
- Y74-809, *Unreviewed Safety Question Determinations*
- 40 CFR 68, *Chemical Accident Prevention Provisions*
- 40 CFR 302, *Designation, Reportable Quantities, and Notification*

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## WHAT TO DO

### A. Identifying New Startups or Restarts

#### Project Manager (where applicable)

1. WHEN the project involves the startup of a new Nuclear or Hazardous Non-Nuclear FACILITY, THEN ensure that the Division Manager responsible for the new FACILITY is engaged so that a Responsible Manager can be identified early.
2. Ensure that the manager responsible for the facility in which a startup or restart is planned (i.e., the Responsible Manager) is engaged in the project at the start and prior to the development of the Project Execution Plan (PEP).

#### Responsible Manager

3. Maintain cognizance of work within the FACILITY and recognize work that may be a startup or restart requiring evaluation.
4. Have a clear understanding of the objective and scope of the startup or restart.

Actions associated with a restart after SUBSTANTIAL OR SIGNIFICANT CHANGES may require a RA or ORR depending on the extent of the changes.

5. Ensure an individual knowledgeable of the readiness process is assigned to evaluate the startup or restart for the applicability of the readiness confirmation process.
6. IF the startup or restart is more complex and likely to require a RA or ORR, THEN request the Readiness Assurance Manager assign a Readiness Leader to evaluate the startup or restart for the applicability of the readiness confirmation process.

In the initial planning stages for a new startup or restart the Readiness Leader develops information to be used to support the evaluation of the startup or restart to determine the type and where applicable the level of readiness review required and, working with the project team, supports the development of an integrated and resource loaded schedule. The Readiness Leader, as a member of the project core team, is responsible for ensuring that the documents required by Y15-190 are properly identified, planned, developed, reviewed, approved, and maintained as changes to the project occur.

#### Readiness Assurance Manager

7. WHEN requested, THEN assign a Readiness Leader.

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## B. Defining the Scope

### Readiness Leader

**NOTE 1** Defining the scope of the startup or restart is crucial to ensuring success in achieving operational readiness. Line Management along with the Project Manager (when assigned) is responsible for defining the scope, utilizing the Operational Safety Board (OSB) and members of the supporting functional organizations, as necessary. It is recommended that an individual with startup experience also participate in defining the scope. The scope definition should be facilitated by both workshop reviews with representatives from each of the disciplines involved (including operators and other direct line support), and must include facility walk downs.

**NOTE 2** Definition of the scope should focus on not only the identification of what is required to perform the actual operations (i.e., the process) associated with the startup or restart, but also on what (e.g., materials, components, etc) will be processed. This includes restart requirements after changes. While all this information may not be known at the beginning, the information should be generated as early as possible. The UCN-21052, *Readiness Activity Checklist*, can serve as a valuable tool in developing the scope. Key functional areas may also have checklists that can aid in this effort.

**NOTE 3** The description document should be written to an unclassified level of detail, no higher than Official Use Only. This will allow its inclusion in the unclassified Startup Notification Report (SNR).

1. Prepare a description of the startup or restart, based on the best available information and using the guidance in Appendix 1A. Use UCN-21679 to document the description.

The description should apply a graded approach (based on the complexity and extent of changes) using the guidance in Appendix 1A.

2. Ensure that the documented description is reviewed by the project team and concurred with by the Project Manager (if applicable), Production Manager (if applicable), and the Responsible Manager.

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### **C. Determining the Level of Review**

**NOTE** The breadth and depth of the review and the work necessary for attaining operational readiness will apply a graded approach utilizing the guidance provided in Vol. I, Chapter 9.0, Level I Readiness Assessment or Vol. I, Chapter 6.0, Drafting a Plan-of-Action for Level II Readiness Assessments and ORRs.

#### **Readiness Leader**

1. Notify the Responsible Manager when a startup or restart is ready for review level evaluation.
2. Provide copies of the description of the scope of the startup or restart (UCN-21679) to the Responsible Manager prior to the review level evaluation.

#### **Responsible Manager**

3. Identify and notify members of the OSB who are required to participate in the review level determination evaluation.

#### **Readiness Leader**

**NOTE** The "Record Copy" of the Review Level Determination will be developed during the OSB meeting.

4. Provide a draft of UCN-21679, and supporting documentation to the OSB for review, either in advance of or at the OSB meeting as directed by the Responsible Manger.

#### **Responsible Manager**

5. Convene a meeting of the OSB for the purpose of conducting review level evaluation.

#### **Readiness Leader**

6. Present the planned ACTIVITY or OPERATION to the OSB including the following:
  - Impact on the Safety Basis including the applicable Authorization Agreement
  - Key Recommended requirements for attaining operational readiness
7. Record applicable comments on UCN-21679 during the OSB meeting.

#### **OSB**

8. Evaluate the startup or restart using criteria in UCN-21679 and information provided by the Readiness Leader.

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### C. Determining the Level of Review (cont.)

#### Readiness Leader

**NOTE 1** Upon recommendation by the OSB, the level of review may be elevated for reasons other than described above. The reason for elevation of the level of review should be documented on the UCN-21679 form in the "Review Level" section.

**NOTE 2** The OSB may recommend to the Senior Manager responsible for the facility, with justification, that the level of review be lowered from one RA Level to another. The reason for lowering the level of review should be documented on UCN-21679 form in the "Review Level" section. Lowering of a RA I to a Standards Operations Checklist requires Management Review Board approval and is only allowed as described by Table 1 of UCN-21679. Lowering an ORR to a RA requires an exemption to DOE Order 425.1. Exemptions to DOE Directives are requested in accordance with the process described in DOE Order 251.1.

**NOTE 3** NNSA will use the guidelines in DOE Order 425.1, *Startup and Restart of Nuclear Facilities*, to approve the recommended Startup/Restart (a.k.a. Authorization) Authority.

9. Document the level of review designated by the OSB on the UCN-21679.

**NOTE** Appendix 1B contains Startup/Restart Authority guidance.

10. Indicate the proposed Startup/Restart Authority on the UCN-21679 and complete development of the "Record Copy."

#### OSB

11. Sign (each member) the UCN-21679 signifying agreement with the evaluation.

This includes the Readiness Leader signing as Evaluator and the Facility Safety representative signing concurrence on page 5 of the UCN-21679.

#### Readiness Leader

12. Forward the completed UCN-21679 form to affected Responsible Manager and (where applicable) the Production Manager for approval.

#### Responsible Manager

13. Review the UCN-21679 form.
14. IF the startup or restart has a planned startup date less than 12 months from the date of the OSB evaluation, THEN ensure that a justification is provided in the "Review Level" section of the UCN-21679 form.
15. IF the evaluation is acceptable, THEN sign the form.

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### C. Determining the Level of Review (cont.)

#### Responsible Manager

16. IF the evaluation is not acceptable, THEN return the form to the Readiness Leader for further evaluation.
17. WHEN approved, THEN forward the UCN-21679 form to the affected Production Manager (if applicable), or Project Manager (if applicable), or to the Readiness Assurance Manager.

#### Production Manager

18. IF the approved form is not acceptable, THEN return to the Responsible Manager or Readiness Leader for further evaluation.
19. WHEN approved, THEN forward the UCN-21679 form to the Project Manager (if applicable), or the Readiness Assurance Manager (See Readiness Assurance Website, <https://home1.y12.doe.gov/ready/>, for contact information).

#### Project Manager

20. IF the approved form is not acceptable, THEN return to the Responsible Manager or Readiness Leader for further evaluation.
21. WHEN approved, THEN forward the UCN-21679 form to the Readiness Assurance Manager (See Readiness Assurance Website, <https://home1.y12.doe.gov/ready/>, for contact information).

#### Readiness Assurance Manager

22. IF the approved form is not acceptable, THEN return to the Responsible Manager or Readiness Leader for further evaluation.
23. WHEN approved, THEN forward the UCN-21679 form to the Senior Manager for approval.
24. WHEN the Senior Manager returns the approved UCN-21679, THEN ensure that a copy of the completed and signed form is retained in the Readiness Assurance files.

#### Senior Manager

**NOTE** The Senior Manager responsible for the facility in which the startup or restart is occurring has final authority for determining the readiness confirmation review to be recommended to NNSA.

25. Sign the UCN-21679 form indicating final determination of the recommended readiness confirmation review. Provide justification for any changes to the designated level of review in the "Review Level" section of UCN-21679.



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### C. Determining the Level of Review (cont.)

#### Senior Manager

The submittal of a completed UCN-21679 form for a RA or ORR that is approved less than 12 months in advance of the planned startup date requires a justification for the late submittal as it is non-compliant with DOE Order 425.1.

26. Return the approved UCN-21679 form to the Readiness Assurance Manager.

#### Readiness Assurance Manager

27. Ensure that a document number for the completed UCN-21679 form is obtained from the applicable DMC and assigned to the approved document.
28. Ensure that the original is submitted to the applicable DMC with copies to the Responsible Manager and Readiness Leader.
29. Ensure the SNR is updated in accordance with Vol. I, Chapter 4.0, *Startup Notification Report (SNR)*

The addition of an item to the SNR for a RA or ORR that is less than 12 months in advance of the planned startup date requires a justification for the late submittal as it is non-compliant with DOE Order 425.1. The Division/Department Manager responsible for the planning associated with the late submittals should be informed of the non-compliant situation and repeated occurrences from a given Division or Department may warrant issuance of a deficiency in accordance with Y15-312, *Issues Management*.

#### Responsible Manager

30. IF final determination is to use the Standard Operations Checklist, THEN GO TO Vol. I, Chapter 3.0, *Standard Operations*, and follow the described process.

#### Readiness Assurance Manager

31. IF determination is that a RA or ORR is required, THEN:
  - a. Ensure that a Readiness Leader is assigned to support the startup or restart.

#### Readiness Leader

- b. For a Level I RA follow the steps in Vol. I, Chapter 9.
- c. For a Level II RA or an ORR develop a Readiness Plan per Vol. I, Chapter 5.0, *Developing a Readiness Plan*.

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## D. Developing the Readiness Files

### Readiness Leader

**NOTE 1** Documents included in the Readiness files or Evidence files should be uniquely identified/numbered. If an Evidence Matrix is prepared, it can be used to define the unique numbers for each document in the file or designate the location where a particular document can be found. The Readiness Leader must ensure that the appropriate documents are identified and included in the files.

**NOTE 2** It is understood that classified documents, large bodies of evidence (e.g., Change Request Packages, Safety Analysis Reports, etc.) may not be practical to duplicate and include in an evidence file. In those instances, the evidence file should point to the permanent storage location and the contact for review or retrieval.

1. Establish a Readiness file for the startup or restart.
2. Ensure the appropriate documents are added to the Readiness file(s) or are available in a specified location (e.g., Document Management Center) when the documents are finalized and approved.

It is a good practice to develop an Evidence Matrix that lists the anticipated documentation that will serve as evidence that the Prerequisites and Core Requirements have been satisfied. Examples of documents that might appear in this matrix are:

- Approved procedures, system alignment checklists, etc.
- Permits for work (RWP, hot work, etc.)
- Results and evidence of correction of ES&H walkdown items
- Change Request Packages
- Design drawings
- Automated Job Hazard Analysis
- Change evaluation forms
- Completed and approved USQDs
- Engineering Technical Basis/Process Description/Technical Basis Index Summary (TBIS)
- Grading Worksheet Package(s)
- Structures, Systems, and Equipment List/Master Equipment Lists/Configuration Control Equipment Data Sheets (CCEDS)
- Results of pre-operational testing of modified equipment and associated support systems
- List of personnel (names) filling minimum staffing positions

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## **D. Developing the Readiness Files (cont.)**

### **Readiness Leader**

- Training Plans and evidence of Qualification, and/or Certification
- Fire Hazard Analysis (FHA)
- Criticality Safety Evaluation (CSE/CSA/CSR)
- Safety Analysis Report (SAR)/ Technical Safety Requirements (TSR)/Safety Evaluation Report (SER)
- Security Plan(s)
- Drill guides
- Plans and reviews related to the project (e.g., ALARA Plan, Waste Management Plan, Pre-Fire Plan, etc.)
- Lessons Learned/CAPS reviews
- Maintenance Work Order reviews
- Project UCN-21679
- Documentation of any Scope Changes
- Readiness Plan (e.g., closure criteria, checklists, schedule, etc.)
- Plan of Action (POA)
- Implementation Plan for reviews
- Performance Self Assessment (PSA), RA/ORR Final Reports
- Startup Plan (if applicable)
- Level 1 Readiness Assessment Checklist (if applicable)

## **E. Defining and Controlling Changes**

### **Readiness Leader/Project Manager**

**NOTE** During the course of achieving operational readiness, changes in scope can occur.

1. IF a change in scope occurs during the course of achieving operational readiness, THEN perform the following:
  - a. Evaluate impacts to the Review Level criteria and determine required actions.
  - b. Notify the Responsible Manager if scope changes occur.
  - c. Document the evaluation of the change along with required actions and place in the Readiness file.
  - d. Evaluate impacts to the schedule, Readiness Plan, and POA. Notify the Startup/Restart Authority if changes to the POA are required.

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## **E. Defining and Controlling Changes (cont.)**

### **Readiness Leader/Project Manager**

2. Update the schedule and scope, as required.

## **F. Startup Plan**

### **Readiness Leader/Project Manager**

**NOTE** A Startup Plan is required for startups requiring Level 2 RAs or higher. It is also required for Level 1 RAs or Standard Operations Checklist startups if the operation involves multiple non-trivial activities, operation of complex equipment, or operation of non-trivial equipment whose failure could jeopardize safety of personnel, the environment, or the public or result in substantial monetary impact,

1. Prepare a Startup Plan if required per Vol. II, Chapter 1, *Developing a Startup Plan*.

## **G. Scoping Meeting**

### **Readiness Leader**

**NOTE** The Scoping Meeting is only required for startups or restarts where NNSA is the Startup/Restart Authority. When held, the scoping meeting is conducted with representatives of the YSO. The scoping meeting is to occur prior to the development of the final Plan of Action (POA), but it should only be held after the Readiness Plan is approved and provided to YSO.

1. IF NNSA is the Startup/Restart Authority, THEN Convene a Scoping Meeting in accordance with guidance in Appendix 1C, *Scoping Meeting Guidance*.

The Scoping Meeting should:

- Provide early information on the activity.
  - Include a walk down of the ACTIVITY or OPERATION area to ensure the physical scope is well defined and understood.
  - Establish customer expectations and relate to the POA development and status of administrative program implementation.
2. Document the decisions from the Scoping Meeting as a memorandum and place in the evidence files.
  3. Finalize development of POA in accordance with Vol. I, Chapter 6.0, *Drafting a Plan of Action*, upon receipt of Scoping Meeting notes/discussion from NNSA.

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## RECORDS

Records generated as a result of this procedure are maintained in accordance with Y15-101, *Manual for the Management of Records and Controlled Documents* and established retention and disposition schedules in the Approved Comprehensive Records Schedule at <https://home1.y12.doe.gov/scripts/eicms/prod/SMARTMain.cfm>.

## Owner/DMC

The Records generated as a result of this Chapter include:

- UCN-21679 document.

The above record is to be maintained by the applicable DMC for the Organization responsible for the FACILITY in which the startup or restart is occurring. A hard copy and electronic copy of this document must also be provided to the Readiness Assurance Manager.

## SOURCE DOCUMENTS

- Standards/Requirements Identification Document (S/RID) Requirement Unique Identifiers (RUIDs): 10905, 10906, 10907, 10908, 10909, 10910, 10911, 10912, 10913, 10914, 10925, 10926, 10935, 10965, 11594, 11596, 11597, 11598, 11599, and 11601.
- YSO-CRD-03-01, *Start-Up and Restart of Operations, Activities and Facilities at Y-12*

## APPENDICES

Appendix 1A, *Guidance for Developing the Scope Description*

Appendix 1B, *Startup/Restart Authority*

Appendix 1C, *Scoping Meeting Guidance*

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## **APPENDIX 1A**

### **Guidance for Developing the Scope Description**

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Defining the scope of the startup or restart is crucial to ensure success in achieving operational readiness. Line Management is responsible for defining the scope, utilizing the Operational Safety Board (OSB) and members of supporting organizations, as necessary. It is recommended that an individual with startup experience also participate in defining the scope. The scope definition should be facilitated by both workshop reviews with representatives from each of the disciplines involved (including operators and other direct line support), and must include facility walk downs.

Definition of the scope should focus on identification of what is required to perform the operation or activity. This includes restart requirements after process/equipment changes. While not all this information may be known at the beginning, the information should be generated as soon as possible. Identification of actions needed to attain operational readiness will be defined further during the development of the Readiness Plan (only required for Level II RAs and ORRs). Items listed below that are not applicable to the particular startup or restart may be omitted.

The scope of work description of the startup or restart, to include the following:

- Objective of the startup or restart (i.e., product of the work)
- Brief description of the process, facilities, equipment, and systems involved with the operation or activity including support systems
- Facility where the work will be performed
- Facility Hazard Category or Class
- Responsible Organization for the actual production work and Readiness Leader
- Key changes necessary to perform this ACTIVITY or OPERATION (e.g., facility, equipment, DSA/Safety documentation, procedures, personnel, training, facility security plan, etc.)
- Description of the impact of the operation or activity on the facility (e.g., change in facility, characterization, security, etc.)
- Length of shutdown period (for restarts) and reason for shutdown
- Estimated schedule date for actual startup or restart
- Primary systems, equipment, documentation, personnel, and organizational support that must be functioning to conduct the startup or restart by developing a description of the following:
  - Physical boundaries of the operation or activity
    - Vaults
    - Switches

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## APPENDIX 1A

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- Rooms
- Dampers
- Floors
- Administrative boundaries of the operation or activity
  - Procedures
  - Documented Safety Analysis (DSA)
  - Criticality Safety Approval (CSA)/ Criticality Safety Requirement (CSR)
  - Organizations
  - Departments
- Buildings, structures, equipment, and hardware (include tooling and automated controls)
- Changes since previous operation (restarts only)

Conduct and document a walk down which consists of a visual inspection of work area, condition of equipment and tooling, accessibility, lighting, age of facility and equipment, and other pertinent factors which may affect the assessment. Performance of an ES&H Walkdown should be considered at this time to provide early identification of facility safety issues that will need to be resolved to support full operation.

Identify areas and equipment associated with, or supporting the ACTIVITY or OPERATION (e.g., vaults, labs, hoods, cranes, storage racks, movement carts, forklifts, etc.).

Identify personnel directly required for performance of (e.g., having performance, approval, or support responsibilities, etc.) the startup or restart, such as those listed below. Develop a Training Impact Evaluation (TIE) using UCN-21529, *Project/Task Training Impact Evaluation*, to document the anticipated training needs for the involved personnel.

- Operations Production (e.g., Production Managers, Supervisors and Operators, etc.)
- Facility Operations (e.g., Operations Manager, Shift Technical Advisor, Shift Manager, etc.)
- Environmental Health and Safety (IS, IH)
- Radiological Control
- Maintenance (including ET&I)
- Utilities
- Equipment Testing and Inspection (ET&I)
- Nuclear Criticality Safety
- Building tenants
- Security

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## **APPENDIX 1A**

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- Nuclear Material Control and Accountability (NMC&A)
- Environmental and Waste Management
- Quality Assurance
- Fire Protection Engineering
- Emergency Response
- Metrology
- Fire Protection Operations
- Plant Shift Superintendent (PSS )
- Material Management Organization

Document the information listed above and maintain this documentation as a record and include it in the readiness file. The completed UCN-21679 form should be given a unique document number from the applicable DMC and retained as a record in the DMC.



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**APPENDIX 1B**  
**Startup/Restart Authority**  
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1. Startup/Restart Authority for ORRs is determined in accordance with DOE O 425.1 and Memorandum from Linton F. Brooks to Principle Deputy Administrator and Deputy Administrator for Defense Programs, dated April 20, 2005, *Delegation of Authority for Order 425.1C, Startup and Restart of Nuclear Facilities*.
2. The Manager, YSO, will be the Startup/Restart Authority for Level II RAs unless delegated (i.e., via SNR approval) to the Contractor.
3. The Contractor Senior Manager will be the Startup/Restart Authority for Level I (checklist) RAs.

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**APPENDIX 1C**  
**Scoping Meeting Guidance**  
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1. The meeting schedule should be coordinated with the YSO Program Manager.
2. The meeting should occur after the Readiness Plan is provided to NNSA and prior to the development of the final Plan of Action (POA).
3. A summary of the results should be provided to the YSO Assistant Manager for Programs.
4. For startups/restarts that require an ORR, attendance should include Division Managers.
5. The agenda elements should consider the following: personnel, including supporting organization personnel; supporting organization services; site and organization level programs and procedures; documentation; technical baseline; safety basis documentation; safeguards and security basis documentation; and the equipment/facility. The following is an example of a possible agenda:

**PURPOSE:**

Develop a baseline understanding of the scope of the startup or restart including the reviewing and understanding the actions necessary to prepare a startup or restart for operational readiness.

**DISCUSSION:**

*Physical Boundary*

- Buildings, facilities, control rooms, storage locations, handling areas, systems, and equipment that will be used to perform the operation or activity being started.
- Description of how the physical boundary will be defined (e.g., defined by location, isolation valve or breaker, etc.).
- Depending on the complexity, the boundary definition should be in a controlled document (e.g., drawing, project plan, or other boundary definition document, etc.).
- The scoping meeting should include a discussion of physical boundary, and include a walk down of the area for clarification.

*Operational Boundary*

- Operations associated with the startup or restart should be discussed. This should include a description of all the systems, processes involved.
- Discuss how changes affect the startup or restart that is going to be operated.

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## APPENDIX 1C

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- The impact of the startup or restart on currently operational equipment and processes should be discussed. For example, the startup or restart requires the use of HEPA exhaust ventilation, which is currently operational. Does the current exhaust system have the capacity to support the startup or restart? Another example, the startup or restart requires the use of a ventilated hood that is currently operational. Does the hood have adequate alarms and flow to support the operation or activity?
- Operational interfaces with the startup or restart should be discussed (e.g., the sampling points, addition of feed materials, disposition of waste streams, etc.).
- Support systems that are required should be discussed.

#### *Organizational Boundary*

- A complete identification of the organizations required to operate and maintain the startup or restart should be discussed. This will include operational, technical, and functional support organizations including safeguards and security.

#### *Documentation*

- Provide a project plan, checklist, or listing of documents that will be generated, or upgraded as part of the operation or activity. The UCN-21052, *Readiness Activity Checklist*, can serve as a valuable tool in identifying impacted documents.
  - Identify any unique programmatic elements required to support the startup or restart (e.g., source control, hazardous chemicals, security plan, etc.).
6. Other items, not necessarily required for the scoping meeting, but could be discussed.
- Actions that can not be conducted prior to startup or restart operational authorization
  - Surrogate materials to be used for demonstrations
  - Practice evolutions or cold operations
  - Application of previous "Lessons to be Learned." Document these discussions for use in the Lessons Learned review required for the activity or project.