

No: Y15-009INS

Title: *Criteria for Application of the Y-12 Configuration Management Program*

Rev: 06/13/01

This instruction provides the criteria and describes the process for identifying the structures, systems, and equipment that are to be included in the Y-12 Configuration Management Program at the Y-12 National Security Complex in Oak Ridge, Tennessee.

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Management Requirements

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BWXT Y-12
Management Control

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Re-Affirm Date

This document has been reviewed and determined not to require an ADC or UCNI review in accordance with Y19-203INS. This review does not constitute clearance for public release.

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REVISION LOG
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Revision Date	Description of Change	Pages Affected
06/13/01	DM/R-01-CM-01 This is a new instruction written to address the criteria and describe the process for identifying the structures, systems, and equipment that are to be included in the Y-12 Configuration Management Program and are, therefore, subject to grading per Y15-001INS, <i>Grading Criteria for Y-12 Facilities and Systems</i> .	All

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PURPOSE

To provide the criteria and describe the process for identifying the structures, systems, and equipment that are to be included in the Y-12 Configuration Management Program at the Y-12 National Security Complex in Oak Ridge, Tennessee. These structures, systems, and equipment are subject to grading per Y15-001INS, *Grading Criteria for Y-12 Facilities and Systems*

APPLIES TO

All Y-12 organizations that have the following:

- facilities listed in Chapter 1, Appendix D, Table 1, of Y14-001INS, *Conduct of Operations Manual*, and/or
- complex-wide systems listed in Chapter 1, Appendix D, Table 2, of Y14-001INS, *Conduct of Operations Manual*.

This instruction does not apply to those activities defined by an agreement (e.g., memorandum of understanding, memorandum of agreement, work instruction) between the managing and operating contractor and another contractor/tenant at the Y-12 National Security Complex (e.g., Bechtel Jacobs Company, UT-Battelle, Qwest, and City of Oak Ridge)

OTHER DOCUMENTS NEEDED

- Y10-176, *System Equipment and Component Labeling*
- Y14-001INS, *Conduct of Operations Manual*
- Y15-001INS, *Grading Criteria for Y-12 Facilities and Systems*
- Y15-102, *Document Control*
- Y17-69-319INS, *Configuration Control Equipment List*

WHAT TO DO

NOTE 1: Definitions of terms used in this instruction are contained in Appendix A, Acronyms and Definitions.

NOTE 2: Each user of this instruction has the responsibility, in the identification of structures, systems, and equipment, to address the need for review of pertinent classified and Unclassified Controlled Nuclear Information/Unclassified National Security Related Information classification concerns with the classification officer. Each user is responsible for being aware of the classification issues associated with the process and its documentation and is responsible for being aware of guidance pertaining to the protection and handling of classified/ sensitive matter.

NOTE 3: The structures, systems, and equipment identification process will be performed by personnel who (a) understand the design and safety function(s) performed by the structures, systems, and equipment and (b) are knowledgeable of the design, safety, environmental, mission, and other pertinent issues associated with the structures, systems, and equipment.. The system engineer(s) for the structure, system, and/or equipment is responsible for involvement of the appropriate design and technical disciplines in the identification process.

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**WHAT TO DO
(CONT.)**

NOTE 4: The applicable operations manager/system owner (OM/SO) for the structures, systems, and equipment under consideration has the authority to include—in the Y-12 Configuration Management Program—structures, systems, and equipment not required to be in the program to ensure an appropriate level of control.

A. Preparing To Identify Structures, Systems, and Equipment

**System
Engineer(s)/
Operations
Manager/
System Owner**

1. Identify the structures, systems, and equipment to be evaluated for potential inclusion in the Y-12 Configuration Management Program.

**System
Engineer(s)/
Design Authority
Representative(s)
(DARs)**

2. Identify and review the source documents that contain the safety and design requirements and/or other technical information related to design, operation, maintenance, or associated hazard(s) for the structures, systems, and equipment. Examples of source documents include the following:

- safety documents (e.g., Operational Safety Requirements, Basis for Interim Operations, Technical Safety Requirements, Safety Analysis Reports, Criticality Safety Approvals/Evaluations/ Requirements, Hazard Evaluation Reports);
- environmental permits (e.g., Clean Air Act, Clean Water Act, and Resource Conservation and Recovery Act);
- design documents (e.g., drawings, data sheets, specifications, System Design Descriptions, Process Descriptions);
- operating, maintenance, or other procedures that may contain special requirements or information; and
- other documentation that identifies special safety, environmental, or business/mission requirements.

3. Identify the design and technical representatives who are most knowledgeable of the function(s) and functional requirement(s) of the structures, systems, and equipment to be evaluated and who can provide input to the identification process.

B. Developing a List of the Structures, Systems, and Equipment

NOTE: For those organizations that share facilities with a tenant organization, the facility tenant organization develops its own Structures, Systems, and Equipment List.

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B. Developing a List of the Structures, Systems, and Equipment (cont.)

System Engineer

1. Obtain a copy of the Structures, Systems, and Equipment List form (Appendix B, Form UCN-20965) from Just-in-Time (JIT) Forms, which can be accessed from the Y-12 Internal Home Page on the Web.
2. Enter the name of the organization on the Structures, Systems, and Equipment List form.

NOTE: Individual organizations will maintain an index of their Structures, Systems, and Equipment List(s) numbers by facility, building, or location.

3. Obtain a number for the Structures, Systems, and Equipment List from the appropriate document management center (DMC) and enter the number in the appropriate space at the top of the form:

Use the following convention as guidance: SEL-[facility, building, or location]-[organization]. (As examples, "SEL-9720005-AO" would be the number assigned to the Assembly Organization for 9720-5 and "SEL-Complex-FPO" would be the number assigned to the Fire Protection Organization for the Y-12 Complex.)

4. Enter the revision in the appropriate space at the top of the Structures, Systems, and Equipment List (e.g., Rev. A if this is the first issue, Rev. B if this is a revision to Rev. A, etc.).

NOTE: Input for the Structures, Systems, and Equipment List may be obtained by either convening a meeting of the appropriate design and technical discipline representatives for a single identification effort or by obtaining input individually from the design and technical discipline representatives.

5. Solicit input from the appropriate design and technical discipline representatives needed to complete the Structures, Systems, and Equipment List.

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B. Developing a List of the Structures, Systems, and Equipment (cont.)

NOTE: Structures, systems, or equipment that do not meet the criteria to be included in the Y-12 Configuration Management Program will not be included on the Structures, Systems, and Equipment List. These structures, systems, or equipment will default to a grade designation of “cmX” (i.e., not in the Y-12 Configuration Management Program) for purposes of proceduralized processes and activities that require a grade designation.

System Engineer(s), DAR(s), and Appropriate Technical Representative(s)

6. Apply the scoping criteria provided in Appendix C of this instruction to identify the structures, systems, or equipment to be included in the Y-12 Configuration Management Program.

System Engineer(s)

7. IF it is determined that there are no structures, systems, or equipment that meet the criteria to be included in the Y-12 Configuration Management Program, THEN document this on the Structures, Systems, and Equipment List form and GO TO Step C1 of this instruction.

NOTE: The Equipment and Inspection Scheduler (EIS) database has assigned unique identifiers for some structures, systems, and equipment. This is the unique identifier that is to be used on the Structures, Systems, and Equipment List.

8. Enter a unique identification number for each of the structures, systems, and equipment. (Use Y10-176, *System Equipment and Component Labeling*, or some other appropriate unique numbering convention). Enter this unique identification number on Structures, Systems, and Equipment List.

The unique identification number must be consistent with the unique identification number in the source document(s) to ensure traceability to the structures, systems, and equipment.

9. Enter the title/name/description associated with the unique identification number, (e.g., denitrator, kathabar, vacuum arc remelt furnace, etc.) on the Structures, Systems, and Equipment List.

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C. Reviewing, Approving, and Issuing the Structures, Systems, and Equipment List

System Engineer

1. Ensure the Structures, Systems, and Equipment List is complete and technically accurate.

NOTE: The DAR reviews the Structures, Systems, and Equipment List to ensure technical adequacy; proper application of the scoping criteria; the Structures, Systems, and Equipment List is identifiable and traceable to the applicable organization; and the unique identification numbers are correct.

2. Provide the Structures, Systems, and Equipment List to the DAR for review.

3. In no prescribed order, obtain approval signatures on the Structures, Systems, and Equipment List from the following individuals:

- SE(s),
- DAR(s), and
- OM/SO.

NOTE: When a DMC other than the Facility Records and Document Management Center issues a Structures, Systems, and Equipment List, then the Facility Records and Document Management Center must be included on the distribution for a controlled copy of the Structures, Systems, and Equipment List.

4. Submit the approved Structures, Systems, and Equipment List to the appropriate DMC with the controlled distribution indicated in accordance with Y15-102, *Document Control*.

DMC

5. Issue the Structures, Systems, and Equipment List as a controlled document and file the original master copy.

Facility Records and Document Management Center

6. Input data from the Structures, Systems, and Equipment List to the Configuration Control Equipment List database in accordance with Y17-69-319INS, *Configuration Control Equipment List*.

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D. Revising the Structures, Systems, and Equipment List

- System Engineer(s)**
1. WHEN a new Structures, Systems, and Equipment List requires revision due to additions or deletions, THEN
perform the applicable steps in sections B and C of this instruction to revise and reissue the Structures, Systems, and Equipment List.
 2. Highlight, circle, cloud, or otherwise identify the changes (C), additions (A), or deletions (D) to the Structures, Systems, and Equipment List and mark the revisions with a (C), (A), or (D) as appropriate.

RECORDS Structures, Systems, and Equipment Lists, which are controlled documents and are generated as a result of implementing this instruction, are maintained in accordance with BWXT Y-12 document control practices.

SOURCE DOCUMENTS The following Standards/Requirements Identification Documents (S/RIDs) constitute the requirements documents for this instruction: 9661 and 9752.

- APPENDICES**
- A. Acronyms and Definitions
 - B. Sample Structures, Systems, and Equipment List
 - C. Criteria for Determining Structures, Systems, and Equipment To Be Included in the Y-12 Configuration Management Program

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APPENDIX A
Acronyms and Definitions
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ACRONYMS:

DAR	design authority representative
DOE	U.S. Department of Energy
DMC	document management center
EIS	Equipment and Inspection Scheduler
JIT	Just-in-Time [Forms]
OM/SO	operations manager/system owner
SE	system engineer
S/RID	Standards/Requirements Identification Document

Defense-in-Depth—An approach to facility safety based on several layers of protection with successive barriers to prevent the release of hazardous materials to the environment or serious injury to workers. Use of multiple layers of defense is often employed so that no one layer by itself, no matter how good, is solely relied upon. For significant hazards, DOE Orders dictate the determination of primary protective or mitigating features to protect workers, the public, and the environment. These primary features are identified in the safety analysis process as safety class or safety significant structures, systems, and components. Additional features may also be identified as defense in depth. Items relied upon for defense in depth beyond those safety class and safety significant structures, systems, and components should also be controlled in a consistent manner.

Design Authority Representative—An individual assigned by Engineering to represent the design authority for establishing and maintaining the technical basis of a facility or system.

Operations Manager/System Owner—The individual who owns and is responsible for the operation of a facility or system within the defined safety envelope.

Safety Class Structures, Systems, and Components—Structures, systems, and components, including portions of process systems, whose preventive or mitigative function is necessary to limit radioactive hazardous material exposure to the public, as determined from safety analyses.

Safety Significant Structures, Systems, and Components—Structures, systems, and components that are not designated as safety class structures, systems, and components, but whose preventive or mitigative function is a major contributor to defense-in-depth and/or worker safety as determined from safety analyses.

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Safety Significant Structures, Systems, and Components for Non-nuclear Safety—Structures, systems, and components whose preventive or mitigative function is a major contributor to public safety, defense in depth (i.e., prevention of uncontrolled, non-nuclear material releases) and/or worker safety as determined from safety and/or hazard analyses. Safety significant structures, systems, and components for non-nuclear safety are designated for prevention or mitigation of accidents that do not cause or exacerbate nuclear hazards.

System Engineer—An individual (e.g., subject matter expert, facility engineer, process engineer, or technical representative) assigned by the operations manager/system owner to provide technical support for operations, maintenance, and configuration management of a system or process.

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APPENDIX B
Sample Structures, Systems, and Equipment List
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STRUCTURES, SYSTEMS, AND EQUIPMENT LIST

	PAGE	of
ORGANIZATION	NUMBER	REV.
	SEL-	
UNIQUE IDENTIFICATION NO.	TITLE/NAME/DESCRIPTION	
SYSTEM ENGINEER SIGNATURE	DATE	
SYSTEM ENGINEER SIGNATURE	DATE	
DESIGN AUTHORITY REPRESENTATIVE SIGNATURE	DATE	
DESIGN AUTHORITY REPRESENTATIVE SIGNATURE	DATE	
OPERATIONS MANAGER/SYSTEM OWNER SIGNATURE	DATE	
This Structures, Systems, and Equipment List has been reviewed by an Authorized Derivative Classifier and UCNI reviewing official and has been determined to be UNCLASSIFIED and contains no UCNI. This review does not constitute clearance for public release.	AUTHORIZED DERIVATIVE CLASSIFIER/UCNI REVIEWING OFFICIAL SIGNATURE	DATE

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APPENDIX C
Criteria for Determining Structures, Systems, and Equipment
To Be Included in the Y-12 Configuration Management Program
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The list of the structures, systems, and equipment to be included in the Y-12 Configuration Management Program shall include the following:

- Structures, systems, and equipment identified as safety class, safety significant, non-nuclear safety significant, important to safety, or a contributor to defense in depth in a Basis for Interim Operation document, Safety Analysis Report, Safety Evaluation Report, or Hazard Evaluation Report.
- Structures, systems, and equipment for which credit is taken in a Criticality Safety Approval, Requirement, or Evaluation document for Nuclear Criticality Safety.
- Structures, systems, and equipment (i.e., Utilities—Water, Air, Electrical Power, etc.), providing support or their redundant backup, whose failure or failure to function, when required, would prevent a safety class, safety significant, non-nuclear safety significant, important to safety, or contributor to defense in depth SSC from performing its preventative or mitigative safety function(s). *This does not include support structures, systems, or equipment for which it is documented that the safety class, safety significant, non-nuclear safety significant, important to safety, or contributor to defense in depth structures, systems, or equipment fails safe, is provided with redundant backup, or has compensatory measures (i.e., administrative controls) available.*
- Structures, systems, and equipment identified in an environmental permit for which the configuration is controlled by the permit.
- Structures, systems, and equipment (e.g., safeguard and security systems and emergency management structures or systems) whose failure would result in a substantial interruption of programmatic mission as determined by the appropriate operations manager/system owner.
- Structures, systems, and equipment that monitor, detect, or alert workers to accidents identified in a Basis for Interim Operation document, Safety Analysis Report, Safety Evaluation Report, or Hazard Evaluation Report.
- Structures, systems, and equipment of sufficient importance to require the controls provided by the Y-12 Configuration Management Program (as determined by the appropriate operations manager/system owner).