

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 II, Chg. 2, SAFETY ANALYSIS AND REVIEW SYSTEM**
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? LMES LMER ORAU SURA
- Bechtel Jacobs Company
- Other contractors (list by type) Any other covered contractor responsible for the design, operation, decontamination, or decommissioning of ORO nonnuclear facilities.

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: This ORO Chapter is part of the ORO sunset review process. Changes to this Chapter include minor editorial revisions to reflect the current organizational titles of the ORO Project Services Division and Technical Services Division, and to revise and update the DOE and ORO Directives referenced in paragraph 6.
5. **CONTACT POINT:** Jorge Ferrer Nuclear Safety Division, SE-33 576-6638
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 II, Chg. 1, Pages II-1 through II-5 | 03/31/1998 | ORO O Control Form ORO O 420, Chapter II, Chg. 2, Pages II-1 through II-5 | 04/01/1999 04/01/1999 |

*ORO Orders are available on the ORO Directives Management Home Page
[http://www.ornl.gov/doe_oro_dmg/orchklst.htm] within 5-10 working days after receipt of this Control Form.
The ORO Orders will no longer be mailed in printed copy unless you do not have Internet capabilities.*

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

Original signed by

Jennifer H. Cusick, AD-440

Signature Management Analyst, AD-440

04/01/1999

Date

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

Rev. 08/04/1998

U.S. Department of Energy

Oak Ridge Operations

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| ORO O 420 Chapter II Change 2 |
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DATE: 04/01/1999

SUBJECT: SAFETY ANALYSIS AND REVIEW SYSTEM

1. PURPOSE. This Chapter correlates to DOE 5481.1B, SAFETY ANALYSIS AND REVIEW SYSTEM, dated September 23, 1986, by assigning responsibility and accountability and providing administrative guidance to Oak Ridge Operations (ORO) and its contractors for preparation and review of safety analyses for non-nuclear facilities. Nothing in this issuance changes any requirements contained in any DOE Order.
2. CANCELLATION. This Chapter cancels and replaces ORO O 420, Chapter II, Chg. 1, SAFETY ANALYSIS AND REVIEW SYSTEM, dated March 31, 1998.
3. APPLICABILITY.
 - a. The provisions of this Chapter apply to ORO Principal Staff and contractors responsible for the design, operation, decontamination, or decommissioning of ORO nonnuclear facilities, to the extent set forth in their contract.
 - b. The applicability of DOE 5481.1B (and this associated Chapter) was restricted to nonnuclear facilities on issuance of DOE 5480.23, dated April 10, 1992. DOE 5481.1B was canceled by DOE N 251.4, dated September 9, 1995. However, no replacement DOE Directive has yet been issued, and it has been determined that the requirements contained in DOE 5481.1B are necessary to adequately address the Safety Analysis and Review System.
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 5481.1B or this Chapter. Interpretation and performance of Federal responsibilities outlined below must take into account the approved standards set for each particular contract and must not be deemed to add any requirements to the approved set.
 - a. Manager approves Safety Analysis Reports (SAR) and issues the associated Safety Evaluation Reports (SER) for nonnuclear facilities if so delegated by the cognizant Secretarial Officer (CSO) where redelegation to subordinate levels of ORO is not authorized.
 - b. Assistant Managers approve SAR and issue associated SER for nonnuclear facilities where redelegation to subordinate levels of ORO is authorized and/or approved by the CSO and formally documented by the Manager.
 - c. Director, Project Services Division, or Director, Technical Services Division.
 - (1) Assists in the review of Preliminary Safety Analysis Reports (PSAR) and Final Safety Analysis Reports (FSAR) for construction projects related to new or modified facilities

where documentation is required. Provides recommendations to the COR on engineering aspects of the documents.

(2) Maintains the permanent ORO file of pertinent documents related to engineering activities.

d. Director, Nuclear Safety Division.

(1) Conducts independent reviews of nonnuclear SAR and revisions thereto when requested by the Contracting Officer's Representatives (COR). Prepares SER to document the review and findings/recommendations.

(2) Assists in oversight of contractor preparation and review of safety analyses, when requested by the COR. Prepares appropriate documentation of the activity and associated findings/recommendations.

(3) Forwards findings and recommendations to the COR.

e. Contracting Officer's Representatives.

(1) Approve SAR and issue associated SER for nonnuclear facilities where redelegation to subordinate levels of ORO is authorized and/or approved by the CSO and formally documented by the Manager.

(2) Ensure that contractors establish programs, to the extent set forth in their contract, for the preparation, review, and maintenance of new or upgraded safety documentation for nonnuclear ORO facilities. Such programs will be consistent with the requirements of DOE 5481.1B.

(3) Ensure that contractors prepare, to the extent set forth in their contract, appropriate safety documentation for new, existing, or significantly modified nonnuclear ORO facilities.

(4) Ensure auditable, independent review of safety documents for existing, new, or modified facilities.

(5) Forward recommendations to the CSO on safety documentation programs, plans, schedules, and issues.

5. REQUIREMENTS AND PROCEDURES. None.

6. REFERENCES.

a. ORO O 420, CHAPTER V, DELEGATION OF APPROVAL AUTHORITY FOR DOE 5480.21, 5480.22, 5480.23, AND 5481.1B, dated September 30, 1996, and any subsequent revisions.

- b. ORO O 420, CHAPTER VI, NUCLEAR SAFETY ANALYSIS REPORTS, dated September 30, 1996, and any subsequent revisions.
 - c. DOE-EM-STD-5502-94, HAZARD BASELINE DOCUMENTATION, dated August 1994.
 - d. DOE-STD-1120-98, INTEGRATION OF ENVIRONMENT, SAFETY, AND HEALTH INTO FACILITY DISPOSITION ACTIVITIES, dated May 1998.
7. DEFINITIONS. None.
8. CONTRACTOR REQUIREMENTS DOCUMENT. See Contractor Requirements Document, Attachment 1 of this Chapter.
9. ATTACHMENTS.
- Attachment 1 - Contractor Requirements Document.

CONTRACTOR REQUIREMENTS DOCUMENT

Contractors identified in paragraph 3 of this Chapter will accomplish the following, to the extent set forth in their contract:

1. Establish and maintain programs and management systems for the preparation, review, and maintenance of new or upgraded safety documentation for nonnuclear ORO facilities. Such programs will be consistent with the requirements of DOE 5481.1B, DOE 5480.21, and DOE 5480.22, or the requirements from these Orders as contained in the Work Smart Standards documents (WSS documents). Although DOE 5480.23 is applicable only to nuclear facilities that Order should also be used as guidance for nonnuclear facilities.
 - a. Prepare appropriate safety analyses and documents for new and significantly modified facilities and provide for independent internal review of the documents.
 - b. Submit to the COR for approval:
 - (1) PSAR. DOE approval is required before undertaking procurement of materials and components, construction, and preoperational testing.
 - (2) FSAR, Technical Safety Requirements (TSR), and Operational Safety Requirements (OSR). DOE approval is required before facility operation.
 - (3) All changes to DOE-approved TSR and OSR. DOE approval is required before implementation of the changes.
 - (4) Other safety documents (e.g., safety assessments, hazard screenings, system safety analyses, auditable safety analysis, basis for interim operations, unreviewed safety questions, etc.) as determined by the COR.
 - c. Determine if an USQ exists for proposed facility, system, or procedural changes, tests, or experiments. If an USQ exists, prepare appropriate safety analysis and proposed safety documentation revisions and ensure these are approved before implementing the change. If the facility affected by the change has DOE-approved safety documentation, DOE approval of the change and the proposed safety documentation revision is required before implementing the change. Update the FSAR at least annually to incorporate all revisions.
 - d. Maintain records of safety documentation preparation and review, as well as facility changes and their evaluation/disposition.
 - e. Conduct reviews, at least annually, of all facility safety documentation to ensure that existing safety analyses and their conclusions accurately reflect the controls for current facility configuration and operations. For all facilities with DOE-approved safety documentation,

certify annually to the COR that the TSR/OSR accurately reflects the current facility configuration and operation.

2. Establish a program to systematically review and upgrade existing safety documentation with the overall objective of bringing the safety analyses and their documentation into compliance with current DOE requirements or the requirements in the WSS documents. As a minimum, the program will include:
 - a. A plan identifying the overall approach along with key program elements and/or phases. Base prioritization on facility hazard and complexity.
 - b. Major program elements and/or phases are to provide increasingly refined analyses and documentation consistent with facility hazards/risk, complexity, and current knowledge base. Place emphasis on keeping the TSR/OSR up-to-date, consistent with the current facility knowledge base.
 - c. Specific plans and guidance documents defining key elements and/or phases of the program are to include as minimum objectives the organizations and responsibilities, approach/methodologies, and documentation of results.
3. Report all deficiencies in safety documentation that involve USQ in accordance with the requirements of DOE O 232.1 and DOE M 232.1-1 or the requirements in the WSS documents. In addition, notify the cognizant COR. Take action(s) to place the facility in a safe condition until a safety evaluation is completed. Submit the completed safety evaluation to the COR for approval prior to removal of the operating restrictions arising from the deficiency.
4. See ORO O 420, Chapter V, Attachment 1, for additional responsibilities delegated to contractors.
5. Complete all internal review and approval steps (including approval signatures) before submitting safety documentation to DOE.