
INSPECTION PROCEDURE 69008

CLASS I RESEARCH AND TEST REACTOR PROCEDURES

69008-01 INSPECTION OBJECTIVE

To determine if the facility procedures met regulatory requirements, and licensee commitments, since the last inspection.

69008-02 INSPECTION REQUIREMENTS

02.01 Administrative Controls. Determine if the licensee's administrative procedural controls are consistent with the Technical Specifications (TS), the license requirements, and licensee commitments.

02.02 Operating and Maintenance Procedures. Determine if operating and maintenance procedures meet TS requirements and the licensee's administrative controls.

02.03 Adherence to Procedures. Determine if the licensee has implemented its administrative guidance on adherence to procedures.

02.04 Updated Procedures. Determine if the procedures in use by the operator are current, reviewed, and approved as required by the TS and the licensee's administrative controls.

69008-03 INSPECTION GUIDANCE

General Guidance

This inspection procedure focuses on the licensee's administrative controls for procedures and on procedures that guide the operation and maintenance of reactor facilities. Inspection of actual implementation of procedures should be performed under the inspection procedures related to specific topics, e.g., Inspection Procedure 69006 that considers Class I Research and Test Reactors Operations and Maintenance Procedures.

The facility's TS generally specify the activities that are required to have written procedures. Additional commitments and requirements may be found in the SAR and the

SER. Many requirements are specified in licensee written administrative controls. There may be conditions where licensee administrative controls are informal and appear to be inadequate for the task, or where they simply do not exist. In these instances, the inspector should, as generally directed throughout the inspection program, continue to verify licensee activities through performance based inspection observations. If the licensee is performing the function safely and in accordance with the requirements, regardless of the formality or quality of their administrative controls, the inspector should find this acceptable. Problems in procedure implementation should be brought to the attention of appropriate management and the NRR project manager.

Procedures provide an approved method of conducting activities and reduce reliance on memory. Their use minimizes rapid analysis and judgments, which could lead to problems. The level of procedural controls will depend on the type and extent of use of research and test reactor. The licensee should not be required to have the procedure open and follow specific steps sequentially if the activity is being conducted by a qualified operator, and if the specific steps are routine, within the skill of the trade, and can be memorized easily. In these observations the inspector should consider licensee past performance, that is, were activities properly accomplished.

A facility that is used only for routinely repeated functions and has a low operator turnover should have simple, less detailed procedures. A university, using students as part-time operators or conducting rather elaborate experiments, should have more detailed, rigorous procedural controls. Examples of when procedures should be open and in use are:

- a. When a student or trainee is manipulating the controls under the direction of an operator.
- b. When the operation being conducted is non-routine or complicated.
- c. When previous incidents or observations indicate a general weakness in the knowledge of procedures.

General guidance may be found in the ANS/ANSI Section 15 Standards listed in Appendix B to Inspection Procedure 69001, "Class II Research and Test Reactors." Additional general guidance may be found in the Division 2 Regulatory Guides, and the "Other Regulatory Guides of Possible Interest to Division 2 Recipients" listed in the Division 2 Regulatory Guides Table of Contents. The reference to this guidance is to aid the inspector in technical evaluation of licensee activities and is not to be used as requirements on the licensee unless the licensee has committed in writing to the NRC to use the specific guidance document.

The sample sizes and resource estimates suggested in the inspection procedure is provided for broad planning purposes and to define the typical depth of the inspection. It is not intended to be a rigid requirement on the inspector. Actual inspection at any facility may require more or less effort depending on past inspection history, conditions at the facility, and safety significance.

Specific Guidance

03.01 Administrative Controls. The administrative controls may be reviewed in the office if practical, otherwise the inspector should review them during the onsite inspection. The

requirements for administrative controls may be found in the facility-specific TS and the license. Licensee commitments may be found in the SAR, SER, and supporting documentation. If the administrative controls are the same for all of the facility's procedures, the inspection of administrative controls should not be duplicated in other Class I research and test reactor inspection procedures. The licensee's administrative controls should keep procedures current, reviewed, and technically correct to accomplish their intended purpose. Administrative controls may include, but are not limited to, the following:

- a. Operator Responsibilities. The responsibilities listed below should be addressed in the licensee's administrative procedures or guidance.
 1. The operator's and senior operator's responsibility to use written procedures. The TS may require that the licensee provide written procedures for malfunctions, radioactive releases and contaminations, and emergencies. Further, the TS may require that operators use these procedures.
 2. The operator's and senior operator's responsibility to adhere to the TS.
 3. The logging of operating information, including description, date, time and identification of the individual logging the information.
 4. The method of shift turnover.
 5. The operator's responsibility to shut down the reactor when it is felt that the safety of the reactor is in jeopardy.
 6. The operator's responsibility for not returning the reactor to power following a scram or unexplained power reduction without the presence and direction of the senior operator (10 CFR 50.54 (l) and (m)(1)).
 7. The senior operator's responsibility to determine the circumstances, analyze the cause, and correct the fault, before directing the return of the reactor to power after a scram or unexplained power reduction in accordance with the licensee's procedures.
 8. The operator's responsibility to believe instrument indications until indications are proven to be incorrect.
 9. The operator's responsibility to shut down the reactor if the control system does not automatically shut down the reactor when operating parameters exceed the reactor protection set points.
- b. Review and Approval Requirements. If the TS or the licensee's administrative procedures do not describe the requirements for review and approval of procedures, the following method is one of several acceptable alternatives. Before granting final approval, the licensee should review sequentially and walk-through the steps in new procedures and in significant revisions to the existing procedures to test the effectiveness of the procedure to control the operation. Persons

representing applicable disciplines such as nuclear engineering, health physics, instrumentation, or electrical engineering should concur in procedures after performing a detailed review in their areas of specialty. This may simply be the review and approval by the safety review committee and reactor supervisor, and the minutes of the review committee meetings should verify that procedures have been reviewed. Each procedure should be approved by an appropriate member of the facility management, usually the facility director or other designated person. The approval signature and issue date should appear on the procedure.

- c. Temporary Changes to Procedures. Licensee procedures should contain provisions for changing, revising, and updating procedures when deficiencies or discrepancies become apparent while the reactor is operating. The following provides an example of an acceptable way to make changes to procedures. The supervisor may make changes that do not change the intent of the original procedure, if the supervisor is a licensed senior operator and if a note of the change, listing the date and the authorizing personnel, is recorded in the operating log or procedures manual. The operators should be informed of the change. The change should be reviewed by the review committee and approved by the facility director, or other designated person at the earliest convenient time, or deleted when no longer required.

03.02 Operating and Maintenance Procedures. The review of the changes to the TS required, operating and maintenance procedures should provide an acceptable sample for this inspection requirement. Once a procedure is found acceptable, the inspector should review only changes. If available, the inspector should review the procedure changes in the office, otherwise they should be reviewed during the onsite inspection. Procedures may include those for system checkout, start-up, operation, and shutdown.

03.03 Adherence to Procedures. This inspection item can be accomplished during the observation of procedure implementation in Inspection Procedure 69006, "Research and Test Reactors Organization and Operations and Maintenance Activities," or by direct observation and discussions with operators for a reactor start-up. As previously discussed, operators need not have procedures in hand depending on the complexity of and familiarity with the specific procedure. That is, if the operator can acceptably accomplish the activity, the extent of the use of the procedure is irrelevant.

03.04 Updated Procedures. The verification of the procedures used in Section 03.03, above, should provide an acceptable sample for this inspection requirement. The procedures should be up to date, and should comply with review and approval requirements in the licensee's administrative controls.

69008-04 RESOURCE ESTIMATE

For planning purposes, the direct inspection effort to complete this inspection procedure is estimated to be five hours.

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