

Activity Plant System Operations (Power Operations)

1.0 Purpose This guideline provides a method to evaluate the activities during full power operations.

2.0 Scope This guideline has been developed to review and evaluate the following activities during full power operations:

- The use of plant instructions in the control room and the plant.
- Control room activities.
- The plant is operated in full compliance with all licenses and commitments supporting the licenses.
- Equipment manipulations.
- Auxiliary operator actions outside the control room.

Note: It is recommended that an individual with SRO qualifications, or equivalent, perform or assist in the performance of this evaluation.

References

1. INPO Good Practice OP-204, "Conduct of Operations."
2. Regulatory Guide 1.114-1976, "Guidance on Being Operator at the Controls of a Nuclear Power Plant."
3. INPO Report 85-017, "Guidelines for Conduct of Operations at Nuclear Power Stations."

3.0 Guidelines

3.1 In preparation for and during the conduct of this surveillance

- Obtain and review implementing procedures, instructions, and drawings governing this activity.
- Prepare a guide or checklist using the selected items from this guideline.
- Review past surveys, audits, surveillances, and other evaluations/assessments.
- Ensure that checklists include, where applicable, actual observations of performance, general plant conditions, radiological work practices, housekeeping, work document controls and use, and safety practices.

Note: Refer to Chapter 1 for specific details on the attributes listed above.

3.2 Plant Instructions and Administrative Controls

Verify that

- A. Procedures are used and followed as required by plant policy.
- B. Instructions being used are the latest approved issue.
- C. Adherence to applicable technical specifications.

- D. System alignments and master checklists are kept up to date as applicable.
- 3.3 Observe the performance and proper documentation of completion, and verify that the acceptance criteria is met for surveillance procedures required to be completed during the shift.
- 3.4 Observe and verify the following for the operator designated as the operator-at-the-controls:
- A. Operators are attentive and responsive to plant parameters and conditions.
 - B. Equipment status changes are appropriately documented and communicated to appropriate shift personnel.
 - C. The operating conditions of plant equipment are effectively monitored, and appropriate corrective action is initiated when required.
 - D. Personnel entering the at-the-controls area must have the permission of the operator-at-the-controls.
 - E. Only licensed operators are permitted to manipulate the controls that directly affect the reactivity or power level of the reactor except for training purposes. A trainee may manipulate controls only under the *direct* supervision of a licensed operator.
- 3.5 During a tour of the plant verify that
- A. No one performs any action that will affect the operability of a system or component without the permission of the operator or assistant shift engineer.
 - B. Plant operations are carried out by fully qualified operations personnel or trainees under the direct observation of qualified personnel.
 - C. Procedures that are the latest approved issue are used in the plant for nonroutine operations.
 - D. The shift engineer maintains a broad perspective of operational conditions affecting the safety of his assigned unit as a matter of highest priority at all times.
 - E. The shift engineer does not become involved in any single operation that distracts him when multiple operations are required in the control room.
 - F. The shift engineer is responsible for ensuring that a professional atmosphere is maintained in the control room at all times.
 - G. All senior reactor operators, shift engineers/assistant shift engineers, reactor operators, and auxiliary operators on shift are aware of and responsible for the plant status at all times. This includes supervisors being responsible for the performance of all personnel assigned to their shift.
 - H. Potentially distracting activities in the control room and other watchstations are prohibited (e.g., radios, TVs, games, horseplay, hobbies, and reading that is not directly job related).

- I. Briefings are conducted for individuals involved in an evolution that is to be performed. The details of the briefing will be dependent on the evolution's complexity.
- J. Backup instrumentation, measurements, and readings are used as appropriate when normal instrumentation is found to be defective or out of tolerance.
- K. Log keeping is timely, accurate, and adequately reflects plant activity and status.

4.0 Other Guidelines for Consideration

- 4.1 See Chapter 1, "General Quality Surveillance Guidance."
- 4.2 See Chapter 16, "Control Room Quality Surveillance."
- 4.3 See Chapter 16, "Shift Manning, Relief, and Turnover."
- 4.4 See Chapter 16, "Plant System Operations (Planned Shutdown)."