

NRC INSPECTION MANUAL

INSPECTION PROCEDURE 72564

PRECITICAL TEST PROCEDURE REVIEW (PROTECTIVE TRIP CIRCUIT OR ROD DROP MEASUREMENT)

PROGRAM APPLICABILITY:

72564-01 INSPECTION OBJECTIVE

Ascertain whether one of the identified tests is consistent with regulatory requirements, guidance, license commitments, and technical specifications.

72564-02 INSPECTION REQUIREMENTS

02.01 Rod Drop Time Measurements (Group A). If Group A procedures are selected for review, the inspector shall:

- a. Review the FSAR, DL Safety Evaluation Report, and docketed letters from the licensee and verify that the testing commitments have been included.
- b. Verify standard procedures review requirements are met as defined in Procedure 72300.
- c. Verify that the procedure contains acceptance criteria as follows:
 - (1) Drop time is specified per technical specifications.
 - (2) Part length rods tested and do not drop.
 - (3) Proper operation of control rod decelerating devices.
- d. Confirm that initial conditions include:
 - (1) Head on, rods vented.
 - (2) CRD mechanical tests previously completed.
 - (3) Rod position indicator previously tested.
 - (4) Reactor protective system in service.

e. Test conditions (each rod) should include:

(1) no flow cold

- (2) full flow cold
- (3) no flow, hot zero power
- (4) full flow, hot zero power
- (5) minimum retest requirements

02.02 Reactor Protection Trip Circuit and Manual Scram (Group B). If Group B procedures are selected for review, the inspector shall:

- a. Review the FSAR, DL Safety Evaluation Report, and docketed letters from the licensee and verify that the testing commitments have been included.
- b. Verify standard procedures review requirements are met as defined in Procedure 72300.
- c. Verify that the procedure contains acceptance criteria as follows:
 - (1) Demonstrated design protection functions for all design modes
 - (2) Manual scram demonstrated.
 - (3) Trip settings verified.
- d. Precautions should include:
 - (1) All jumper connections properly logged for tests, and removed and logged following tests.
 - (2) Assurance that instrumentation and protection circuits have been energized at least the minimum time for warmup (if appropriate).
- e. Initial conditions should specify:
 - (1) All instrumentation calibrated.
 - (2) RPS system operational.
- f. Test conditions should provide that:
 - (1) All reactor protective system controller circuitry interlocks are checked.
 - (2) All trip logic is verified in all logic paths.
 - (3) A manual scram trip of each channel and of both channels is performed.

72564-03 INSPECTION GUIDANCE

- 1.e. Guidance is provided in R.G. 1.68, Revision 2, Appendix A, Paragraph 2.b.
- 1.e For each test condition, those control rods whose scram times
(5) fall outside the two-sigma limit of the scram time data for all control rods should be retested at least 3 times to reasonably ensure proper performance during subsequent plant operations.
- 2. Guidance is provided in R.G. 1.68, Revision 2, Appendix A, Paragraph 1.c., "Reactor Protection System and Engineered Safety-Feature Actuation Systems," and Paragraph 2, "Initial Loading and Precritical Tests."
- 2.f. The mode of testing should be in accordance with licensee commitments (e.g., full channel check or tested in stages with specified overlap).

END