

NRC INSPECTION MANUAL

INSPECTION PROCEDURE 70325

PREOPERATIONAL TEST RESULTS EVALUATION - REACTOR PROTECTION SYSTEM

PROGRAM APPLICABILITY:

70325-01 INSPECTION OBJECTIVES

- 01.01 Assure that test results are being adequately evaluated.
- 01.02 Assure test data meets acceptance criteria, and that deviations are properly identified and resolved.
- 01.03 Verify that the review procedures are being followed.
- 01.04 Evaluate the adequacy of the licensee's administrative practices with respect to test execution and data evaluation.

70325-02 INSPECTION REQUIREMENTS

The inspector shall:

- 02.01 Review Regulatory Guide 1.68 and FSAR to determine licensee commitments;
- 02.02 Review the Reactor Protection System Test results per inspection procedure MC 70400.

70325-03 INSPECTION GUIDANCE

03.01 The inspector should review the test requirements and licensee commitments related to this test. In addition to Regulatory Guide 1.68 and the FSAR, this may include a review of the TS, SER and docketed correspondence with the licensee.

- 03.02 Items which should be included in the evaluation of test result data include (but are not limited to):
- a. A test verified that each protection sensor is calibrated and the channel trips are properly set, including TIP calibration system.
 - b. A test verifies that each combination of required channel trips will scram the reactor. All possible combinations of logic should be checked during the testing.

- c. The breaker test should demonstrate that those protection systems which have two or more methods of tripping a scram breaker do function in all possible combination for each trip mode.
- d. Scram valve operational test.
- e. A test verifies that a scram occurs on loss of electrical power and on instrument air if applicable (most plants can be safely controlled and shutdown under controlled conditions upon loss of instrument air - review instrument air test to confirm requirements for loss of instrument air).
- f. Integrated test.
- g. Support and auxiliary systems are functional as required.
- h. Verify that the standard test results and review requirements are met.
- i. Results of reactor vessel high pressure, low water level and discharge volume high water level.
- j. The inspector should observe one of the following tests and 10% of the data for the test:
 - (a) Containment high pressure
 - (b) Condenser low vacuum
 - (c) Main steam line high radiation and main steam isolation valve closure.
 - (d) Reactor manual scram (scram button should be depressed for short time period only).
- k. Reactor Protection System (RPS) Scram relays test (purpose of these tests is to prove that by de-energizing the scram relays in the proper logic, the reactor will be scrammed).
- l. RPS auxiliary functions test.
- m. RPS Response Time Test (purpose of this test is to measure the system response time from trip to rods inserted to various percentages (examples: 10%, 25%, 50%, 75%, and 90% - measurements may be taken at only one or two of these points).

END