NRC INSPECTION MANUAL

INSPECTION PROCEDURE 72576

POWER ASCENSION TEST PROCEDURE REVIEW
(NATURAL CIRCULATION OR POWER REACTIVITY COEFFICIENT MEASUREMENT)

PROGRAM APPLICABILITY:

72576-01 INSPECTION OBJECTIVE

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

72576-02 INSPECTION REQUIREMENT

02.01 Natural Circulation Test (Group A). If the licensee does not plan to perform a natural circulation test, review the Power Reactivity Coefficient Evaluation (Group B). 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 which demonstrate the ability of the primary coolant system to provide adequate core heat removal by natural circulation.

d. Assure that precautions include the following primary and secondary system limits.

   (1) Steam generator maximum pressure.

   (2) Pressurizer maximum pressure.

   (3) Core outlet temperature.

   (4) Pressurizer spray must be provided from the auxiliary spray.

   (5) Minimum Boron concentration.

e. Verify that initial conditions include hot shutdown from a steady state power operation sufficient to generate measurable decay heat for at least two hours.

f. Confirm that test conditions include:

(1) Steam generator levels maintained by at least one feed pump or auxiliary feed pump.

(2) Core outlet temperatures monitored to satisfy acceptance criteria.

(3) All primary coolant pumps tripped and allowed to coast to a complete stop.

(4) Data recorded for main steam pressure, steam bypass valve position, feedwater flow, steam generator level, and primary coolant temperatures (hot leg and cold leg for each loop). Record data for at least one hour.

(5) Examination of data for any unusual equipment performance.

(6) Assurance that acceptance criteria are met.

(7) Restoration of the plant to normal operation using normal facility procedures.

02.02 Power Reactivity Coefficient Evaluation (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 described in Procedure 72300.

c. Verify that the procedure contains acceptance criteria for the comparison of test data with calculated data.

d. Verify that initial conditions specify steady state power level at the planned test plateau.

e. Confirm that test conditions include:

(1) 25, 50, 75, and 100% powers

(2) Operation at specified power levels to permit stabilized temperatures, rod bank positions and Boron concentration to evaluate reactivity vs. reactor power.

72576-03 INSPECTION GUIDANCE

General: Testing requirements for these tests should be compared with applicable provisions of Regulatory Guide 1.68, and with the test program description in the FSAR.

2. MC Module 61709, "Power Coefficient of Reactivity" may be used concurrently or as reference in procedure review.

END