

# NRC INSPECTION MANUAL

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INSPECTION PROCEDURE 72514

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## STARTUP TEST PROCEDURE REVIEW: TURBINE TRIP/GENERATOR TRIP

### PROGRAM APPLICABILITY:

#### 72514-01 INSPECTION OBJECTIVE

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

#### 72514-02 INSPECTION REQUIREMENTS

##### BWR Power Ascension Testing Procedure Review (Turbine Trip Generator Trip)

02.01 Turbine Trip (100%) (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. Reactor pressure remains below the setpoint of the first safety valves
  2. Feedwater system settings must prevent flooding of the steam lines during the transient
  3. Plants with 100% bypass capability shall remain at power without scram during the transient
  4. Plants with select-rod-insertion shall maintain power without scram from recirculation pump overspeed or cold feedwater effect.

5. No safety valve weeping shall occur
6. Feedwater control adjustments should prevent low level initiation of ECCS and MSIV isolation during the transient.
7. Reactor protection system functions should be verified.

- d. Initial conditions should include:
  - 1. Trip from steady-state operation (> 95% power)
  - 2. Recirculation system flow control mode must be specified
- e. Test conditions should specify:
  - 1. Steady-state conditions
  - 2. Methods of recording data during transient operation and until steady-state conditions are achieved
  - 3. Initiation of test by stop valve trip.
  - 4. Verification that acceptance criteria have been met
  - 5. Examination of data for any unusual equipment performance
  - 6. Restoration of plant to normal operating conditions using facility operating procedures
- f. Verify that precautions provide crew assignments to perform necessary manual functions to maintain safe plant limits, including stationing personnel at major pipe locations to observe and report unacceptable vibrations during transients.

02.02 Generator Trip (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. Reactor pressure remains below the first safety valve setting
  - 2. All safety and ECCS systems such as RPS, HPCI, diesel generators, and RCIC function without manual assistance if called upon.
  - 3. Normal reactor cooling systems should maintain adequate cooling and prevent actuation of automatic depressurization system, even though relief valves may function to control pressure.
  - 4. Acceptance criteria for generator overspeed.
- d. Verify that initial conditions include:
  - 1. Steady-state power operation (> 95% power)

2. Recirculation system flow control mode
- e. Test conditions should include:
1. Recording of data during the transient
  2. Initiation of test by trip of the main generator output breaker
  3. Verification that the initial operating plant loads are in the final expected load condition.
  4. Assurance that acceptance criteria have been met
  5. Examination of data for any unusual equipment performance
  6. Restoration of plant to normal using facility operating procedures
- f. Verify that precautions provide crew assignments to perform necessary manual functions to maintain safe plant limits, including stationing personnel at major pipe locations to observe and report unacceptable vibrations during transients.

72514-03 INSPECTION GUIDANCE

Guidance is provided in R.G. 1.68, Revision 2, Appendix A, Paragraph 5.11 and Paragraph 5.nn; Appendix B; and Appendix C.

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