

# NRC INSPECTION MANUAL

DQASIP

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## INSPECTION PROCEDURE 70362

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### REACTOR COOLANT SYSTEM HYDROSTATIC TEST PROCEDURE REVIEW

PROGRAM APPLICABILITY: 2513

#### 70362-01 INSPECTION OBJECTIVE

01.01 Ensure that the test procedure is technically adequate.

01.02 Ensure that the described test is consistent with regulatory requirements, guidance, and licensee commitments.

#### 70362-02 INSPECTION AND REQUIREMENTS

02.01 Obtain an approved copy of the test procedure(s) before the date scheduled for the test.

02.02 Review the test procedure(s) in accordance with IP 70300.

02.03 Review applicable portions of the FSAR, docketed licensee letters, and the plant's NRR Safety Evaluation Report and verify that testing commitments relating to the subject being tested are met.

02.04 Determine that the test procedure(s) includes the following:

- a. The system boundary includes all pressure vessels, piping, pumps, and valves which are part of the reactor coolant system, or connected to the reactor coolant system, up to and including:
  1. The outermost containment isolation valve in system piping that penetrates primary reactor containment.
  2. The second of two valves normally closed during normal reactor operation in system piping that does not penetrate primary reactor containment.
  3. The reactor coolant system safety and relief valves.
- b. The system is vented during the filling operation.
- c. Water quality is specified as required by the latest vendor or other specifications for the temperatures to be present during the test.

- d. Reactor coolant temperature requirements are stated to ensure that primary components are maintained above the nil ductility transition temperature.
- e. The minimum hydrostatic test pressure is 1.25 times the lowest design pressure of any component within the test boundaries protected by the overpressure devices which satisfy the requirements of NB-7000.
- f. The maximum hydrostatic test pressure is less than the limits specified by ASME Boiler and Pressure Vessel Code, Section III, Division 1, Subsection NB-3226.
- g. The hydrostatic test pressure is maintained for a minimum of 10 minutes before initiation of the examination for leakage.
- h. The examination for leakage includes all joints, connections, and regions of high stress, such as regions around openings and thickness transition sections. This examination shall be at a pressure equal to the design pressure or three-fourths of the test pressure, whichever is greater.
- i. The examination of pumps and valves shall be at test pressure.

#### 70362-03 INSPECTION GUIDANCE<sup>1</sup>

03.04a The pressure test may be performed progressively on erected portions of the system. Systems which are open ended, such as spray systems, may be pressure tested with the nozzle attachment opening plugged. The spray nozzles and their attachment weld joints or mechanical joints need not be pressure tested.

#### 70362-04 REFERENCES

10 CFR 50.2 (V)

R.G. 1.68, Revision 2 (August 1978), Appendix A

ASME Boiler and Pressure Vessel Code, Section III, Division 1, Subsection NB

Vendor Precautions, Limitations, and Setpoints (PLS) document.

END

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<sup>1</sup> The digit following the "03" number in this section refers to the equivalent digit following the "02" number in Section 70362-02, "Inspection Requirements." Section 03.04a offers specific guidance for Section 02.04a.