4.2 REACTOR COOLANT SYSTEM INSERVICE INSPECTION

Applicability

This technical specification applies to the inservice inspection of the reactor coolant system pressure boundary and portions of other safety oriented system pressure boundaries.

Objective

The objective of this inservice inspection program is to provide assurance of the continuing integrity of the reactor coolant system while at the same time minimizing radiation exposure to personnel in the performance of inservice inspections.

Specification

4.2.1 Inservice Inspection of ASME Code Class 1, Class 2, and Class 3 components shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(g), except where specific written relief has been granted by the NRC.

4.2.2 The reactor vessel material surveillance capsules removed from TMI-1 during 1976 shall be inserted, irradiated in and withdrawn from Crystal River Unit No. 3 (CR-3) in accordance with the schedule shown in Table 4.2-2. (The insertion/withdrawal schedule shown in Table 4.2-2 may be revised at a later date pending the restart of TMI-2.) The licensee shall be responsible for the examination of these specimens and for submission of reports of test results in accordance with 10 CFR 50, Appendix H.

4.2.3 The accessible portions of one reactor coolant pump motor flywheel assembly will be ultrasonically inspected within 3-1/3 years, two within 6-2/3 years, and all four by the end of the 10 year inspection interval. However, the U.T. procedure is developmental and will be used only to the extent that it is shown to be meaningful. The extent of coverage will be limited to those areas of the flywheel which are accessible without motor disassembly, i.e., can be reached through the access ports. Also, if radiation levels at the lower access ports are prohibitive, only the upper access ports will be used.

4.2.4 The licensee shall submit a report or application for license amendment to the NRC within 90 days after any time that Crystal River Unit No. 3 fails to maintain a cumulative reactor utilization factor of at least 65%.

The report shall provide justification for continued operation of TMI-1 with the reactor vessel surveillance program conducted at Crystal River Unit No. 3, or the application for license amendment shall propose an alternate program for conduct of the TMI-1 reactor vessel surveillance program.

For the purpose of this technical specification, the definition of commercial operation is that given in Regulatory Guide 1.16, Revision 4. The definition of cumulative reactor utilization factor is:

> Cumulative reactor utilization factor - (Cumulative megawatt hours (thermal) since attainment of commercial operation at 100% power x (100)) divided by (licensed power (MWt) x (Cumulative hours since attainment of commercial operation at 100% power)).

4.2.5 In addition to the reports required by Specification 4.2.4, a report shall be submitted to the NRC prior to September 1, 1982, which summarizes the first five years of operating experience with the TMI-1 integrated surveillance program performed at a host reactor. If, at the time of submission of this report, it is desired to continue the surveillance program at a host reactor, such continuation shall be justified on the basis of the attained operating experience.

Bases

a. Specifications 4.2.1 & 2 ensure that inservice inspection of ASME Code Class 1, 2 and 3 components will be performed in accordance with a periodically updated version of Section XI of the ASME Boiler and Pressure Vessel Code and Addenda as required by 10 CFR 50.55a(g). Relief from any of the above requirements has been provided in writing by the NRC and is not a part of these technical specifications.

b. Because of damage to the surveillance capsule holder tubes originally installed in TMI-1, irradiation of the TMI-1 capsules was to be conducted in TMI-2 pursuant to 10 CFR 50, Appendix H, Section II.C.4. One of the five remaining TMI-1 capsules (Capsule E had been withdrawn and tested earlier) was installed in a holder tube in the TMI-2 reactor at the initial startup of TMI-2. The other four capsules were scheduled for later insertions. However, due to the TMI-2 Incident, Unit 2 may be out of operation for a considerably longer period of time than will be TMI-1. So that TMI-1 will have an ongoing surveillance program, a TMI-1 capsule will be inserted into a holder tube in the Crystal River Unit 3 (CR-3) reactor. Because similarities exist between TMI-1 and CR-3, appropriate adjustments and margins can be imposed to the surveillance capsule irradiation in CR-3 to account for such differences that may exist in the irradiation exposure of the TMI-1 reactor vessel and the surveillance capsule.

The withdrawal schedule has been formulated to optimize the availability of irradiation data from all the capsules being irradiated in the CR-3 reactor.

Because the irradiation program is dependent upon the successful operation and a reasonable utilization of CR-3, reporting requirements are included to permit re-evaluation of the program if CR-3 suffers extended outages.