

- (d) The tubes examined in a given steam generator during the first examination of any inservice inspection shall include all non-plugged tubes in that steam generator that from prior examination were degraded, plus additional tubes are required to satisfy the minimum sample size specified in Table 4.2-2. If any selected tube does not permit passage of the eddy current probe for a tube inspection, this shall be recorded and an adjacent tube shall be selected and subjected to a tube inspection. This information shall be included in the report required by Specification 4.2.1.3.2.
- (e) During the second and third sample examinations of any inservice inspection, the tube inspection may be limited to those sections of the tube lengths where imperfections were detected during the prior examination.
- (f) During subsequent inservice inspections, the tube inspection may be limited to certain areas of the tube sheet array and those sections of the tube lengths where imperfections were detected during previous inservice inspections.

4.2.1.1.3 Examination Method and Requirements

Steam generator tubes shall be examined in accordance with the method prescribed in Appendix IV, "Eddy Current Examination of Non-Ferromagnetic Steam Generator Heat Exchanger Tubes," as contained in ASME Boiler and Pressure Vessel Code - Section XI- "Inservice Inspection of Nuclear Power Plant Components."

4.2.1.1.4 Inspection Intervals

- (a) Inservice inspections shall not be more than 24 calendar months apart, except that reduced or tightened inspection intervals shall be governed as specified in 4.2.1.4(c) and (d).
- (b) The inservice inspections may be scheduled to be coincident with refueling outages or any plant shutdown, provided the inspection intervals of 4.2.1.1.4(a), (c) or (d), as applicable, are not exceeded.
- (c) If two consecutive inservice inspections covering a time span of at least 12 months yield results that fall in C-1 category, the inspection frequency may be extended to 40 month intervals between inspections.
- (d) If the results of the inservice inspection of steam generator tubing conducted in accordance with Table 4.2-2 at 40 month intervals fall in category C-3, the inspection frequency shall be reduced to at least once per 20 months. The increase in inspection frequency shall apply until a subsequent inspection meets the conditions specified in 4.2.1.1.4(c) and the interval can be extended to a 40 month period.

2. The complete results of the steam generator tube inservice inspection shall be included in the Operating Report for the period in which the inspection was completed.

Reports shall include:

- (a) Number and extent of tubes inspected
 - (b) Location and percent of wall thickness penetration for each eddy current indication and any leaks.
 - (c) Identification of tubes plugged.
3. All results in Category C-3 of Table 4.2.2 shall be reported to the Commission as a prompt notification of Specification 6.9.2.a prior to resumption of plant operation. The written follow-up shall provide a description of investigations conducted to determine cause of the tube degradation and corrective measures taken to prevent recurrence.

Basis:

The inspection program is in compliance with Section XI of the ASME Rules for In-service Inspection of Nuclear Power Plant Components. It should be recognized that examinations in certain areas are desirable but impractical due to the state-of-the-art. The areas indicated for inspection represent those of representative stress levels and therefore will serve to indicate potential problems before significant flaws develop there or in other areas. As more experience is gained in operation of pressurized water reactors, the time schedule and location of inspection may be altered or, should new equipment and/or techniques be developed, consideration may be given to incorporate these into this inspection program.

The use of conventional nondestructive, direct visual and remote visual test techniques can be applied to the inspection of most primary loop components except the reactor vessel. The reactor vessel presents special problems because of the radiation levels and the requirement for remote underwater accessibility to this component. Because of these limitations on access to the reactor vessel, several steps⁽¹⁾ have been incorporated into the design and manufacturing procedures in preparation for nondestructive test techniques which may be available in the future.

The techniques used for in-service inspection include visual inspections, ultrasonic, radiographic, magnetic particle and dye penetrant testing of selected parts during refueling periods.

The primary pressure boundary class 1 components covered by this inspection will include the primary reactor coolant system and branch lines greater than 1" from the reactor coolant system to the second design isolation valve. Credit is taken in the design of this plant for check valves.