4.17 STEAM GENERATOR TUBING SURVEILLANCE

Applicability

Applies to the surveillance of tubing of each steam generator.

Objective

To ensure integrity of the steam generator tubing through a defined inservice surveillance program, and to minimize exposure of personnel to radiation during performance of the surveillance program.

Specification

4.17.1 Examination Methods

Inservice inspection of steam generator tubing shall include non-destructive examination by eddy-current testing or other equivalent techniques. The inspection equipment shall provide a sensitivity that will detect defects with a penetration of 20 percent or more of the minimum allowable as-manufactured tube wall thickness.

4.17.2 Acceptance Criteria

The steam generator shall be considered operable after completion of the specified actions. All tubes examined exceeding the repair limit shall be repaired by sleeving or rerolling or removed from service (e.g., plugged, stabilized).

For Units 1 and 3, there are a number of steam generator tubes which exceed the tube repair limit as a result of tube end anomalies. These tubes will be repaired in the next Unit 1 and Unit 3 refueling outages (Unit 1 EOC 18, and Unit 3 EOC 17 refueling outages, respectively). An analysis has been performed which confirms that operability of Units 1 and 3 will not be impacted with these tubes in service until the next refueling outage on each of these units.

4.17.3 Selection and Testing

The steam generator tube minimum sample size, inspection result classification, and the corresponding action required shall be as specified in Table 4.17.1. The inservice inspection of steam generator tubes shall be performed at the frequencies specified in Specification 4.17.4 and the inspected tubes shall be verified acceptable per Specification 4.17.5. The tubes selected for each inservice inspection shall include at least 3% of the total number of tubes in both steam generators, with one or both steam generators being inspected. The tubes selected for these inspections shall be selected on a random basis except:

a. The first sample inspection during each inservice inspection of each steam generator shall include:

   1. All tubes that previously had detectable wall penetrations (>20%) and have not been plugged or sleeve repaired in the affected area.

   2. At least 50% of the tubes inspected shall be in those areas where experience has indicated potential problems.

   3. A tube adjacent to any selected tube which does not permit passage of the eddy current probe for tube inspection.

Amendment No. ____ (Unit 1)
Amendment No. ____ (Unit 2)
Amendment No. ____ (Unit 3)