

ATTACHMENT 2

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REACTOR COOLANT SYSTEM

SURVEILLANCE REQUIREMENTS (Continued)

or specifications. Eddy-current testing indications below 20% of the nominal tube wall thickness, if detectable, may be considered as imperfections.

3. Degradation means a service-induced cracking, wastage, wear, or general corrosion occurring on either inside or outside of a tube.
 4. Degraded Tube means a tube containing imperfections $\geq 20\%$ of the nominal wall thickness caused by degradation except where all such degradation has been spanned by the installation of a sleeve.
 5. % Degradation means the percentage of the tube wall thickness affected or removed by degradation.
 6. Defect means an imperfection of such severity that it exceeds the plugging/sleeving limit except where the imperfection has been spanned by the installation of a sleeve. A tube containing a defect in its pressure boundary is defective. Any tube which does not permit the passage of the eddy-current inspection probe shall be deemed a defective tube.
 7. Plugging/Sleeving Limit means the imperfection depth at or beyond which the tube shall be restored to serviceability by the installation of a sleeve or removed from service because it may become unserviceable prior to the next inspection and is equal to 40% of the nominal tube or sleeve wall thickness. No more than five thousand sleeves may be installed in each steam generator.
 8. Unserviceable describes the condition of a tube if it leaks or contains a defect large enough to affect its structural integrity in the event of an Operating Basis Earthquake, a loss-of-coolant accident, or a steam line or feedwater line break as specified in 4.4.5.3.c, above.
 9. Tube Inspection means an inspection of the entire steam generator tube as far as possible.
- b. The steam generator shall be determined OPERABLE after completing the corresponding actions (plug or sleeve all tubes exceeding the plugging/sleeving limit and all tubes containing through-wall cracks) required by Table 4.4-2 (and Table 4.4-6, if the provisions of Specification 4.4.5.2.d are utilized). Defective tubes may be repaired in accordance with the B&W process (or method) equivalent to the method described in report BAW-2120P.

4.4.5.5 Reports

- a. Following each inservice inspection of steam generator tubes, the number of tubes plugged and tubes sleeved in each steam generator shall be reported to the Commission within 15 days.

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system and the secondary coolant system (primary-to-secondary leakage = 1 GPM). Cracks having a primary-to-secondary leakage less than this limit during operation will have an adequate margin of safety to withstand the loads imposed during normal operation and by postulated accidents. Operating plants have demonstrated that primary-to-secondary leakage of 1 GPM can be detected by monitoring the secondary coolant. Leakage in excess of this limit will require plant shutdown and an unscheduled inspection, during which the leaking tubes will be located and plugged.

Operational experience has shown that tube defects can be the result of unique operating conditions and/or physical arrangements in specific limited areas of the steam generators (for example, tubes adjacent to the open inspection lane or tubes whose 15th tube support plate hole is not broached but drilled). A full inspection of all of the tubes in such specific limited areas will provide complete assurance that degraded or defective tubes in these areas are detected. Because no credit is taken for these distinctive tubes in the constitution of the first sample or its results, the requirements for the first sample are unchanged. This requirement is essentially equivalent to and meets the intent of the requirements set forth in Regulatory Guide 1.83, "Inservice Inspection of Pressurized Water Reactor Steam Generator Tubes", Rev. 1, July 1975, and does not reduce the margin of safety provided by those requirements.

Wastage-type defects are unlikely with proper chemistry treatment of the secondary coolant. However, even if a defect should develop in service, it will be found during scheduled inservice steam generator tube examinations. Plugging or sleeving will be required for all tubes with imperfections exceeding the plugging/sleeving limit of 40% of the nominal tube or sleeve wall thickness. Steam generator tube inspections of operating plants have demonstrated the capability to reliably detect degradation that has penetrated 20% of the original tube wall thickness. For examination of the sleeved steam generator tubing at the lower sleeve end, the indications will be compared to those obtained during the baseline sleeved tube inspection. Significant deviations between these indications will be considered sufficient evidence to warrant designation as a degraded tube. Defective tubes may be repaired in accordance with the B&W process (or method) equivalent to the method described in report BAW-2120P.

Whenever the results of any steam generator tubing inservice inspection fall into Category C-3, these results will be promptly reported to the Commission pursuant to Specification 6.9.1 prior to resumption of plant operation. Such cases will be considered by the Commission on a case-by-case basis and may result in a requirement for analysis, laboratory examinations, tests, additional eddy-current inspection, and revision of the Technical Specifications, if necessary.

The steam generator water level limits are consistent with the initial condition assumptions in the FSAR. The maximum steam generator level, as a function of steam superheat, is sufficient to assure a mass inventory of less than or equal to 62,600 lbm in the event of a main steam line rupture.