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# 5.5.9.2 <u>Steam Generator Tube Sample Selection and Inspection</u> (continued)

- 1. The tubes selected for these samples include the tubes from those areas of the tube sheet array where tubes with imperfections were previously found.
- 2. The inspections include those portions of the tubes where imperfections were previously found.

The results of each sample inspection shall be classified into one of the following three categories:

Category	Inspection Results
C-1	Less than 5% of the total tubes inspected are degraded tubes and none of the inspected tubes are defective.
C-2	One or more tubes, but not more than 1% of the total tubes inspected are defective, or between 5% and 10% of the total tubes inspected are degraded tubes.
C-3	More than 10% of the total tubes inspected are degraded tubes or more than 1% of the inspected tubes are defective.

Note: In all inspections, previously degraded tubes must exhibit significant (greater than 10%) further wall penetrations to be included in the above percentage calculations.

# 5.5.9.3 Inspection Frequencies

The above required inservice inspections of steam generator tubes shall be performed at the following frequencies:

a. The first inservice inspection shall be performed after 6
 Effective Full Power Months but within 24 calendar months of
 initial criticality. Subsequent inservice inspections shall be
 performed at intervals of not less than 12 nor more than 24
 calendar months after the previous inspection. If two
 consecutive inspections following service under AVT
 conditions, not including the preservice inspection, result in all
 inspection results falling into the C-1 category or if two
 consecutive inspections demonstrate that previously observed
 degradation has not continued and no additional degradation has
 occurred, the inspection interval may be extended to a maximum
 of once per 40 months. [An exception to this Extension Criteria is

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# 5.5.9.3 <u>Inspection Frequencies</u> (continued)

that for Farley Unit 1 only, a one-time inspection interval extension of a maximum of once per 40 months is allowed for the inspection performed immediately after the Farley 1 1R17 inspection. This is an exception to the Extension Criteria in that the inspection interval is based on the result of only one inspection result falling into the C-1 category.]

- b. If the results of the inservice inspection of a steam generator conducted in accordance with Table 5.5.9-2 at 40 month intervals fall in Category C-3, the inspection frequency shall be increased to at least once per 20 months. The increase in inspection frequency shall apply until the subsequent inspections satisfy the criteria of Specification 5.5.9.3.a; the interval may then be extended to a maximum of once per 40 months.
- c. Additional, unscheduled inservice inspections shall be performed on each steam generator in accordance with the first sample inspection specified in Table 5.5.9-2 during the shutdown subsequent to any of the following conditions:
  - 1. Primary-to-secondary tube leaks (not including leaks originating from tube-to-tubesheet welds) in excess of the limits of Specification 3.4.13.
  - 2. A seismic occurrence greater than the Operating Basis Earthquake.
  - 3. A loss-of-coolant accident requiring actuation of the engineered safeguards.
  - 4. A main steam line or feedwater line break.

# 5.5.9.4 Acceptance Criteria

- a. As used in this Specification:
  - 1. <u>Imperfection</u> means an exception to the dimensions, finish or contour of a tube from that required by fabrication drawings or specifications. Eddy-current testing indications below 20% of the nominal wall thickness, if detectable, may be considered as imperfections.

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5.5.9.4	Acceptance Criteria	(continued)
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- 2. <u>Degradation</u> means a service-induced cracking, wastage, wear or general corrosion occurring on either inside or outside of a tube.
- 3. <u>Degraded Tube</u> means a tube that contains imperfections greater than or equal to 20% of the nominal wall thickness caused by degradation.
- 4. <u>% Degradation</u> means the percentage of the tube wall thickness affected or removed by degradation.
- 5. <u>Defect</u> means an imperfection of such severity that it exceeds the plugging limit. A tube containing a defect is defective.
- 6. <u>Plugging Limit</u> means the imperfection depth at or beyond which the tube shall be removed from service by plugging and is greater than or equal to 40% of the nominal tube wall thickness.
- 7. <u>Unserviceable</u> 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 5.5.9.3.c, above.
- 8. <u>Tube Inspection</u> means an inspection of the steam generator tube from the point of entry (hot leg side) completely around the U-bend to the top support of the cold leg.
- 9. <u>Preservice Inspection</u> means an inspection of the full length of each tube in each steam generator performed by eddy current techniques prior to service to establish a baseline condition of the tubing. This inspection shall be performed using the equipment and techniques expected to be used during subsequent inservice inspections.

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# 5.5.9.4 Acceptance Criteria (continued)

b. The steam generator shall be determined OPERABLE after completing the corresponding actions (plugging of all tubes exceeding the plugging limit) required by Table 5.5.9-2.

#### Table 5.5.9-1

No. of Steam Generators per Unit	Three
First Inservice Inspection	Two
Second and Subsequent Inservice Inspections	One*

<sup>\*</sup> The other steam generator not inspected during the first inservice inspection shall be reinspected. The third and subsequent inspections may be limited to one steam generator on a rotating schedule encompassing 3 N% of the tubes (where N is the number of steam generators in the plant) if the results of the first or previous inspections indicate that all steam generators are performing in a like manner. Note that under some circumstances, the operating conditions in one or more steam generators may be found to be more severe than those in other steam generators. Under such circumstances the same sequence shall be modified to inspect the most severe conditions.