

RANCHO SECO UNIT 1
TECHNICAL SPECIFICATIONS

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Surveillance Standards

4.17 STEAM GENERATORS

Applicability

Applies to inservice inspection of the steam generator tubes.

Objective

To verify the operability and structural integrity of the tubing as part of the reactor coolant boundary.

Specification

Each steam generator shall be demonstrated OPERABLE by performance of the following augmented inservice inspection program and the requirements of Specification 1.3.

4.17.1 Steam Generator Sample Selection and Inspection

Steam generator tubing shall be demonstrated OPERABLE by selecting and inspecting steam generators as specified in Table 4.17-1.

4.17.2 Steam Generator Tube Sample Selection and Inspection

The steam generator tube minimum sample size, inspection result classification, and the corresponding action required shall be as specified in Table 4.17-2A. The inspection result classification and the corresponding action required for inspection of "specific limited areas" (see paragraph 4.17.2e) shall be as specified in Table 4.17-2B. The inservice inspection of steam generator tubes shall be performed at the frequencies specified in Specification 4.17.3 and the inspected tubes shall be verified acceptable per Specification 4.17.4. The tubes selected for these inspections shall include at least 3% of the total number of tubes in both steam generators and be selected on a random basis except:

- a. If experience in similar plants with similar water chemistry indicates critical areas to be inspected, then at least 50% of the tubes inspected shall be from these critical areas.
- b. The first sample inspection during inservice inspection (subsequent to the first inservice inspection) of each steam generator shall include:
 1. All tubes that previously had detectable wall penetrations (>20%), that have not been plugged or sleeve repaired in the affected area,
 2. All sleeves that previously had detectable wall penetrations (>20%) that have not been plugged, and

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4.17.5 (continued)

1. Number and extent of tubes inspected.
2. Location and percent of wall-thickness penetration for each indication of an imperfection.
3. Identification of tubes plugged.
- c. Results of steam generator tube inspections which fall into Category C-3 require notification of the Commission within 4 hours and shall be reported pursuant to Specification 6.9.5P. The written followup of this report shall provide a description of investigations conducted to determine cause of the tube degradation and corrective measures taken to prevent recurrence.

4.17.6 OTSG Auxiliary Feedwater Header Surveillance

On the first refueling outage following the 1983 refueling outage, and at the 10-year ISI, the following inspections will take place:

- a. Visual inspections of the secured Internal Header, attachment welds and external headers thermal sleeves will be made through selected openings, and will be performed in such a manner that the known cracks in the Internal Header will be inspected.
- b. Selected special interest peripheral tubes, designated in Table 4.17-3, will be Eddy Current inspected but shall not be considered a part of the Eddy Current inspection that is conducted pursuant to Technical Specification 4.17.1 through 4.17.5.

4.17.7 Inspection Acceptance Criteria and Corrective Actions

- a. Video taped inspections of the known cracks performed during the initial discovery will be compared with the crack configuration found during this surveillance. This comparison will allow a determination to be made as to whether or not the crack has propagated.
- b. If any inspected special interest peripheral tube indicates clearance (less than 1/4") or greater than 40% through wall indications, it will be plugged.

4.17.8 Reports

A report of these inspections will be prepared and incorporated in the subsequent Monthly Report to the NRC.

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TABLE 4.17-2A
STEAM GENERATOR TUBE INSPECTION

1ST SAMPLE INSPECTION			2ND SAMPLE INSPECTION			3RD SAMPLE INSPECTION		
Sample Size	Result	Action Required	Result	Action Required	Result	Action Required	Result	Action Required
A minimum of S of the Tubes per S.G.	C-1	None	N/A	N/A	N/A	N/A	N/A	N/A
	C-2	Plug or repair defective tubes and inspect additional 2S of the tubes in this S.G.	C-1	None	N/A	N/A	N/A	N/A
			C-2	Plug or repair defective tubes and inspect additional 4S of the tubes in this S.G.	C-1	None	C-2	Plug or repair defective tubes
					C-3	Plug or repair defective tubes and perform action for C-3 result of first sample		
			C-3	Plug or repair defective tubes and perform action for C-3 result of first sample	N/A	N/A		
C-3	Inspect 6S tubes in this S.G., plug or repair defective tubes and inspect 2S tubes in the other S.G. Perform follow-on inspections in the other S.G. in accordance with results of the above inspection as applied to Table 4.17-2A.	The other S.G. is C-1	None	Perform action for C-2 result of second sample	N/A	N/A	N/A	N/A
	Notification to NRC within 4 hours and shall be reported pursuant to Specification 6.9.5P.	The other S.G. is C-3	(a) If defects can be localized to an affected area, inspect all tubes in affected area and plug or repair defective tubes. (b) If defects cannot be localized to an affected area, inspect all tubes in this S.G. and plug or repair defective tubes.	N/A	N/A	N/A	N/A	N/A

$S = \frac{6}{n} \%$ Where n is the number of steam generators inspected during an inspection