

# FORD 1

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SUBJECT: Informs that on 910918,insp of SG tubing required 41 tubes  
 be removed from svc,exceeding amount of tubing required per  
 Surveillance Requirements 4.4.4.0 through 4.4.4.2.Thirteen  
 tubes were preventively plugged.

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STATION MANAGER

October 2, 1991

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U. S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, D. C. 20555

Subject: Docket No. 50-361  
Special Report  
Inservice Inspection of Steam Generator Tubes  
San Onofre Nuclear Generating Station, Unit 2

References: A. PWR Steam Generator Examination Guidelines, Revision 2,  
Electric Power Research Institute (EPRI) Report Number  
NP-6201, dated December 1988.

B. Letter from M. O. Medford (SCE) to Mr. G. W. Knighton  
(USNRC) dated April 5, 1985.

Pursuant to Surveillance Requirement 4.4.4.5(a) of Appendix A, Technical Specifications to Facility Operating License NPF-10, this report is being submitted to the Commission following the completion of inservice inspection of steam generator tubes at San Onofre Unit 2.

Eddy current inspection of the steam generator tubing was completed on September 18, 1991. A total of 4205 tubes (23.2% of the tubes in service) in two steam generators were inspected full length and 41 tubes were removed from service by mechanical plugging. This inspection significantly exceeded the amount of tubing required to be inspected per Surveillance Requirements 4.4.4.0 through 4.4.4.2 including all prospective C-2 expansions [i.e., a 3% sample plus a 6% (2S) and a 12% (4S) expansion in each steam generator].

The planned inspection programs for both steam generators were fully consistent with recent industry recommendations in the "PWR Steam Generator Examination Guidelines" (Reference A). The programs included inspection of the full length of 100% of the tubing in the area of the tube bundle where the batwing wear mechanism previously described in Reference B is active, and tubes adjacent to tie-rods.

In Steam Generator E-088, 2113 tubes were inspected. No tubes were found to be defective. Four tubes were preventively plugged due to the wear mechanism previously described in Reference B. Four tubes were preventively plugged due to tie-rod denting. Two tubes were preventively plugged due to non-quantifiable bobbin probe indications. Although the motorized rotating pancake coil (MRPC) probe results for these two tubes revealed the indications to be below the plugging limit and characterized them as manufacturing artifacts, they were conservatively plugged.

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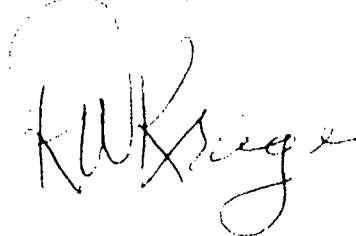
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In Steam Generator E-089, 2092 tubes were inspected. One tube was found defective and was plugged. The 46% throughwall indication in this tube was reported as 43% throughwall in the previous inspection and through comparison of current and previous results, no significant growth is indicated. Thirteen tubes were preventively plugged due to the wear mechanism previously described in reference B. Five tubes were preventively plugged due to degradation at a vertical strap support. One tube was preventively plugged due to the wear mechanism previously described in reference B and degradation at a vertical strap support. Eleven tubes were preventively plugged due to tie-rod denting.

As required by Surveillance Requirement 4.4.4.5(b), complete results of the recently completed inservice inspection will be submitted to the Commission by September 18, 1992.

If you require any additional information, please so advise.

Sincerely,

A handwritten signature in dark ink, appearing to read "K. W. Caldwell", is written over a faint circular stamp.

cc: J. B. Martin (Regional Administrator, USNRC Region V)  
C. W. Caldwell (USNRC Senior Resident Inspector, Units 1, 2 & 3)  
L. Kokajko (Project Manager, SONGS 2/3, USNRC, NRR)  
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