



*Southern California Edison Company*

SAN ONOFRE NUCLEAR GENERATING STATION

P. O. BOX 128

SAN CLEMENTE, CALIFORNIA 92672

May 22, 1990

H. E. MORGAN  
STATION MANAGER

TELEPHONE  
(714) 338-6241

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

Subject: Docket No. 50-362  
Special Report  
Inservice Inspection of Steam Generator Tubes  
San Onofre Nuclear Generating Station, Unit 3

- 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-15, this report is being submitted to the Commission following the completion of inservice inspection of steam generator tubes at San Onofre Unit 3.

Eddy current inspection of the steam generator tubing was completed on May 7, 1990. A total of 4191 tubes (23% of the tubes in service) in two steam generators were inspected full length and 18 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. The programs included tubes adjacent to tie rods where denting was anticipated based on experience from similar steam generators at San Onofre Unit 2 in October 1989. The programs also included general surveillance of the full length of 20% of the remainder of the tubing. The programs were expanded to include tubes adjacent to, or associated with tubes exhibiting new eddy current indications.

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In Steam Generator E-088, 2106 tubes were inspected. No tubes were found to be defective. Eight tubes were preventively plugged due to the wear mechanism previously described in Reference B. In addition, three tubes at the tube bundle periphery were preventively plugged due to degradation at diagonal strap supports.

In Steam Generator E-089, 2085 tubes were inspected. One tube was found to be defective at its intersection with a vertical strap support and was plugged. Two tubes were preventively plugged due to the wear mechanism described in Reference B, three tubes were preventively plugged due to degradation at vertical strap supports, and one tube was 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 May 7, 1991.

If you require any additional information, please so advise.

Sincerely,

HEMog—

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)  
Institute of Nuclear Power Operations (INPO)