

# ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8805060026 DOC. DATE: 88/05/03 NOTARIZED: NO DOCKET #  
FACIL: 50-361 San Onofre Nuclear Station, Unit 2, Southern Californ 05000361  
50-362 San Onofre Nuclear Station, Unit 3, Southern Californ 05000362

AUTH. NAME AUTHOR AFFILIATION  
MEDFORD, M.O. Southern California Edison Co.  
RECIP. NAME RECIPIENT AFFILIATION  
Document Control Branch (Document Control Desk)

SUBJECT: Forwards latest insp rept for each steam generator & tube maps, per D Cox 880412 request.

DISTRIBUTION CODE: A047D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 3  
TITLE: OR Submittal: Inservice Inspection/Testing/Relief from ASME Code

### NOTES:

	RECIPIENT ID CODE/NAME	COPIES LTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTR ENCL
	PD5 LA	1 0	PD5 PD	5 5
	HICKMAN, D	1 1		
INTERNAL:	ACRS	10 10	AEOD/DOA	1 1
	AEOD/DSP/TPAB	1 1	ARM/DAF/LFMB	1 0
	NRR/DEST/MEB 9H	1 1	NRR/DEST/MTB 9H	1 1
	NRR/PMAS/ILRB12	1 1	OGC 15-B-18	1 0
	<u>REG FILE</u> 01	1 1	RES/DE/EIB	1 1
EXTERNAL:	EG&G ROCKHOLD, H	1 1	LPDR	1 1
	NL 007 HEMMING	1 1	NRC PDR	1 1
	NSIC	1 1		

TOTAL NUMBER OF COPIES REQUIRED: LTR 31 ENCL 28

R  
I  
D  
S  
/  
A  
D  
D  
S  
  
R  
I  
D  
S  
/  
A  
D  
D  
S



*Southern California Edison Company*

P. O. BOX 800  
2244 WALNUT GROVE AVENUE  
ROSEMEAD, CALIFORNIA 91770

M. O. MEDFORD  
MANAGER OF NUCLEAR ENGINEERING  
AND LICENSING

TELEPHONE  
(818) 302-1749

May 3, 1988

U.S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, DC 20555

Gentlemen:

Subject: TAC Nos. 67126 and 67127  
Docket Nos. 50-361 and 50-362  
San Onofre Nuclear Generating Station Units 2 and 3

Enclosures: 1) Letters, H.E. Morgan (SCE) to NRC, dated February 20, October 5, and November 9, 1987; Subject: Inservice Inspection of Steam Generator Tubes.

2) Tube Sheet Maps

In our letter dated January 26, 1988 and in Amendment Application Nos. 33 and 34 for San Onofre Units 2 and 3, respectively, dated February 22, 1988, the Southern California Edison Company (SCE) requested approval of proposed Technical Specification Change (PCN) No. 240. The proposed change would revise Technical Specification 3/4.4.4, "Steam Generators" surveillance requirements to require a special "batwing wear" area inspection and remove this area from the general tube sample selection. The NRC's Mr. D. Hickman requested during a telephone conversation with our Mr. D. Cox on April 12, 1988 that additional information be submitted to facilitate review and approval of the proposed change. The purpose of this letter is to provide the requested information. Please find enclosed the latest inspection report for each steam generator and the tube maps showing the location of currently installed steam generator tube plugs.

Should the NRC have additional questions or for other reasons be unable to approve the proposed change on a permanent basis, it is requested that the change be approved for one refueling outage for each unit. Approval of the proposed Technical Specification change is requested before May 15, 1988 for utilization during the upcoming Unit 3, Cycle 4 refueling outage.

8805060026 880503  
PDR ADOCK 05000361  
Q ICD

A047  
1/1

May 3, 1988

If you encounter further questions or require additional information, please contact me.

Very truly yours,



Enclosures

cc: D. Hickman, NRR Project Manager, San Onofre Units 2 and 3  
J. B. Martin, Regional Administrator, USNRC Region V  
F. R. Huey, NRC Senior Resident Inspector, San Onofre

ENCLOSURE 1

~~8703030600~~ 4pp.

February 20, 1987

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

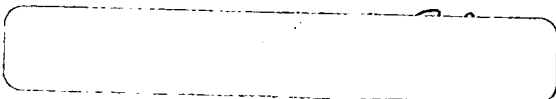
Subject: Docket No. 50-362  
Special Report - Inservice Inspection of Steam Generator Tubes  
San Onofre Nuclear Generating Station, Unit 3

Reference: Letter from Mr. 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 February 6, 1987. A total of 1117 tubes (6% of the tubes in service) in two steam generators were inspected full length and 20 tubes were removed from service by mechanical plugging.

In steam generator E-088, 840 tubes were inspected. One tube found to be defective due to the wear mechanism previously described in the reference, was plugged. Additionally, eight tubes with indications below the plugging limit, that were due to the wear mechanism previously described in the reference, were preventively plugged.



In steam generator E-089, 277 tubes were inspected. One tube, which exhibited degradation during the previous inspection in October 1985, was found to be defective. This defective tube was plugged. A comparison of the eddy current results from the previous inspection and this inspection showed no growth of the flaw. Therefore, as provided for in Technical Specification 4.4.4.2, no program expansion was necessary. Additionally, ten tubes with indications below the plugging limit, that were due to the wear mechanism previously described in the reference, were preventively plugged.

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 February 5, 1988.

If you require any additional information, please so advise.

Sincerely,



H. E. MORGAN  
STATION MANAGER

ERSfacor:7999u:sas

cc: J. B. Martin (Regional Administrator, USNRC Region V)  
F. R. Huey (USNRC Senior Resident Inspector, Units 1, 2 and 3)  
H. Rood (Project Manager, SONGS 2/3, USNRC, NRR)

Institute of Nuclear Power Operations (INPO)

Unit 3  
San Onofre Nuclear Generating Station

Special Report -  
Inservice Inspection of  
Steam Generator Tubes

bcc: Kenneth P. Baskin, Vice President, Room 416, G01  
D. L. Cox, Rm. 412 G01  
G. O. Engl, Universal Testing Laboratories, Inc.  
579 Pompton Avenue  
P.O. Box 320  
Cedar Grove, NJ 07009  
S. L. Harris (City of Riverside), Public Utilities Dept.  
3900 Main St., Riverside, CA 92522  
J. F. Hasenzahl (City of Anaheim), Public Utilities Dept.  
P. O. Box 3222, Anaheim, CA 92803  
D. R. Heinicke, D-11, SONGS  
D. Herbst, D3F, SONGS  
T. A. Jones, (CE)  
1000 Prospect Road  
P.O. Box 500  
Windsor, CT 06095-0500  
B. Katz, D-3B, SONGS  
P. J. Knapp, D-17, SONGS  
C. R. Kocher, Rm. 330, G01  
R. W. Krieger, D-15, SONGS  
M. O. Medford, Rm. 410A, G01  
H. E. Morgan, D-14, SONGS  
W. C. Moody, D-42, SONGS  
Harold B. Ray, Vice President, D-45, SONGS  
J. T. Reilly, D-16, SONGS  
R. M. Rosenblum, Rm. 169, G01  
D. B. Schone, N-42, SONGS  
M. P. Short, E-50, SONGS  
D. E. Shull, D-18, SONGS  
W. W. Strom, Rm. 415, G01  
J. J. Wambold, K-20, SONGS  
M. A. Wharton, D-12, SONGS  
J. L. Winter, (SDG&E), D3A, SONGS  
J. K. Yann, 3-E-9, G03

Compliance File, D2A, SONGS  
CDM File, D2A, SONGS  
SOCR File, D2A, SONGS

APPROVALS:

W. G. Zintl  
T. A. Mackey, Jr.  
P. C. Wattson  
E. R. Siacor  
J. A. Mundis  
A. L. Matheny

*103*  
*[Signature]*  
*[Signature]*  
*[Signature]*

(A)

A

October 5, 1987

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

Reference: 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 21, 1987. A total of 1,228 tubes (6.7 % of the tubes in service) in two steam generators were inspected full length and 141 tubes were removed from service by mechanical plugging.

In steam generator E-088, 364 tubes were inspected. No tubes were found to be defective. Sixty tubes were preventively plugged due to the wear mechanism previously described in the reference. Additionally, one tube was preventively plugged due to previous degradation.

~~8710140017 3 pp.~~



In steam generator E-089, 864 tubes were inspected. Two tubes found to be defective due to the wear mechanism previously described in the reference, were plugged. One additional tube was found to be defective and was plugged; however, a comparison of eddy current results from the previous inspection and this inspection showed no growth of the flaw. Therefore, as provided for in Technical Specification 4.4.4.2, only a C-2 program expansion was necessary. Seventy three tubes were preventively plugged due to the wear mechanism previously described in the reference. Additionally, four tubes were preventively plugged due to previous degradation.

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 20, 1988.

If you require any additional information, please so advise.

Sincerely,

*HEM*

H. E. MORGAN  
STATION MANAGER

ERSiacor: wp

cc: J. B. Martin (Regional Administrator, USNRC Region V)  
F. R. Huey (USNRC Senior Resident Inspector, Units 1, 2 and 3)  
H. Rood (Project Manager, SONGS 2/3, USNRC, NRR)

Institute of Nuclear Power Operations (INPO)

Unit 2  
San Onofre Nuclear Generating Station

Special Report-  
Inservice  
Inspection of  
Steam Generator  
Tubes

bcc: Kenneth P. Baskin, Vice President, Rm. 410, GO1  
D. L. Cox, Rm. 412, GO1  
R. L. Erickson, (SDG & E), D3A, SONGS  
B. D. Marlow, CONAM Inspection Inc.  
660 South 31st Street  
Richmond, CA 94804  
S. L. Harris (City of Riverside), Public Utilities Dept.  
3900 Main St., Riverside, CA 92522  
A. Rivera (City of Anaheim), Public Utilities Dept.  
P. O. Box 3222, Anaheim, CA 92803  
D. R. Heinicke, D-11, SONGS  
D. Herbst, D4E, SONGS  
T. A. Jones (Combustion Engineering)  
1000 Prospect Rd., P. O. Box 500  
Windsor, CT 06095-0500  
B. Katz, D3B, SONGS  
P. J. Knapp, D-17, SONGS  
C. R. Kocher, Rm. 330, GO1  
R. W. Krieger, D-15, SONGS  
M. O. Medford, Rm. 412, GO1  
W. C. Moody, D-42, SONGS  
H. E. Morgan, D-14, SONGS  
Harold B. Ray, Vice President, D-45, SONGS  
J. T. Reilly, D-16, SONGS  
R. M. Rosenblum, Rm. 169, GO1  
D. B. Schone, N-42, SONGS  
M. P. Short, E-50, SONGS  
D. E. Shull, D-18, SONGS  
W. W. Strom, Rm. 415, GO1  
J. J. Wambold, K-20, SONGS  
M. A. Wharton, D-12, SONGS  
J. L. Winter, (SDG & E), D3A, SONGS  
J. K. Yann, 3-E-9, GO3

Compliance File, D2A, SONGS  
CDM File

~~SOGR File, D2A, SONGS~~

APPROVALS:

W. G. Zintl WZ  
T. A. Mackey, Jr. TAM  
P. C. Wattson PW  
E. R. Siacor ERS  
J. A. Mundis JAM  
A. L. Matheny AM

ers:wp

8701504  
Reference only  
(A)

8701291  
(B)

ENTERED INTO SO CR

NOV 13 1987

ITEM          TASK

November 9, 1987

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

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

Reference: Letter from H. E. Morgan (SCE) to USNRC Document Control Desk  
dated October 5, 1987

This report is being submitted to the Commission to provide information associated with a supplemental examination of steam generator E-088 at San Onofre Unit 2 resulting from the discovery of two foreign objects in the steam generator.

As reported in the reference, eddy current inspection of the steam generator tubing was completed on September 21, 1987. Subsequent to the completion of sludge lancing, visual inspection of the secondary side on both steam generators was conducted. On steam generator E-088, the inspection found two metal pieces lodged between the tubes in the periphery near the tubesheet. Although the source of the material has not been identified, due to the size of the metal pieces, it is believed these objects have been in the steam generator since original construction. No foreign objects were found on steam generator E-089.

The metal pieces were removed and 155 steam generator tubes surrounding the location of the metal pieces were examined through the first outlet end tube support using eddy current testing. One of the tubes examined was determined to be defective and was removed from service by mechanical plugging.

~~8711170098~~ 3pp.

Document Control Desk

-2-

If you require any additional information, please so advise.

Sincerely,

*Hem*  
H. E. MORGAN  
STATION MANAGER

ERSiacor: wp

cc: J. B. Martin (Regional Administrator, USNRC Region V)  
F. R. Huey (USNRC Senior Resident Inspector, Units 1,2 and 3)  
H. Rood (Project Manager, SONGS 2/3, USNRC, NRR)

Institute of Nuclear Power Operations (INPO)

Unit 2  
San Onofre Nuclear Generating Station

Special Report-  
Inservice Inspection of  
Steam Generator Tubes

bcc: Kenneth P. Baskin, Vice President, Rm. 410, G01  
D. L. Cox, Rm. 412, G01  
R. L. Erickson, (SDG & E), D3A, SONGS  
B. D. Marlow, CONAM Inspection Inc.  
660 South 31st Street  
Richmond, CA 94804  
S. L. Harris (City of Riverside), Public Utilities Dept.  
3900 Main St., Riverside, CA 92522  
A. Rivera (City of Anaheim), Public Utilities Dept.  
P. O. Box 3222, Anaheim, CA 92803  
D. R. Heinicke, D-11, SONGS  
D. Herbst, D4E, SONGS  
T. A. Jones (Combustion Engineering)  
1000 Prospect Rd., P. O. Box 500  
Windsor, CT 06095-0500  
B. Katz, D3B, SONGS  
P. J. Knapp, D-17, SONGS  
C. R. Kocher, Rm. 330, G01  
R. W. Krieger, D-15, SONGS  
M. O. Medford, Rm. 412, G01  
W. C. Moody, D-42, SONGS  
H. E. Morgan, D-14, SONGS  
Harold B. Ray, Vice President, D-45, SONGS  
J. T. Reilly, D-16, SONGS  
R. M. Rosenblum, Rm. 169, G01  
D. B. Schone, N-42, SONGS  
M. P. Short, E-50, SONGS  
D. E. Shull, D-18, SONGS  
W. W. Strom, Rm. 415, G01  
J. J. Wambold, K-20, SONGS  
M. A. Wharton, D-12, SONGS  
J. L. Winter, (SDG & E), D3A, SONGS  
J. K. Yann, 3-E-9, G03

Compliance File, D2A, SONGS  
CDM File  
SOCR File, D2A, SONGS

APPROVALS:

R. D. Plappert RD  
E. R. Siacor ER Siacor  
J. A. Mundis  
A. L. Matheny AL Matheny

ENCLOSURE 2