

A Edward Scherer Manager of Nuclear Oversight and Regulatory Affairs

February 2, 2001

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

Subject: Docket No. 50-361 Owner's Report of Inservice Inspection, Form NIS-1 San Onofre Nuclear Generating Station, Unit 2

Reference: American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (ASME B&PVC) Section XI: 1989 Edition: No Addenda; Second Inspection Interval

Gentlemen:

In accordance with 10CFR50.55(a)(g) and ASME B&PVE, Section XI, Article IWA-6000, this letter submits the Inservice Inspection (ISI) Summary Report, including the Owner's Reports of Repairs and Replacements, for San Onofre Nuclear Generating Station, Unit 2.

This report covers the period from February 28, 1999 through November 16, 2000, the date Unit 2 returned to service following its cycle 11 refueling outage. If you have any questions or require additional information, please advise.

Sincerely,

Allehum

Attachment

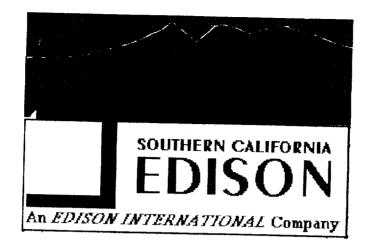
cc: (see attached list)

047

cc: E. W. Merschoff, Regional Administrator, NRC Region IV
 A. T. Howell, III, Director, Division of Reactor Safety, NRC Region IV
 J. A. Sloan, NRC Senior Resident Inspector, San Onofre Units 2 & 3
 L. Raghavan, NRC Project Manager, San Onofre Units 2 and 3

Gerald Quinn, Senior Safety Engineer Division of Occupational Safety and Health Pressure Vessel Unit 2100 E. Katella Ave. Anaheim, CA 92806-6040

J. LeMire, Principal Safety Engineer Division of Occupational Safety and Health Pressure Vessel Unit 2100 E. Katella Ave. Anaheim, CA 92806-6040



SAN ONOFRE NUCLEAR GENERATING STATION UNIT-2

INSERVICE INSPECTION SUMMARY REPORT

CYCLE-11 REFUELING OUTAGE

January 26, 2001

<u>1</u> INTRODUCTION

This document refers to the implementation of the Inservice Inspection (ISI) conducted at the San Onofre Nuclear Generating Station (SONGS) Unit 2 for the 2nd Period of the 2nd Interval.

1st Interval	August 18, 1983 through August 17, 1993
2nd Interval	August 18, 1993 through August 17, 2003

Each 10-year Interval is further divided into 3 periods which is adjusted to accommodate 2 refueling outages in each period. Adjustments of the intervals to accommodate these refueling outages is allowed by the code to extend or decrease the interval by as much as 1 year. These extension was used in the 1st 10-year interval which ended in March 1994.

The 1st and 2nd 10-year intervals are:

1st Interval	August 18, 1983 through March 31, 1994
2nd Interval	April 1, 1994 through August 17, 2003

The 3 periods for the 2nd 10-year interval are as follows:

PERIODS	DATES	OUTAGES
1	Apr 1, 1994 - Aug 17, 1997	U2C8, U2C9
2	Aug 18, 1997 - Aug 17, 2001	U2C10, U2C11
3	Aug 18, 2001 - Aug 17, 2003	U2C12

ASME Code Section XI, Article IWA-6000, Records & Reports, the ISI Program 90063 Rev 6, and the ISI procedures were used to put this report together. This report is intended to provide a summary of the ISI activities performed during the Unit 2 Cycle 11 outage. Detailed descriptions of these activities are documented, controlled and maintained in accordance with the Owner's Technical Specification commitments.

SAN ONOFRE NUCLEAR GENERATING STATION UNIT 2

SUBSECTION	CATEGORY	TOTAL EXAMS	PERIOD	PERIOD	PERIOD		
		REQUIRI	ED				
			1	2	3		
IWB	B-A	27	2				
	B-A B-B	6	3	2	23		
	B-D B-D	ø 34	2	2	2		
	B-F	28	10	0	24		
	B-G-1	28	10 84	9	9		
	B-G-2	178	84 61	82 50	82		
	B-J	165	61 57	59 54	62		
	B-K	105	8	54	54		
	B-L-1	2	8 0	3	3		
	B-L-2(See Note-3)		v	0	2		
	B-M-1	8	2	0	6		
	B-M-2(See Note-3)		0	0 2	6		
	B-N-1	3	1	2	1		
	B-N-2	30	0	0	1		
	B-N-3	2	0	0	30		
	B-O	10	0 0	0	2 10		
	B-P		fueling Outage	v	10		
	B-Q	Per Tech					
WC	O A						
WC	C-A	20	7	6	7		
	C-B	8	2	2	4		
	C-C	47	26	15	16		
	C-F-1	248	85	82	82		
	C-F-2	29	14	12	10		
	C-G	5	1	2	2		
	С-Н	Each Inspe	ection Period				
WD	D-A (System Pressu	re Test) Ea	ch Inspection Pe	riod			
	D-A (System Pressure Test) Each Inspection Period D-B (System Pressure Test) Each Inspection Period						
	D-C (System Pressur	e Test) Ea	ch Inspection Pe	riod			
	D-A(Integral Attach'	's) 59	21	20	20		
	(8	5) 57	21	20	20		

<u>2</u>	<u>PL</u>	AN	&	SCH	ED	ULE	

ON CATEGOI	EXAMS	PERIOD D	PERIOD	PERIOD		
		1	2	3		
F-A	284	97	93	94		
E-A	443	1	1	441		
E-C	9	3	3	3		
E-D	3	1	1	1		
E-G	101	0	0	101		
E-P PER 10) CFR 50 APPEND	DIX J				
L-A (Concre	ete surfaces)	Every te	n years			
L-B(Unbond Item L2.10,	led Post-Tensioning L2.20, and L2.30, 1	g System) Eve L2.40, L2.50	ery five years al	ternative,		
nented ISI for Reactor	Coolant pump flyv	vheels and high	n energy lines			
neels	4	4	0	4		
Energy line welds	208	69	71	68		
 Notes : 1) For Class MC components (IWE), 1st Period examination shall be completed by September 9, 2001, as mandated by the NRC final rule August 8, 1996. Remaining two periods for the 1st interval of IWE, 2nd Period : September 9, 2001 to September 8, 2005, 3rd Period : September 9, 2005 to September 8, 2008. 2) For Class CC components (IWL), Inspection Schedule shall comply with IWL-2421 3) Examination required when pump or valve is disassembled. 						
	F-A E-A E-C E-D E-G E-P PER 10 L-A (Concre L-B(Unbond Item L2.10, tem L2.10, tem L2.10, tem L2.10, tem L2.10, tem L2.10, tem L2.10, 2) For Class MC conservations for the 8, 2005, 3rd Period	F-A284E-A443E-C9E-D3E-G101E-P PER 10 CFR 50 APPENDL-A (Concrete surfaces)L-B(Unbonded Post-Tensioning Item L2.10, L2.20, and L2.30, Itented ISI for Reactor Coolant pump flywteels4Energy line welds208: 1) For Class MC components (IWE), 1 September 9, 2001, as mandated by two periods for the 1st interval of IW 8, 2005, 3rd Period : September 9, 202) For Class CC components (IWL), In	EXAMS EXAMS REQUIRED 1 F-A 284 97 E-A 443 1 E-C 9 3 E-D 3 1 E-G 101 0 E-P PER 10 CFR 50 APPENDIX J L-A (Concrete surfaces) Every te L-B (Unbonded Post-Tensioning System) Eventer L-B (Unbonded Post-Tensioning System) Eventer L-B (Unbonded Post-Tensioning System) Eventer Every te Every te <th>EXAMS REQUIREDImage: F-A12F-A2849793E-A44311E-C933E-D311E-G10100E-P PER 10 CFR 50 APPENDIX JL-A (Concrete surfaces)Every ten yearsL-B(Unbonded Post-Tensioning System)Every tive years all trem L2.10, L2.20, and L2.30, L2.40, L2.50tented ISI for Reactor Coolant pump flywheels and high energy lines neels4400Energy line welds2086971: 1) For Class MC components (IWE), 1st Period examination shall be September 9, 2001, as mandated by the NRC final rule August 8, 1 two periods for the 1st interval of IWE, 2nd Period : September 9, 8, 2005, 3rd Period : September 9, 2005 to September 8, 2008.2) For Class CC components (IWL), Inspection Schedule shall comp</th>	EXAMS REQUIREDImage: F-A12F-A2849793E-A44311E-C933E-D311E-G10100E-P PER 10 CFR 50 APPENDIX JL-A (Concrete surfaces)Every ten yearsL-B(Unbonded Post-Tensioning System)Every tive years all trem L2.10, L2.20, and L2.30, L2.40, L2.50tented ISI for Reactor Coolant pump flywheels and high energy lines neels4400Energy line welds2086971: 1) For Class MC components (IWE), 1st Period examination shall be September 9, 2001, as mandated by the NRC final rule August 8, 1 two periods for the 1st interval of IWE, 2nd Period : September 9, 8, 2005, 3rd Period : September 9, 2005 to September 8, 2008.2) For Class CC components (IWL), Inspection Schedule shall comp		

<u>3 SUMMARY REPORT</u>

Date of Document Completion.....January 26, 2001

Name & Address of Owners:

Southern California Edison 2244 Walnut Grove Ave. Rosemead, CA 91770

City of Anaheim Public Utilities Department City Hall West - 8th Floor Ste. 802, 201 S. Anaheim Blvd. Anaheim, CA 92805 San Diego Gas & Electric Co. 101 Ash St. San Diego, CA 92112

City of Riverside Public Utilities Department 3900 Main St. Riverside, CA 92522

Name & Address of Generating Plant:

San Onofre Nuclear Generating Station 5000 Pacific Coast Hwy San Clemente, CA 92672

Number Designation of the Unit.....Unit 2

Commercial Service Date for the Unit.....August 18, 1983

REFUELING OUTAGE NO.

Refueling Outage Number:

U2C11

FORM NIS-1 OWNER'S REPORT FOR INSERVICE INSPECTIONS As required by the Provisions of the ASME Code Rules							
1. Owner:	Southern California Edis 2244 Walnut Grove Ave		1 0				
2. Plant:	San Onofre Nuclear Generating Station 5000 Pacific Coast Hwy San Clemente, CA 92672						
3. Plant Unit:	2	4.	Owner's Certificate of Authorization: <u>N/A</u>				
5. Commercia	5. Commercial Service Date: <u>8/18/83</u> 6. National Board Number for Unit: <u>N/A</u>						
7. Components Inspected:							

Component Manufacturer State or Manufacturer National or or Installer or **Province** Board Appurtenance Installer Serial Number Number Number Steam Gen Combustion 2ME088 Engineering 71270-2 35203-82 22219 Steam Gen Combustion 2ME089 Engineering 71270-1 35203-82 22218 Reactor Coolant Byron Jackson Pump 2MP003 701-N-0560 N/A N/A Shutdown Cooling Engineers & Heat Exchanger Fabricators, Inc. S-16644A N/A 1353 **ME003 Regenerative Heat** Combustion Exchanger ME063 Engineering 78826 N/A 10782

FORM NIS-1 (back)

8. Examination Date: February 28, 1999 to November 16, 2000
9. Inspection Period Identification: 1st Period X 2nd Period 3rd Period
10. Inspection Interval: 1st 10-Yr2nd 10-Yr3rd 10-Yr4th 10-Yr
11. Applicable Edition of Section XI For IWB, IWC, IWD, IWF, 1989 Edition, No Addenda,
For IWE, IWL 1992 Edition with 1992 Addenda, For
App.VIII (PDI) 1995Edition with 1996 Addenda
12. Date/Revision of Inspection PlanOctober 5, 1999 Doc # 90063, Rev 6
13. Abstract of Examination & TestSee page 9
14. Abstract of Results of Examinations & Tests:See page 10
15. Abstract of Corrective Measures:See page 11
The certify that a) the statement made in this report are correct, b) the examinations and tests eet the Inspection Plan as required by the ASME Code, Section XI, and c) corrective measures ken conform to the rules of the ASME Code, Section XI. ertificate of Authorization No. <u>N/A</u> Expiration Date: <u>N/A</u> ate: $\frac{1/2b/2001}{2001}$ Signed: Southern California Edison (Owner) By: <u>Multan P. Matter</u>

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of California and employed by Factory_Mutual Insurance Company of Johnston, Rhode Island, have inspected the components described in this Owner's Report during the period February 28, 1999 to November 28, 2000 and state that to the best of my knowledge and belief, the Owner has performed examinations and tests and taken corrective measures described in this Owner's Report in accordance with the Inspection Plan and as required by the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations, tests, and corrective measures described in this Owner's Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

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Inspector's Signature

Commissions 8024 "N" I "5" 15" 1862 CA NB, State, Province or Endorsements

Date: 1/24/01

ABSTRACT OF EXAMINATIONS & TESTS

This report covers the inservice examination activities conducted at the San Onofre Nuclear Generating Station (SONGS), Unit 2. This activity is one of the two that are scheduled for the 2nd period of the 2nd 10-year interval as described in the ISI Program Plan submitted to NRC and Doc. 90063. The inservice examinations were conducted in accordance with the of the ASME Boiler and Pressure Vessel Code Section XI, 1989 Edition No Addenda for IWB, IWC, IWD, IWF, for IWE, IWL 1992 Edition with the 1992 Addenda, for Appendix VIII(PDI) 1995 Edition with the 1996 Addenda as modified by 10 CFR Part 50 RIN 3150-AE26, Federal Register September 22, 1999(Volume 64, Number 183).

The services of NDE Levels- II & III (UT, PT, MT, and VT) were contracted to and provided by Lambert, MacGill, Thomas, Inc. Additional VT Level-II services were provided by SCE.

ISI Visual Examinations (VT-2) performed in conjunction with the Reactor Coolant System pressure test was performed by SCE VT Level-II examiners. List of examinations and tests are included in attachment-1.

Factory Mutual Insurance Company provided the services of the Authorized Inspection Agency (AIA) Authorized Nuclear Inservice Inspectors (ANII's).

ABSTRACT OF RESULTS OF EXAMINATIONS & TESTS

The inservice and preservice examinations conducted at SONGS 2 were performed between 2/28/99 and 11/16/00. These examinations were performed to fulfill the requirements of 10CFR50.55a(g)(4) and IWA-1400, Owner's Responsibilities of ASME Code Section XI.

The number of components and supports for Class 1 and 2 selected for examination were based on the ISI Program Plan Doc. # 90063, Rev. 6 employing Inspection Program Plan B of the ASME Code Section XI, All the pressure retaining components of ASME Class 1, 2 and 3 System pressure test were performed per the requirement of ASME Code Section XI.

All the NDE personnel were certified in accordance with the Section XI Code requirements

In Class 1 and 2 components 84 welds/components were examined for volumetric examination, 31 for surface, and a total of 78 for a combined VT-1 and VT-3 visual examination.

As mandated by 10 CFR Part 50 RIN 3150-AE26, Federal Register September 22, 1999(Volume 64, Number 183) piping welds and RCP Studs were examined per Appendix VIII(PDI) 1995 Edition with the 1996 Addenda as modified by above Final Rule. All the UT examiners were qualified and certified in accordance with PDI and Final Rule.

For Subsection IWE (Containment Liner) general visual examination for Containment liner, VT-3 visual examination for floor to liner plate seal(moisture- barrier), and volumetric examination at three shell liner plate were performed

All the NDE examinations were found Code acceptable.

ABSTRACT OF CORRECTIVE MEASURES

All the ISI NDE examinations were found Code acceptable, hence corrective measures were not needed.

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4 ABSTRACT OF NIS-2 REPAIRS & REPLACEMENTS

Unit 2 Cycle 11 Abstract of Records of Repairs and Replacements

· · ·	MO	EQID	Class	NIS-2	Worksum
\sim_1	00011025000	S21201MP002	III-1	11/29/00	Replaced mechanical seal cartridge
2	00011242000	S2ST015H019	III-2	10/17/00	Deleted snubber
3	00020734000	S2RC140H00M	III-2	11/6/00	Deleted snubber
4	00021582000	027-64264-36995-1-3	III-2	9/1 3/0 0	Replaced valve spindle/plug assembly
5	00022123000	S2RC031H001	lll-1	11/6/00	Deleted snubber
6	00022516000	S21204MU068	III-2	12/19/00	Replaced valve internals
7	00040182000	025-83508-N59380-00-0012	111-2	7/24/00	Replaced valve disc
8	00061061000	S2RC017H00A	III-2	10/30/00	Deleted snubber
9	00061208000	S2RC017H00B	III-2	11/6/00	Deleted snubber
10	00071187000	026-44409-N60061-00-0001-IST	III-2	9/26/00	Fabbed bonnet studs for L-Top valves
11	00090209000	S21201ME613	111-1	11/22/00	Replaced pressurizer heater
12	00090615000	S21201ME607	III-1	11/29/00	Replaced pressurizer heater
13	00090616000	S21201ME608	iii-1	11/29/00	Replaced pressurizer heater
14	00090617000	S21201ME609	111-1	11/29/00	Replaced pressurizer heater
15	00090618000	S21201ME611	III-1	11/29/00	Replaced pressurizer heater
16	00101151000	S2RCP04H001	111-1	11/29/00	Replaced hydraulic snubber control valve
17	00101229000	S2VC001H009E	111-2	11/29/00	Replaced snubber
18	00101517000	S21201ME087	HI -1	11/1 4/0 0	Machined inlet piping flange to restore surface
19	00101518000	S21201ME087	III-1	11/14/00	Machined inlet piping flange to restore surface
20	00110826000	S21104CEDM	III-1	12/4/00	Sealwelded housing nut to ball seal housing
?1	00121178000	S21208MU106	III-2	1/8/01	Replaced valve disc
2	96030149001	S21204MU003	III-2	11/29/00	Replaced flange bolting
23	96070175001	2HV4052	III-2	1/8/01	Modified body drain configuration
24	97011254001	2HV4052	III-2	1/8/01	Replaced bonnet
25	97061153000	RS-046-97-E	111-1	6/9/00	Fabricated instrument nozzle
26	97061274000	RS-046-97-G	111-1	6/9/00	Fabricated instrument nozzle
27	97101708000	503-03	III-1	1/21/00	Replaced instrument nozzles
28	97101713000	503-01	-1	1/19/00	Replaced half nozzles with INCONEL half nozzles
29	97110883000	S21201MR181	III-2	1/19/00	Replaced half nozzles with INCONEL half nozzles
30	98051825000	2PSV9225	III-2	12/21/00	Replaced relief valve
31	98051989001	2PSV9349	111-2	6/9/00	Replaced relief valve
32	98060026000	S22418MU108	111-2	12/19/00	Replaced check valve with new designed check valve
33	98060170000	S22418MU108	III-2	12/19/00	Welded non-code piping to code valve
34	98063094000	2PV0201B	111-2	1/18/00	Replaced unbalanced inconel 718 spindle
	99021229000	S21415MU236	III-2	12/19/00	Replaced check valve
36		027-83249	III-1	9/22/99	Fabricated spare thermowells
37	99031617000	027-83249	III-1	2/24/00	Fabricated spare thermowells
38	99041084000	S21201MU200	III-2	7/14/99	Tack welded disc nut to threaded disc post
39	99041368000	S21201MU202	III-2	7/14/99	Tack welded disc nut to threaded disc post
40	99050737000	027-81177	111-2	5/4/00	Manufactured MSSV studs
		026-44409-N60061-00-0001-IST	111-2	9/26/00	Rebuilt relief valve (L-Top)
42	99051554000	2HV8419	III-2	1/26/01	Replaced valve plug and bonnet nuts
3	99051790000	026-44409-N60061-00-0004-IST	111-2	9/26/00	Rebuilt relief valve (L-Top)

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Unit 2 Cycle 11 Abstract of Records of Repairs and Replacements

<i>;</i>	MO	EQID	Class	NIS-2	Worksum
	99060050000	2PSV9227	III-2	1/25/00	Replaced relief valve
45	99060413000	S21301ME088P	ill-1	1/8/01	Performed SG tube sleeving
46	99060414000	S21301ME089P	-1	1/8/01	Performed SG sleeve tubing
47	99070170000	S21301ME088P	111-1	11/22/00	Installed threaded inserts in SG manway bolt holes
48	99080603000	2PSV0200	111-1	1/10/01	Replaced safety valve
49	99080621000	S21201MP001	11 1-1 ·	12/4/00	Replaced mechanical seal cartridge
50	99080631000	2PSV8401	111-2	1/8/01	Replaced safety valve and inlet bolting
51	99080667000	2PSV0201	111-1	1/10/01	Replaced safety valve and inlet bolting
52	99080671000	2PSV8402	111-2	1/8/01	Replaced safety valve and inlet bolting
53	99080708000	S21208ME062	111-2	1/26/01	Replaced heat exchanger cover bolting
54	99080709000	2PSV8404	111-2	1/8/01	Replaced safety valve and inlet bolting
55	99080725000	2PSV8406	111-2	1/8/01	Replaced safety valve and inlet bolting
56	99080731000	2PSV8407	111-2	1/8/01	Replaced safety valve and inlet bolting
57	99080768000	2PSV8416	111-2	1/8/01	Replaced safety valve and inlet bolting
58	99081503000	S21301ME088	III-2	12/19/00	Replaced SG manway cover bolting
59	99081807000	S21301ME089	III-2	12/19/00	Replaced SG handhole cover bolting
60	99100415000	025-83508-N59380-00-0013	III-2	1/18/00	Replaced valve disc
61	99110008000	025-83508-N59380-00-0006	il l-2	1/21/00	Replaced valve disc
62	99110011000	025-83508-N59380-00-0010	III-2	7/24/00	Replaced valve disc
63	99121408000	025-83508-N59380-00-0001	III-2	6/9/00	Replaced valve disc

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5 NDE RECORDS

NDE PROCEDURES:

1) Non PDI UT, PT, MT, and Visual examination procedures (1989 Edition No Addenda)

SO23-XXVII-20.47	Magnetia Deutisla Deutisla
	Magnetic Particle Examination
SO23-XXVII-20.48	Liquid Penetrant Examination
SO23-XXVII-20.49	Visual Examination Procedure to Determine the Condition of Nuclear Parts, Components and Surfaces
SO23-XXVII-20.51	Visual Examination Procedure for Operability of Nuclear Components and Supports and Conditions Relating to their Functional Adequacy
SO23-XXVII-20.54	UT Examination of Nuclear Cooling System Ferritic Piping
SO23-XXVII-20.55	UT Examination of Nuclear Cooling System Austenitic Piping
SO23-XXVII-20.56	UT Flaw Sizing
SO23-XXVII-20.59	Planar Size Characterization to ASME Section XI Code Requirements
SO23-XXVII-20.66	UT of Vessel Welds & Adjacent Base Metal
<u>2) Appendix VIII (P</u>	DI) UT Procedures (1995 Edition with the 1996 Addenda)
SO23-XXVII-30.5	Ultrasonic Examination of Ferritic Piping Welds
SO23-XXVII-30.6	Ultrasonic Examination of Austenitic Piping Welds
SO23-XXVII-30.7	Ultrasonic Examination of Bolts and Studs
SO23-XXVII-30.8	Ultrasonic Through Wall sizing in pipe welds
3) IWE Visual and U	T thickness Measurements Procedures (1992 Edition with the 1992 Add.)
SO23-XXVII-30.1	Ultrasonic Thickness Measurements
SO23-XXVII-30.2	Visual Examination Procedure to Determine the Condition of Containment Surfaces and Pressure Retaining Bolting (VT-1)
SO23-XXVII-30.3	Visual Examination Procedure to Determine the Condition of Containment Surfaces and Gaskets, Seals and Moisture Barriers (VT-3)
SO23-XXVII-30.4	Visual Examination Procedure to detect Evidence of Degradation of Containment Structural Integrity or Leak Tightness (General Visual)

NDE PERSONNEL CERTIFICATION RECORDS

NAMES	METHOD	LEVEL	Cert	Eye Test					
Lambert MacGill & Thom	Lambert MacGill & Thomas, Inc.								
Layn R. Davis	UT, PT, MT VT-1 and 3	III II	X X	X X					
Kilpela F. Mathew	UT, PT, MT	II	Х	Х					
Jeffery L. Devers	UT, PT, MT	II	Х	Х					
Todd P. Blechinger	UT, PT, MT	Π	Х	Х					
Southern California Edison	<u>1 (SCE)</u>								
Barry Seaholts	VT-1,2,3	II	Х	Х					
T.M. Pierno	VT-1,2,3	II	Х	Х					
H.Edward McNeill	VT-2	II	Х	X					
P.Fred Haderlie	VT-2	II	X	X					
Joe Perschler	VT-2	II	х	х					

6 ISI PROCEDURES & CONSTRUCTION WORK ORDERS

ISI Procedures

- SO123-IN-1 Inservice Inspection Program
- SO123-XVII-1 Inservice Inspection Program Implementation
- SO123-XVII-1.1 Inservice Inspection Maintenance
- SO23-XVII-3.1 Inservice Inspection of Class 1 Components and Their Supports
- SO23-XVII-3.1.1 Refueling Outage Interval Examination of the Reactor Coolant Pressure Boundary to Detect Leakage
- SO23-XVII-3.2 Inservice Inspection of Class 2 Components and Their Supports
- SO23-XVII-3.3 Inservice Inspection of Class 3 Components and Their Supports
- SO123-XVII-3.4 Location Reference Markers
- SO23-XVII-3.4 Inservice Inspection of Class MC Components and Metallic Liners of Class CC Components

ISI Construction Work Orders

Inside Containment	00022185000
Outside Containment	00022186000

7 MECHANICAL SEAL ASSEMBLY (MNSA), VISUAL EXAMINATION RESULTS

As stated in letter from J. L. Rainsberry (SCE) to Document Control Desk (U.S. NRC), dated April 30, 1998; Subject : Docket Nos. 50-361 and 50-362, use of the Mechanical Nozzle Seal Assembly (MNSA), San Onofre Nuclear Generating Station, Units 2 and 3 (Tac Nos. M99558 and M99599), visual examination of all installed MNSA's were performed. Results of the inspection were acceptable per approved procedures.

8 STEAM GENERATOR EXAMINATIONS



Dwight E. Nunn Vice President

November 13, 2000

NOV 1 4 2000

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

Gentlemen:

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

Reference: Steam Generator Program Guidelines, Nuclear Energy Institute Document Number NEI 97-06 [Onginal], dated December 1997

On November 5, 2000, Southern California Edison (SCE) completed the inservice inspection of steam generator tubes at San Onofre Nuclear Generating Station Unit 2. The attached report satisfies the following reporting requirements of Technical Specification 5.7.2.c:

- Within 15 days of inspection completion, report the number of tubes plugged and tubes sleeved in each steam generator;
- Prior to resumption of plant operation, report the results of the steam generator tube inspections which fall into Category C-3, and
- Within 12 months of inspection completion, report the complete results of steam generator tube inspections

In addition, the contents of the report were prepared using the guidance contained in the above reference. In accordance with the suggested NEI guidance, the enclosed report includes

- a Scope of inspections performed;
- b Active Degradation Mechanisms found;
- c. Nondestructive Examination (NDE) techniques utilized for each degradation mechanism,
- d Number of tubes plugged or repaired during the inspection for each active degradation mechanism. Repair methods utilized and the number of tubes repaired by each repair method, and

P O Box 128 San Clemente, CA 92674-0128 949-368-1480 Fax 949-368-1490 San Onofre Nuclear Generating Station, Unit 2

e Total number and percentage of tubes plugged and/or repaired to date and the effective plugging percentage in each steam generator

This report contains no new commitments. If you require any additional information, please advise

Sincerely

Attachments

NO

CC^o E. W. Merschoff, Regional Administrator, NRC Region IV
 L. Raghavan, NRC Project Manager, San Onofre Units 2 & 3
 J. A. Sloan, NRC Senior Resident, San Onofre Units 2 & 3
 Institute of Nuclear Power Operations (INPO)

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San Onofre Nuclear Generating Station, Unit 2

Special Report

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SPECIAL REPORT - INSERVICE INSPECTION OF STEAM GENERATOR TUBES

Regulatory Reporting Requirements

Reporting Requirement 5 7.2 c of Appendix A, Technical Specification to Facility Operating License NPF-10, requires the number of tubes plugged and tubes sleeved in each steam generator to be reported to the Nuclear Regulatory Commission within 15 days following completion of the inspection

Reporting Requirement 5 7 2 c of Appendix A, Technical Specification to Facility Operating License NPF-10, requires the results of steam generator tube inspections which fall into Category C-3 to be reported to the Nuclear Regulatory Commission prior to resumption of plant operation

Reporting Requirement 5.7 2.c of Appendix A, Technical Specification to Facility Operating License NPF-10, requires the complete results of steam generator tube inspections to be reported to the Nuclear Regulatory Commission within 12 months following completion of the inspection.

Planned Inspection Scope

Table 1 summarizes the planned inspection program. Also, when indications by the bobbin probe were non-quantifiable or distorted, the inspection program included inspection with the Plus-Point Probe Table 4 provides the list of Nondestructive Examination (NDE) techniques utilized for each degradation mechanism.

Inspection Scope Expansion

Table 2 summanzes significant inspection program scope expansion in response to inspection results. The following explanatory details are provided for these expansions.

The planned inspection scope included Plus-Point Probe examination at all dented (≥ 2 volts) tube support locations in the hot leg of the tubing. An axially oriented indication was detected by the bobbin probe at a 2.2 volt dent at a tube support that is referred to as "VC2." This location was outside the planned Plus-Point Probe examination of hot leg dents. In response to this indication, the inspection was expanded to provide Plus-Point Probe examination of all dented (≥ 2 volts) tube support locations throughout the entire tube bundle.

SCE desired to continue the existing inspection of the U-bends in Rows 1, 2, and 3, but also evaluate the potential benefit of a newly developed inspection technique. The planned inspection scope included mid-range Plus-Point Probe inspection of the U-bends of all (100%), of the U-bends in Rows 1, 2, and 3 The planned inspection scope also included high frequency Plus-Point Probe inspection of a sample of the U-bends in Rows 1, 2, and 3 The evaluation indicated that the high frequency Plus-Point Probe provides some benefit in detection capabilities. The inspection was expanded to include high frequency Plus-Point Probe examination of all (100%) of the U-bends in Rows 1, 2, and 3.

Results

This report satisfies the listed regulatory reporting requirements.

The contents of this report are prepared using the guidance contained in NEI 97-06, Rev. 0, "Steam Generator Program Guidelines." The NEI guidance is an initiative to unify the industry approach towards steam generator issues and strengthen, where necessary, the steam generator program. In accordance with the suggested NEI guidance, the following five report contents are included within this report:

- (1) Scope of inspections performed:
- (2) Active Degradation Mechanisms found:
- Nondestructive Examination (NDE) techniques utilized for each degradation mechanism;
- (4) Number of tubes plugged or repaired during the inspection outage for each active degradation mechanism. Repair methods utilized and the number of tubes repaired by each repair method; and
- (5) Total number and percentage of tubes plugged and/or repaired to date and the effective plugging percentage in each steam generator.

Table 3 summarizes significant inspection results, and active degradation mechanisms found. Each tube is only counted once in this listing, although it may also have an eddy current indication of a type below the point in the listing where it appears. The Appendices provide the complete results of the steam generator tubing inservice inspection.

Table 5 summarizes in-situ pressure and leak testing results. This particular testing demonstrated the structural and leakage (i.e., there was no leakage) integrity of the tested tubes consistent with EPRI guidelines and recent industry guidance.¹ Eddy current testing results and in-situ pressure and leak testing results provide assurance that performance criteria in the NEI guidance (structural integrity and accident-induced leakage) were met during operation prior to this inspection.

Repair of Tubes

Table 3 lists the number of tubes repaired (removed from service by plugging, or repaired by sleeving) for each steam generator. Table 6 provides an itemized listing of the tubes plugged in steam generator E-088 along with the corresponding Table 3 category specifying the indication orientation/location. Table 7 provides an itemized listing of the tubes sleeved in steam generator E-088 along with the corresponding Table 3 category specifying the indication orientation/location. Table 8 provides an itemized listing of the tubes plugged in steam generator E-089 along with the corresponding Table 3 category specifying the indication orientation/location. Table 8 provides an itemized listing of the tubes plugged in steam generator E-089 along with the corresponding Table 3 category specifying the indication orientation/location. Table 9 provides an itemized listing of the tubes sleeved in steam

¹ Letter from Lawrence F. Womack (Pacific Gas and Electric Company) to Steam Generator Management Program Utility Steering Committees, et al., "Steam Generator Management Program (SGMP) Interim Guidelines on In Situ Pressure Testing of Steam Generator Tubes," dated October 13, 2000.

generator E-089 along with the corresponding Table 3 category specifying the indication orientation/location.

Repair Methods, Number of Tubes Repaired and Effective Plugging Percentage

All tube plugging was performed using the design, materials, and installation methods of FRAMATOME Technologies, Inc (FTI) A "roll" method was used for all tube plugs. Four tubes were "stabilized" in the vicinity of the top of the tubesheet using the design, materials, and installation methods of FTI

All tube sleeving was performed using the welded sleeve design, materials, and installation methods of Westinghouse (formerly ABB Combustion Engineering). This repair method is specifically addressed in the San Onofre Unit 2 and 3 Technical Specifications.

Thirty-six tubes were plugged, and ninety-six tubes were sleeved in Steam Generator E-088 during the Cycle 11 refueling outage A total of 724 tubes have been plugged, and to date, 180 sleeved tubes are in service. The design number of tubes is 9350 tubes and the sleeve to plug equivalency ratio is thirty-eight sleeves per plug. The effective plugging percentage for E-088 is 7 8%

Fifty-seven tubes were plugged, and fifty-two tubes were sleeved in Steam Generator E-089 during the Cycle 11 refueling outage A total of 765 tubes have been plugged, and to date, 103 sleeved tubes are in service. The design number of tubes is 9350 tubes and the sleeve to plug equivalency ratio is thirty-eight sleeves per plug. The effective plugging percentage for E-089 is 8 2%

Causes And Corrective Actions

The degradation detected during this inspection remained within the Technical Specification category "C-3" There is no significant update since a previous report of causes and corrective actions for "C-3" category results Thus, this portion of a previous report is provided below.

Actions have been taken to improve the secondary side chemistry environment for steam generator tubing in both Unit 2 steam generators. These actions have been reviewed by a panel of industry experts for application at SONGS. The expert panel concurs with these measures The actions include

- 1 Chemical cleaning of the entire tube bundle (full bundle) performed during the Cycle 9 refueling outage in December, 1996
- 2. Addition of an inhibitor (titanium dioxide) for IGA/SCC immediately after the chemical cleaning for maximum crevice penetration potential.
- 3 Use of Ethanolamine (ETA) for pH control of the secondary fluids

4. Bonc acid addition in the secondary side to help reduce denting of the tube supports and stress corrosion cracking of tubing.

In addition, SCE reduced the reactor coolant temperature at the steam generator inlet (T-hot) by about 13°F. SCE expects this will reduce stress corrosion cracking of the tubing initiating from the inside diameter of the tubing. The first phase of this change, a reduction of about 4°F, was completed in January 1998. The final phase of this change, a reduction of an additional 9°F, was completed in February 1999.

Description of Tables and Appendices

Table 1 -	Summary of the Planned Inspection Program for the Unit 2 Cycle 11 (U2C11) Refueling Outage
Table 2 -	Summary of Significant Scope Expansion for the U2C11 Refueling Outage
Table 3 -	Number of Tubes Repaired and Active Degradation Mechanisms Found During the U2C11 Refueling Outage
Table 4 -	List of Nondestructive Examination (NDE) Techniques Utilized for Each Degradation Mechanism for the U2C11 Refueling Outage
Table 5 -	Summary of Results of In-Situ Pressure and Leak Testing for the U2C11 Refueling Outage
Table 6 -	U2C11 Refueling Outage Tubes Plugged, Steam Generator E-088
Table 7 -	U2C11 Refueling Outage Tubes Sleeved, Steam Generator E-088
Table 8 -	U2C11 Refueling Outage Tubes Plugged, Steam Generator E-089
Table 9 -	U2C11 Refueling Outage Tubes Sleeved, Steam Generator E-089
Appendix 1 -	Steam Generator Reference Information
Appendix 2 -	Legend for Appendices 3 and 4
Appendix 3 -	Inspection Summary, Steam Generator E-088
Appendix 4 -	Inspection Summary, Steam Generator E-089

TABLE 1 - Summary of the Planned Inspection Program for the Unit 2 Cycle 11 (U2C11) Refueling Outage

	Steam C	Percentage of Tubes Senerator
	E-088	E-089
Full length of tube with the bobbin probe (excluding sleeved regions)	8662 / 100%	8642 / 100%
Hot leg expansion transition at the top-of-tubesheet with the Plus-Point Probe	8577 / 100%	8590 / 100%
Cold leg expansion transition at the top-of-tubesheet with the Plus-Point Probe	4331 / 50%	4325 / 50%
U-bend regions of Rows 1, 2, and 3 with the mid-range frequency Plus- Point Probe	182 / 100%	184 / 100%
Sample of U-bend regions of Rows 1, 2, and 3 with the high frequency Plus-Point Probe	N/A	62 / 17%
Plus-Point Probe examinations of all hot leg tube support intersections at 01H through DBH with dents greater than, or equal to, 2 volts	3951 / 100%	3005 / 100%
Plus-Point Probe examination of all tube support intersections with quantified wear indications by the bobbin probe	246 / 100%	313 / 100%
Fuil length of sleeves with the Plus-Point Probe	85 / 100%	52 / 100%

<u>TABLE 2</u> - Summary of Significant Scope Expansion for the U2C11 Refueling Outage

	Number of Tubes/Percentage of Tubes Steam Generator		
	E-088	E-089	
Plus-Point Probe examinations of all tube support intersections with dents greater than, or equal to, 2 volts	387 / 100%	168 / 100%	
U-bend regions of Rows 1, 2, and 3 with the high frequency Plus-Point Probe	182 / 100%	122 / 100%	

TABLE 3 - Number of Tubes Repaired and Active Degradation Mechanisms Found During the U2C11 Refueling Outage

Category	Indication Orientation/Location	Steam G E-088	enerator E-089			
1	Tubes with axially onented ID (initiated on the inside-diameter of the tubing wall) indications at tube support locations (ID Axial @ Support)	3	3			
2	Tubes with axially oriented OD (initiated on the outside-diameter of the tubing wall) indications at tube support locations (OD Axial @ Support)	12	5			
3	Tubes with axially onented OD indications not associated with a tube support (freespan) (OD Axial @ Freespan)	4	9			
4	Tubes with circumferentially oriented ID indications near the expansion transition at the top of the hot leg tubesheet (ID Circ @ TSH)	47	9			
5						
6	Tubes with axially onented OD indications in the sludge pile region near the top of the hot leg tubesheet. (OD Axial @ Sludge Pile TSH)	10	14			
7	Tubes with axially oriented OD indications near the expansion transition at the top of the hot leg tubesheet (OD Axial @ TSH)	1	0			
8	Tubes with axially oriented ID indications near the expansion transition at the top of the hot leg tubesheet. (ID Axial @ TSH)	1	0			
9	Tubes with axially oriented ID indications below the inlet top-of-tubesheet. (ID Axial below TSH)	24	24			
10	Tubes with circumferentially oriented ID indications below the inlet top-of- tubesheet. (ID Circ below TSH)	12	10			
11	Tubes with indications of wear at tube support locations (Wear @ Support)	11	22			
12	Tubes with volumetric indications (OD Vol @ Miscellaneous)	0	2			
13	Miscellaneous preventative plugging (not an active degradation mechanism). (Prevent @ Miscellaneous)	0	4			
	Total	132	109			

<u>TABLE 4</u> - List of Nondestructive Examination (NDE) Techniques Utilized for Each Degradation Mechanism for the U2C11 Refueling Outage

م میں معرف میں السیاد	Probe Type for				
Indication Orientation/Location	Detection	Characterization			
Axially onented ID (initiated on the inside-diameter of the tubing wall) indications at tube support locations	Bobbin	Plus Point			
	Plus Point (Note 1)	Plus Point			
Axially oriented OD (initiated on the outside-diameter of the tubing wall) indications at tube support locations	Bobbin	Pius Point			
	Plus Point (Note 1)	Plus Point			
Axially oriented OD indications not associated with a tube support (freespan)	Bobbin	Plus Point			
Circumferentially onented ID indications near or below the expansion transition at the top of the hot leg tubesheet	Plus Point	Plus Point			
Circumferentially onented OD indications near the expansion transition at the top of the hot leg tubesheet	Plus Point	Plus Point			
Axially oriented indications in the sludge pile region near the top of the hot leg tubesheet	Plus Point	Plus Point			
Axially oriented ID indications near or below the expansion transition at the top of the hot leg tubesheet	Plus Point	Plus Point			
Indications of wear at tube support locations	Βοδριη	Pius Point			

Note 1 Plus-Point technique is used at dents with greater than, or equal to, two volts.

TABLE 5 - Summary of Results of In-Situ Pressure and Leak Testing for the U2C11 Refueling Outage

Steam Generator E-088

			TUBE	AND EDDY	CURRE	NT INFOR	MATION		·····	· · · · · · · · · · · · · · · · · · ·	· · · · · ·	IN-SITU	TEST RESUL	TS
REGION	TU	BE INFO	RMATION			PLUS POIN	NT DATA		BOBBIN DATA	SELECTION	CPU	<u> </u>	1	
	ROW	COL	LOCATION	LENGTH	VOLTS	Max. Depth %	PDA or Avg. Depth %	ORIENTATION	VOLTS	CRITERIA	NOPD	MSLB	GPM @ NOPD POST MSLB	PRESSURE 3xNOPD
EGGCRATE	24	62	07H + 0.09	1.37	0.43	39%	27.4% (AD)	OD AXIAL	0.28					
TUBESHEET		75	TSH - 0.09	0.26	0.73	95%	12.0% (PDA)		0.20 N/A				0	5050
	62	98	TSH + 0.12	2.04	0.54	88%	49.9% (PDA)		N/A		0	0	0	5450 5450

Steam Generator E-089

	······		TUBE	AND EDDY	CURRE	NT INFOF	RMATION		*·····			IN-SITU	TEST RESUL	TS
REGION	TUBE INFORMATION				PLUS POINT DATA			BOBBIN DATA	SELECTION		<u> </u>			
-	ROW	COL	LOCATION	LENGTH	VOLTS	Max, Depth %	PDA or Avg. Depth %	ORIENTATION	VOLTS	CRITERIA	NOPD	MSIR	NOPD POST MSLB	PRESSURE 3xNOPD
EGGCRATE	71	73	07H + 0.51	0.57	0.79	54%	45.4% (AD)	ID AXIAL	0.92		Ō			
LOW ROW U-BEND	1	21	DBH + 5.90	N/A	2.4	N/A	N/A	GEOMÉTRY (GEO)	N/A		0	0	0	<u>5050</u> 5050

NOTES: The SELECTION CRITERIA column indicates the EPRI in Situ Testing Guidelines' criteria that prompted selection. P = Pressure testing for structural integrity criteria L = Testing for criteria for postulation of accident-induced leakage integrity GPM = Gallons per Minute NOPD = Normal Operation Pressure Differential MSL = Their Steam Line Break Operation Pressure Differential

MSLB = Main Steam Line Break Pressure Differential

N/A = Not Applicable

OD = Degradation initiated on the outside diameter of the tubing

ID = Degradation initiated on the inside diameter of the tubing

CIRC = Circumferential

PDA = Percent degraded area

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Row	Column	Reason for Plugging Tube (per Table 3)
37	11	OD Axial @ Support
91	25	OD Axial @ Freespan
24	46	ID Axial @ Support
28	48	OD Axial @ Support
2	54	ID Circ below TSH
24	62	OD Axial @ Support
22	68	Wear @ Support
37	73	ID Axial below TSH
41	75	Wear @ Support
77	75	ID Circ @ TSH
85	75	OD Axial @ Support
96	78	ID Circ @ TSH
54	80	Wear @ Support
130	80	OD Axial @ Support
85	83	OD Axial @ Support
143	85	Wear @ Support
52	86	Wear @ Support
54	88	ID Axiai below TSH
137	89	OD Axial @ Support
80	90	OD Axial @ Freespan
146	90	Wear @ Support
53	93	Wear @ Support
48	96	Wear @ Support
50	96	Wear @ Support
62	98	OD Circ @ TSH
85	99	OD Axial @ Support
35	103	Wear @ Support
87	103	OD Axial @ Support
76	106	OD Axial @ Freespan
106	108	ID Axial @ Support

TABLE 6 - SONGS U2C11 Refueling Outage Tubes Plugged STEAM GENERATOR E-088

NO

Row	Column	Reason for Plugging Tube (per Table 3)	
43	109	OD Axial @ Support	
57	113	ID Axial @ Support	
14	120	OD Axial @ Support	
64	122	Wear @ Support	
85	125	OD Axial @ Support	
13	161	OD Axial @ Freespan	

TABLE 6 - SONGS U2C11 Refueling Outage Tubes Plugged STEAM GENERATOR E-088

TABLE 7 - SONGS U2C11 Refueling Outage Tubes Sleeved STEAM GENERATOR E-088

Row	Column	Reason for Sleeving Tube (per Table 3)
18	30	ID Axiai below TSH
41	45	ID Circ @ TSH
34	46	ID Circ @ TSH
27	47	ID Circ @ TSH
4	48	ID Circ below TSH
5	51	ID Circ below TSH
9	51	ID Circ below TSH
17	51	ID Circ @ TSH
22	52	ID Circ @ TSH
42	52	ID Circ @ TSH
15	53	ID Circ below TSH
17	53	ID Axial below TSH
84	56	ID Circ @ TSH
20	58	ID Circ @ TSH
38	58	ID Axial below TSH
. 26	60	ID Axial below TSH
28	60	ID Axial below TSH
. 72	62	ID Circ @ TSH
62	54	ID Circ @ TSH
27	65	ID Axial below TSH
75	65	ID Circ @ TSH
60	66	OD Axial @ Sludge Pile TSH
40	68	ID Axial below TSH
33	69	ID Axial below TSH
77	69	ID Circ @ TSH
84	70	ID Circ @ TSH
97	71	ID Circ @ TSH
44	72	ID Axial below TSH
48	72	ID Axial below TSH
58	72	ID Axial below TSH

Row	Column	Reason for Sleeving Tube (per Table 3)
53	73	ID Axial below TSH
58	74	OD Circ @ TSH
64	76	OD Axial @ Sludge Pile TSH
80	76	ID Circ @ TSH
69	77	ID Circ @ TSH
48	78	ID Circ @ TSH
72	78	ID Circ @ TSH
63	79	OD Circ @ TSH
89	79	ID Circ @ TSH
91	79	ID Circ @ TSH
55	83	OD Axiai @ Sludge Pile TSH
94	86	ID Circ @ TSH
69	87	OD Axial @ Sludge Pile TSH
54 .	90	ID Circ @ TSH
66	90	ID Circ @ TSH
99	91	ID Circ @ TSH
72	92	OD Axial @ Sludge Pile TSH
55	93	ID Axial below TSH
84	94	ID Circ @ TSH
54	96	ID Circ below TSH
69	97	OD Axial @ Sludge Pile TSH
54	98	ID Circ @ TSH
66	98	OD Axial @ Sludge Pile TSH
74	98	OD Circ @ TSH
65	101	OD Axial @ Sludge Pile TSH
73	101	ID Circ @ TSH
79	101	ID Circ @ TSH
42	102	ID Circ below TSH
46	102	ID Axial below TSH
70	102	ID Circ @ TSH
80	102	ID Circ @ TSH

TABLE 7 - SONGS U2C11 Refueling Outage Tubes Sleeved STEAM GENERATOR E-088

Row	Column	Reason for Sleeving Tube (per Table 3)
39	103	ID Axial below TSH
4 1	105	ID Axial below TSH
63	107	OD Axial @ Sludge Pile TSH
24	108	OD Circ @ TSH
37	109	ID Axial below TSH
39	109	OD Axial @ Sludge Pile TSH
47	109	ID Circ @ TSH
79	109	ID Circ @ TSH
39	111	ID Axial @ TSH
43	111	ID Axial below TSH
49	111	OD Axial @ TSH
59	111	ID Circ below TSH
34	114	ID Axial below TSH
65	115	ID Axial below TSH
18	116	ID Circ @ TSH
46	120	OD Circ @ TSH
49	121	ID Circ below TSH
75	121	ID Circ @ TSH
42	124	OD Circ @ TSH
25	125	ID Circ @ TSH
41	125	ID Circ @ TSH
16	126	ID Circ @ TSH
95	127	ID Circ @ TSH
51	129	ID Circ @ TSH
24	130	ID Circ below TSH
44	130	ID Circ @ TSH
60	130	ID Circ @ TSH
14	132	ID Circ below TSH
26	132	ID Axial below TSH
40	132	ID Circ @ TSH
23	135	ID Circ @ TSH

TABLE 7 - SONGS U2C11 Refueling Outage Tubes Sleeved STEAM GENERATOR E-088

Inservice Inspection of Steam Generator Tubes Attachment

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TABLE 7	- SONGS U2C11 Refueling Outage Tubes Sleeved
•	STEAM GENERATOR E-088

Row	Column	Reason for Sleeving Tube (per Table 3)			
26	136	ID Axial below TSH			
7	145	ID Circ below TSH			
14	. 150	ID Circ @ TSH			
10	156	ID Circ @ TSH			

Row	Column	Reason for Plugging Tube (per Table 3)
45	7	Prevent @ Miscellaneous
25	17	OD Axiai @ Freespan
1	. 21	Prevent @ Miscellaneous
30	28	OD Axiał @ Freespan
9	29	ID Circ @ TSH
106	34 '	OD Axial @ Freespan
94	38	OD Axial @ Support
98	38	OD Axial @ Support
12	40	ID Axial below TSH
123	41	OD Vol @ Miscellaneous
8 .	44	OD Axial @ Support
60	48	ID Circ @ TSH
47	55	ID Axial @ Support
131	57	ID Axial below TSH
2	60	OD Axial @ Support
47	63	ID Axial @ Support
1 5	65	OD Axial @ Freespan
64	70	OD Axial @ Sludge Pile TSH
138	70	OD Vol @ Miscellaneous
41	71	Wear @ Support
71	73	ID Axiai @ Support
145	73	Wear @ Support
44	· 76	Wear @ Support
47	79	Wear @ Support
48	82	Wear @ Support
59	83	Wear @ Support
147	83	Wear @ Support
58	84	Wear @ Support
57	85	Wear @ Support
145	85	Wear @ Support

TABLE 8 - SONGS U2C11 Refueling Outage Tubes Plugged STEAM GENERATOR E-089

Row	Column	Reason for Plugging Tube (per Table 3)
56	86	Wear @ Support
59	87	Wear @ Support
147	87	Wear @ Support
54	88	Wear @ Support
70	88	Wear @ Support
57	89	Wear @ Support
51	.91	Wear @ Support
55	93	Wear @ Support
57	93	ID Axiai below TSH
72	94	Wear @ Support
57	95	Wear @ Support
42	100	Wear @ Support
78	102	ID Axial below TSH
36	108	ID Axial below TSH
36	110	ID Axial below TSH
5	113	OD Axial @ Freespan
68	114	OD Axial @ Freespan
91	121	ID Axial below TSH
28	124	OD Axiai @ Freespan
77	125	Wear @ Support
1	127	ID Circ below TSH
103	133	OD Axial @ Support
10	136	ID Circ below TSH
9	141	OD Axial @ Freespan
3	145	Prevent @ Miscellaneous
103	147	OD Axial @ Freespan
3	157	Prevent @ Miscellaneous

TABLE 8 - SONGS U2C11 Refueling Outage Tubes Plugged STEAM GENERATOR E-089

.

TABLE 9 - SONGS U2C11 Refueling Outage Tubes Sleeved STEAM GENERATOR E-089

Row	Column	Reason for Sleeving Tube (per Table 3)
16	24	ID Circ @ TSH
83	49	· ID Circ @ TSH
8	52	ID Circ below TSH
28	52	OD Circ @ TSH
84	54	ID Circ @ TSH
65	57	OD Axial @ Sludge Pile TSH
62	58	ID Axial below TSH
26	60	ID Axial below TSH
11	63	OD Circ @ TSH
. 34	64	OD Axial @ Sludge Pile TSH
26	66	ID Axial below TSH
57	67	OD Axial @ Sludge Pile TSH
63	67	ID Circ @ TSH
44	68	OD Axial @ Sludge Pile TSH
58	70	OD Axial @ Sludge Pile TSH
78	82	ID Axial below TSH
56	84	OD Circ @ TSH
120	84	OD Circ @ TSH
83	89	ID Circ @ TSH
107	89	OD Circ @ TSH
64	92	OD Axial @ Sludge Pile TSH
63	93	OD Axial @ Sludge Pile TSH
64	96	ID Axial below TSH
64	98	OD Axial @ Sludge Pile TSH
78	98	ID Axial below TSH
54	102	ID Axial below TSH
41	105	ID Axial below TSH
34	106	ID Axial below TSH
38	106	ID Axial below TSH
56	106	OD Axial @ Sludge Pile TSH

Inservice Inspection of Steam Generator Tubes Attachment

.

Row	Column	Reason for Sleeving Tube (per Table 3)
37	109	OD Axial @ Sludge Pile TSH
38	110	OD Axial @ Sludge Pile TSH
40 .	110	OD Axial @ Sludge Pile TSH
29	111	OD Circ @ TSH
21	113	OD Circ @ TSH
37	113	ID Axial below TSH
49	113	OD Axial @ Sludge Pile TSH
59	113	ID Axial below TSH
48	114	ID Axial below TSH
62	116	ID Axial below TSH
68	118	ID Axial below TSH
20	120	ID Circ below TSH
82	122	ID Circ @ TSH
8	124	ID Circ below TSH
9 ·	125	ID Circ below TSH
46	126	ID Circ @ TSH
5	127	ID Circ below TSH
11	129	ID Circ below TSH
7	133	ID Circ below TSH
78	136	ID Axial below TSH
19	139	ID Circ below TSH
8	146	ID Axial below TSH

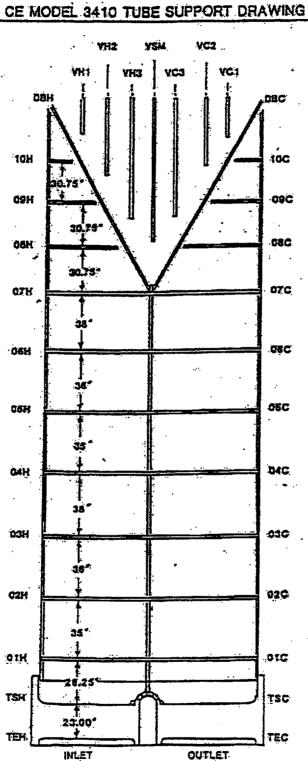
TABLE 9 - SONGS U2C11 Refueling Outage Tubes Sieeved STEAM GENERATOR E-089

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Appendix 1

Steam Generator Reference Information

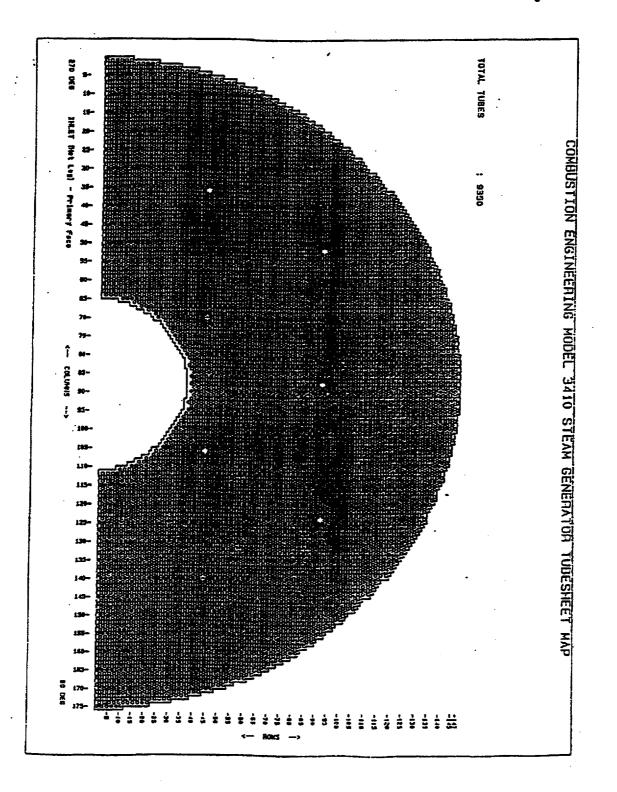
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CLARIFICATION OF TUBING/SUPPORT INTERFACES ABOVE THE 7TH FULL EGGCRATE SUPPORT

ROW(S)	•	TUBII	G/SUPPORT INTERFACE	<u>ES</u>	
120-147	08H.09H.1	OH, DBH, VI	11.VH2.VH3.VSM.VC3.V	/C2.VC1.D8C.10	06,090,080
115-119	08H.09H	DBH, VH	<u>1.VH2.VH3.VSM.VC3.V</u>	IC2.VCI.DBC	090.080
84-114	081,091	DEH	VH2, VH3, VSM, VC3, V	ICZ DBC	09C, 08C
83	08H	OBH	VH2,VH3,VSM,VC3,V	<u>7C2 DBC</u>	080
51-82	08H	DBH	VH3.VSM.VC3.	DBC	080
49-50	088	DBH	VSM	080	080
19-48		DBH	VSM	DBC	•
1-18		D8H		DBC	

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Appendix 2

Legend for Appendices 3 and 4

List of Abbreviations and Format Used to Describe the Indications from Rotating Probe Testing

"I-Code" Abbreviations	Explanation of the Abbreviations
SCI	Single Circumferential Indication
MCI	Multiple Circumferential Indications
SAI	Single Axial Indication
MAI	Multiple Axial Indications
MMI	Mixed Mode Indications
SVI	Single Volumetric Indication (i.e., no special axial or circumferential aspect)
MVI	Multiple Volumetric Indication (i.e., no special axial or circumferential aspect)

Format

NO

In Appendices 3 and 4, a single line of data is associated with each individual rotating probe indication. Below is a descriptive example of the format.

	+P VOLTS +P DES	to the second				
100 100	LL ANTIS LL ARE	icoart cua	+0.01	I ISHTSH	PAN VOLTS	+ P 또비 율

- 1. All "I-code" indications require a single line entry. The example above displays the form of a Resolution report line. The VOLTS field contains the Plus-point P-to-P voltage of the largest, most representative response. The DEG field contains the corresponding phase angle. The PCT field contains the appropriate 3-letter code. The CHAN field contains the reporting channel (i.e. the appropriate 300kHz Plus-point channel). The LOCATION field contains the referenced landmark. The FROM field contains the axial distance from the landmark to the response measured above. The EXTENT field indicates the test extent. The UTIL 1 field contains the 300kHz 0.115" pancake P-to-P voltage of the largest, most representative response. The UTIL 2 field contains the measured Plus-point length of the indication. Exceptions to this general guidance are in paragraphs 2 and 3 below.
- 2. For axial indications of extended length, the location should be ranged in the FROM and TO fields. If the range of such an indication includes any part of a support structure, it should be referenced from that landmark.
- For "I-code" indications which have both axial and circumferential extent (i.e. SVI, MVI, and MMI) the location should be ranged in the FROM and TO fields and the UTIL 2 field should contain the circumferential length.

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Appendix 3

Inspection Summary

Steam Generator E-088

	•	Appendix 3	uun vi Jisani Jo				Page 2 of 13	
			SG88 MAI,	MCI, MMI, MVI, S	SAI, SCI, SVI,	0-1001TWD	• .	
		UTILITY:	Southern California	Edison,			NOV. 8,2000 8:44	
		PLANT :	San Onofre					
~~~		UNIT:	2					
		SG:	88					
'		DATABASE:	SONG5_02_1000_SG88_	FINAL			PAGE 1	
**************************************	ROW COL-	VOLIS DEG PCT CH	N FLAW LOCATION	EXTENT	UTIL1 UTIL2	NAME TYPE CAL GROU	P LEG PROBE SIZE	
1	50 8	0.35 141  14 P	2 VSM +0.84	TEATEC	i	H1748   ==sc   88C00005	C SOOTL	1
2	· 52 8 8	0.39  38  14 P	2 VH3 +0.73	TERTEC	1	T9924   seco   88C00004	CIGOOUL	1.
3	13  9	0.47 78 18 2 3	2]05# -0.00	TENTEC	I	E1748   =eso   88C00005	CIEDOCT	ł
4	52 10	0.36  35  13 2	2   VH3 +0.68	TENTEC	I	T9924   seco   88C00004	C 6000L	1
5	31 11	0.35  70  11 F	3 DBH -1.35	TERTEC	1	V1371 [prim 88C00004	C 6000L	1
5	37  12	0.371122 MAI	2 062 -0.45	06H06H  0	1.0 [0.33	M0554   2850   88H00237	E 60079	I
7	1 1 1	0.16 132 SAI	2 05H +0.78	аснося 10	0.27  0.30	M0554   zesc   88800237	H 50022	1 .
8	63  11	0.36 103 13 2	2 VH3 -0.58	TERTEC	I	V1371 prim 88C00004	CISOOCL	1
9	67 11	0.42 65 15 2	2 VH3 -0.60	TERIEC	1	V1371 prim ##C00004	CISOOCL	ł
10	54 12	0.23 125 9 P	2   VH3 -0.56	TERTEC	t	V1371 prim 88C00004	C 60000	1
11	39 23	0.37 138 14 P	2.VSM +0.42	TENTEC	I.	[ 19924   seco   #2C00004	C 50000 .	1
12	24 14	0.31 89 11 9	2 VSM +0.62	TEATEC	1	33170 prim 88C00007	C 60000	1
13	43 19	0.62 130 21 2	2 024 +0.97	TEATEC		M0554 zeso 18000006	C[ 50002	I
14	16 20	0.28 140 11 2 3	3 DBC +0.51	TERIEC	i	W9658 seco \$800009		Ì
15	70 20	0.43[108] 16[7 :	2 VC3 +0.73	TERTEC	1	V1371 prim #8C00008		Ì
16	43   21	0.27  85  11 P :	2 757 +0.88	TENTEC		L3168 [prim 88C00008		l
17	78 22	0.79 129 25 P	217C3 -0.83'	TENTRC	i	22003 jzia 38C30070		1
13	81 23	0.35  86  12 P :	3 DBC +1.85	TEHTEC	i	D2003 prim \$8C00070	· •	F
19	35 25			TENTEC	1	35926 seco 8800068		1
20	91 25		2 068 +24.53		1.00 10.25	1 E1748 [ === 0   88E00239		I
	102 26	• • •		TERTEC .	10.23	22003 prin 88C30670		1
	18 30				1.73 0.35	[ E4953 [reso] ##E00133		r r
23	1206 30	0.51 126 21 2		TERTEC	1 10.33			1 1
14	94 32	0.52 97 21 P		TENTEC	1	19168 grin [88000073]	•	1
	77 33	0.49 96 17 P			1	[ 13158 prim 88030073]		1
26		0.53 64 19 2	•	TEATEC	I	D5695 seco 88C30072		1
	1 1 1	0.27 68 11 P			1	39278 seco 88C00074		1
. 27	1 1 1			TEXTEC	1	R9278 seco 88C00074		1
25	1108 36		•	TEHTEC	ł	38278  seco 88C30074		1
29	B9  37			ISATEC	l	[ L3025 [pris[88C00074]		1
30		0.27 97 11 P 2		TENTEC	1	1 13025 pria 88C00074		1
31	111  37		-	TENTEC	I	L9158 pria 8800075		ł
32	113 37		•	TENTEC	ŧ	M7252[zeso]88C30074]		ł
33	84 38			TERISC	l	1 13025 prim 88000074		i
34	96  38		•	TENTEC	1	[ R3278 seco 88C00074		ł
35	100 38			TERTEC	1	[ R8278   seco [\$8C20074	C[60002	ł
36	120 38	· • •		TEATEC	I	_R8278   seco   88C00074	C[50002	1
37	81 39			TENTEC	ł	13025 prim 88C00074		1 -
38	93 39			TEHTEC	1	L3025 prim 88C90074	C160002	í –
39	113 39		DBH +1.79	TEATEC	Ι.	L3025[prim[88C00074]	CISOOD .	ł –
40	121 39			TERISC	1	13025 prim 88C00074	CIEDOUL	t
41		0.40  74  15 2 2	2 03C -0.93	TERIEC	1	13025 prim 88000074	C 60002	i –
42	92 40	0.36  81  14 2 2	2   VSM -0.73	TSHTEC	4	13025 pris 8800074	CISOOTL	l –
43	96 40	0.31 86 12 2 2	2 [VC2 +0.30	TERTSC	L .	R8278 seco \$300074	C 600UL	ł
44	77 41	0.23 79 9 2 2	2 VSM +0.78	TEHTEC	1	L3025  pria   88C00074	CISCOUL	l
45	85  41	0.30 140  12 P 2	2 VH2 -0.80	TENTEC	[	R9275 seco 88C00074	CISOOUL	ł
46 .	1 1 1	0.25 88 10 P 2	VH2 -0.50	TENTEC	1	R8278   seco   88C00074	CISCOUL	ł
	1113 41	0.48 107  18 P 2	2 VH2 -0.51	TENTEC	l l	L3025 pris 88000074		Ľ
ممنعه رايه	1121   41	0.40 114  15 P 2	2 VH1 +0.76	TERTEC	ł	L3025 prim 88C00074		i
49	123 41	0.33[137] 13]P 2	2   VH1 -0.69	TEHTEC	1	[ L3025 prim 88000074]		I
				·	-			

0000 MUL. NCL. NCL. NCL. NCL. SUL. SUL. SUL. SUL. SUL. SUL. SUL. SU	роп 13
SC:         B3           DATABLY:         SURGE_12_1000_SOBS_TINL           PARE 2           AMM COL VOLTS DED FOT CHN FLAM LOCATION         LECEN TILL UTILL UTILL UNDE TITE CLUGROUP LOG PROBE ST           50         [116] 42[         0.30] 96] 8]P 21YEM         -0.33         [TERTEC                     RMSET TYPE CLU GROUP LOG PROBES ST           51         [714] 43]         0.39] 63] 17[P 2103H         -0.44         [TERTEC                     RMSET STREES	44
DATABATE:         DATE 02_1000_SG48_FINAL         DETEXT	
ADM COL VOLIS DEC RCT CIN FLM SCATION         EXTENT         TTILL         UTILL         UNIT 2         NAME TYPE CAL GROUP L20         PROBE ST           50         [116] 42[         0.20] 56[         819 21984         -0.83         [TERTE C]         1         RAST 00007 L20         PROBE ST           51         [71] 431         0.39 62]         171 P 201X         -0.84         [TERTE C]         1         RAST 00007 L20         PROBE ST           52         [53] 0.23 [124]         51 P 201X         -0.84         [TERTE C]         1         RAST 00007 L20         PROBE ST           53         [44] 451         0.241 R01 [101P 3100K         -0.52         [DENTE C]         1         RAST 00007 L20	
So       1146       421       0.201       966       817       2100       0.33         50       [114]       421       0.391       [124732]       1       1       142778       1       142778       14200075       C (50007)         52       [134]       44       0.231       [23]       1217       20108       -0.61       1       124778       1       123778       12600070       C (50007)         53       [14]       44       0.241       0.231       221572       1       1       12778       126018       1260077       C (50007)       1260077         54       [44]       [44]       0.231       221572       12167       -0.52       1057057       12       1       7222       126018700222       1260077         55       [24]       46       0.321       210571       1319       21057       -0.52       1057057       12       14752       1260077       160007       126077       160077       160077       160077       160077       160077       160077       160077       160077       160077       160077       160077       160077       160077       160077       160077       160077       160077       17777       16007	
So       1146       421       0.201       966       817       2100       0.33         50       [114]       421       0.391       [124732]       1       1       142778       1       142778       14200075       C (50007)         52       [134]       44       0.231       [23]       1217       20108       -0.61       1       124778       1       123778       12600070       C (50007)         53       [14]       44       0.241       0.231       221572       1       1       12778       126018       1260077       C (50007)       1260077         54       [44]       [44]       0.231       221572       12167       -0.52       1057057       12       1       7222       126018700222       1260077         55       [24]       46       0.321       210571       1319       21057       -0.52       1057057       12       14752       1260077       160007       126077       160077       160077       160077       160077       160077       160077       160077       160077       160077       160077       160077       160077       160077       160077       160077       160077       160077       17777       16007	
51       [71] 43]       0.39       62       171P 21018       -0.84       [TERTEC   ]       M054] [rest] [3400075]       C100007         52       [85] 43]       0.31124       91P 21792       -0.61       [TERTEC   ]       M054] [rest] [3400075]       C100007         54       [44] 0.26] 40 10P 31084       -0.52       [TERTEC   ]       I       T544 [sec] [3400075]       C160007         55       [24] 46       0.39 12507       21957       -0.52       [DE00578] [.20] [37057] [38005022]       3[60077         56       [4]       0.36 1171 131P 21068       -0.52       [DE00578] [.20] [3705 [3800022]       3[60077         57       []       0.331003[AX1 2106K       -0.52       [DE00578] [.20] [3705 [3800022]       3[60077         58       []       0.56 [127] 131P 21068       -0.11       [TERTEC   ]       [M7222] rest3[8400056] [210071       [CE0070         59       []       44       60.32 [2172 21068       -0.11       [TERTEC   ]       [M722] rest3[84000512] [160072         51       []       0.52 [171] 1178       -0.48       [TERTEC   ]       [M722] rest3[84000512] [160072         52       []       []       0.52 [171] 1178       -0.48       [TERTEC   ]       [M722] rest3[8400051] [160072         51	£ .
1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1	1
53       18       44       0.26       40       101P       31000000000000000000000000000000000000	Ì
54       4.1       4.5       0.49       231SCIP 175H       -0.11       TEXETSER       0.00       0.20       MT4521res0[3800012]       B(4002P)         55       2.4       4.6       0.23       22[SXI       2[05H       -0.52       [05H05H       1.20       1.15       Px5731res0[3800012]       B(4002P)         56       1       0.33       1.03[SXI       2[05H       -0.60       TEXTEC       1       Px5731res0[3820022]       B(6002P)         57       1       1       0.551127       1.9       2[05H       -0.60       TEXTEC       1       Px5731res0[3820022]       B(6002P)         58       1       0.551127       1.9       2[05H       -0.60       TEXTEC       1       Px5731res0[3820023]       B(6002P)         59       34       44       5.2       [25174]       1.58       -0.32       TEXTEC       1       M7252]res0[3820023]       B(6002P)         51       1.37       47       0.42       22       SCIP 1       -0.32       TEXTEC       1       32254]res0[3820023]       B(6002P)         52       1.37       41       48       0.731751       M7251       1.57       1.52       1.52       1.52       1.500571       1.6002P	I
55       244       461       0.281       23       541       20       058077       1.20       1.15       1.45       1.45       1.45       1.45       1.45       1.45       1.45       1.45       1.45       1.45       1.45       1.45       1.45       1.45       1.45       1.45       1.45       1.45       1.45       1.45       1.45       1.45       1.45       1.45       1.44       1.45       1.45       1.44       1.45       1.45       1.44       1.45       1.44       1.45       1.44       1.45       1.44       1.45       1.44       1.45       1.44       1.45       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1.44       1	I
56       []       0.36[117] 13]P 2[05H       -0.60       []       1000000000000000000000000000000000000	Í
57                       0.33 103 SAT       2106H       -0.27       06R06H        .43        .22       P4578 res0 8800222       Ri60029         58                       0.56 117 19 9206H       -0.11       TENTEC               M7262 res0 88000221       Ri60029         59       34 46       0.32 22 SCIP1TISH       -0.08       TSHTSH               0.70               M7262 res0 88000214       Ri60029         50               27 47        0.43 22 SCIP1TISH       -0.08       TSHTSH               0.70               #3225]prinl#400085[       Ci60071         51               448        0.31 TSCIP2 TISH       -0.08       TSHTSH               0.57                       32265]prinl#400085[       Ci60071         52               1.37               -0.48               TSHTSH               0.57                       32265]prinl#400851       Ci60071         53                               -0.31       TSHTSH               0.57               >        32265]prinl#400851       Ci60072         54                                       1.37                                                 <t< td=""><td>Ì</td></t<>	Ì
58               0.56 127 19 22 068       -0.11       TEXTEC               H7252 res0 38C30066       C 6000TL         59         34 46[       0.32 21 SCI[P1 TSR       -0.08       [TSKTSR]       0.00       0.20       H7252 res0 38C30066       C 6000TL         60         27 47        0.42 22 SCI[P1 TSR       -0.08       [TSKTSR]       0.15       G4441[res0]48E00294       I 60027         61       37 47        0.42 22 SCI[P1 TSR       -0.18       [TSKTSR]       0.157       [0.15]       G4441[res0]48E00294       I 60027         52       129 47        0.63 144 22 P2 VKB       -0.92       [TEXTEC]               H9223 sec0 48200454       I 60027         54         28 44        0.44117 SAI 207H       -0.46       [07807H]0.0       0.157         0.15       G4441[res0 48200234       I 60027         54         28 44        0.44117 SAI 207H       -0.46       [07807H]0.0       0.17         M7252 res0 38200234       I 60027         55       166 48        0.47 133 17 22 VKM       -0.72       [TEXTEC]                 132133 seco 38200234       I 60027         56       196 501       0.42 67 145 P2 VC2       -0.36       [TEXTEC]                 32133 seco 38200234       I 60027         57	ł
59       34       46       0.32       21       SCIP       1TSKT       -0.08       TSKTSH       0.00       0.20       MT2S2       TSKTSH       1       1       1       1       0.00       1       1       1       0.00       1       1       1       0.00       1       1       1       0.00       1       1       1       0.00       1       1       1       1       0.00       1       1       1       1       1       1       0.00       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       0.00       1       1       1       1       1       1       1       0       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1 <t< td=""><td>j.</td></t<>	j.
59         34  46        0.32  21 SCI  P 1 TSR       -0.08       [TSHTSH  0.00]        0.20]        MT252 Tas0 88E00191       ] [60022         60         27  47        0.46  126  17  P 2 VSN       -0.13       [TSHTSH  0.57]        0.15       [G4841]Tas0 88E00194       ] [60022         61         37  47        0.46  126  17  P 2 VSN       -0.92       [TSHTSH  0.57]         1       32265]Prim]84C00085       [G60022]         52         129  47        0.46  117 SAI   20 P 1       -0.89       [TSHTSH  0.6]         1.29       [MT252]Tas0 88E00194       [G6022]         53         44  48        0.93 147 SCI   21 TSR       -5.66       [TSHTSH  0.6]         0.25       [M0554]Tas0 88E00194       [G6022]         54         28  44        0.47 113  17  21 VSN       -0.72       [TSHTSH  0.53]         0.17       [MT262]Tas0 88E0052  2  50025        [G5022]         55         66  46        0.47 13  17  21 VSN       -0.72       [TSHTSH  0.53]         0.17       [MT262]Tas0 88E0052  2  50025        [G5022]         66         9  51        0.35  20 SCI   11TSR       +0.48       [TSHTSH  0.53]         0.17       [MT262]Tas0 88E0053  3  50025        [S50222]         63       1.51       0.35  122  14  11TSR       +0.48       [TSHTSH  0.34   0.21        [MT232]Ta	- i
60       27       47       0.42       22       SCIP       1TSET       -0.18       TSETSE       0.57       0.15       G4841[reso]#E00294       E[60072         61       17       47       0.48       17       218272       [       32265]prin[#4200045       C[60072         62       129       47       0.63[144]       22       21921       -0.89       TEXTEC       [       #2265]prin[#4200045       C[60072         62       129       44       0.63[144]       22       2191       -0.89       TEXTEC       [       #9213]sec0]#8200234       E[60079         54       128       44       0.44[117]SAI       2197H       +0.48       07H07H       [0.0       [0.25]       M0554]reso]#8200234       E[60079         55       166       481       0.47[113]       17P       21984       -0.72       TEXTEC       [       15243]sec0]#8200251       E[60079         65       155       10.55       20[SCIP 1]TSH       -4.45       TEXTEC       [       152253]sec0]#8200252       E[60079         64       9       51       0.55       25[SCIP 1]TSH       -0.04       TESTER       [0.32]       1.77       M7262]reso]#8200652       E[60072	I
61       37       47       0.48       126       17       2       172       172       122       41       0.53       144       22       2       173       -0.89       172       1       9223       secolasC30073       C       150072         53       4       48       0.93       171       SCI2       1       175       -5.66       172       10.19       G4441       12503       8200234       2       60077         64       124       44       0.93       171       2       175       -0.40       17077       10.0       10.25       10.554       1260027       2       60077       1       15054       1260027       1       15054       1260027       1       17072       10.00       10.25       10.554       1260027       1       15074       10.00       10.25       100554       1260027       1       15077       10.7262       1260027       15077       150726       15077       150726       15077       10.7262       15077       150726       15077       150726       15077       150727       170721       15077       150726       15077       15077       170727       170721       150787       10.02       10.77 <t< td=""><td>i</td></t<>	i
62       [129] 47]       0.63[144] 22]P 2[VR3       -0.89       [TERTEC [ ] ] W9213[\$eco]33C00073 [ C]400LL         53       [4] 44 [ 0.93] 17]SC1P 1]TSR       -5.66       [TSRTSR [ 1.57] [ 0.19 ] [ G4841]=sso]38E00234 ] Z[400PP         54       [28] 44 [ 0.44]117]SAI   2]07H       -0.48       [OTROTR [ 0.0 ] [ 0.25 ] [ M0554]=sso]38E00234 ] Z[400PP         54       [66] 44 [ 0.47]13] 17] 2]07H       -0.48       [OTROTR [ 0.0 ] [ 0.25 ] [ M0554]=sso]38E00251 ] Z[400PP         65       [66] 46 [ 0.47]13] 7] 2]VSH       -0.72       [TERTEC ]   [ TERTEC ]   [ TSRT56] [ 0.17 ] [ T5243]seco]33C00052 ] Z[500PP         64       [ 95] 50 ] 0.42 [ 67] 16 [P 2]VC2       -0.46       [TERTEC ]   [ TTRT56] [ 0.32 ] [ 0.17 ] [ M7262]=sso[33E00052 ] Z[500PP         64       [ 95] 51 ] 0.55 [ 25]SCI [P 1]TSR       -4.45       [TSRTSR ] 0.32 ] [ 0.17 ] [ M7261]=sso[33E00052 ] Z[500PP         63       [ 151 ] 0.79]125 [ 26 ] 2[VSH       -0.64       !TSRTSR ] 0.34 [ 0.12 ] [ M7261]=sso[33E00052 ] Z[500PP         63       [ 151 ] 0.57]125 [ 26 ] 2[VSH       -0.64       !TSRTSR ] 0.34 [ 0.12 ] [ M7251]=sso[33E00052 ] Z[500PP         72       [ 19] 51 ] 0.35 [ 122 ] 14 [P 2]VR1       -0.53       !TERTEC   [ [ M7252]=sso[33E00052 ] Z[500PP         72       [ 19] 51 ] 0.46 [ 131 ] 18 [P 2]VR2       -0.53       !TERTEC   [ [ M7252]=sso[33E00053 ] Z[500PP         73       [ 42] 52 ] 0.40 [ 21 [SC1 P 1]TSR	1
53       4       44       0.93       17       SCI P       175       5.66       ISHTSR       0.37       0.19       G4841[rsso[88E00194]       2[60029         54       28       44       0.44117[SAI       2[07H       -0.48       07B07H       10.0       10.25       \$M0554]rsso[88E00194]       2[60029         65       66       48       0.471133       17       P       0.48       07B07H       10.0       10.25       \$M0554]rsso[88E00194]       2[60029         65       66       48       0.471133       17       P       2[V2       -0.46       ISETSC       1       ISETSC       ISETSC       1       ISETSC       ISETS	•
54       128       44       0.44       117       SAI       21078       -0.48       078078       0.0       0.25       M0554       2000000       2160000         65       166       48       0.47       133       17       21757       18078       2153       2600073       C150000         66       96       50       0.42       67       167       167       167       167       167       151       0.55       2015CIP       1758       -4.45       1758756       10.32       0.17       M72621=ms01882000521       2150022         64       95       51       0.55       25       SCIP       17587       -0.36       1758756       10.32       0.17       M72621=ms0188200521       2150022       2150022         63       127       51       0.55       25       SCIP       17587       -0.38       1758756       0.32       1277       M72621=ms01882000521       21500002       C150000         72       1139       51       0.35       128       -0.08       175878       1.31       17721       173721       160000       1500000       C1500000       C1500000       C1500000       C1500000       C1500000       16500000       C1500000	1
65       66       481       0.47 133       17 2 2 VSM       -0.72       TENTEC         [ 55:44]sec0]33C00025       C 5CUT.         66       96       50       0.42       67       16 2 2 VC2       -0.36       [TENTEC         [ 32153]sec0]33C00073       C 530UL.         67       5       51       0.55       20 SCT  P 1 TSH       -4.85       [TENTEC         [ 32153]sec0]33C0052  3 S0029         68       9       51       0.39       25 SCT  P 1 TSH       -6.89       [TENTER  0.32       [0.17]       M7262]reso[33E00052  3 S0029         64       19       51       0.39       25 SCT  P 1 TSH       -0.04       !TENTER  0.32       [0.12]       37791]reso[33E00053  3 S0029         64       19       51       0.75       2 VH3       -0.28       [TENTEC         [       #7231]prini@3200053  4 S0029         64       10       0.35       12.21       14 P 2 VH3       -0.92       !TENTEC         [       #9213]secn]33C0050  C S00UL         72       119       51       0.46       131<18 P 2 VH2	I I
66       96       50       0.42       67       16       P 2 VC2       -0.36       TEATEC               32233 [seco] 34C00073 [       C[500TL         67       15       51       0.55       20 [SCI ]P 1 [TSH       -4.85       [TSHTSH ]0.53       0.17       M7262 [raso] 34C00073 [       C[500TL         68       9       51       0.39       25 [SCI ]P 1 [TSH       -0.04       [TSHTSH ]0.32       0.17       M7262 [raso] 34200052 [       E[5007P         63       107       51       0.55       25 [SCI ]P 1 [TSH       -0.04       [TSHTSH ]0.34       0.11 [       ST791 [raso] 34200053 [       E[5007P         63       51       0.55 [22 [SCI ]P 1 [TSH       -0.04       [TSHTSH ]0.34       0.11 [       ST791 [raso] 34200053 [       E[5007L         74       13 [10 .79 [125] 26 [P 2 [VSM       -0.38       [TEATEC ]               #9213 [seco] 34200053 [       E[5007L         72       119 [51       0.46 [131 [18 ]P 2 [VH3       -0.92       [TEATEC ]               #9213 [seco] 34200053 [       E[5007L         72       12 [S2 [0 .40] 21 [SCI ]P 1 [TSH       -0.53       [TEATEC ]               #9213 [seco] 34200053 [       E[5007L         74       15 [1 .19 [S1 .10 [S1 .10 ]P 1]TSH       -0.51       [TEATEC	1
67       5       51       0.55       20[SCIP 1]TSH       -4.85       [TSHTSH ]0.53       [0.17]       N7262]reso[38230052]       E[S0079         68       9       51       0.39       25[SCIP 1]TSH       -6.89       [TSHTSH ]0.34       [0.17]       N7262]reso[38230052]       E[S0079         63       1.7[51]       0.55       25[SCIP 1]TSH       -0.04       !TSHTSH ]0.34       [0.12]       #7791]reso[3820052]       E[S0079         63       1.7[51]       0.55       25[SCIP 1]TSH       -0.04       !TSHTSH ]0.34       [0.12]       #7791]reso[3820052]       E[S0077         63       1.7[51]       0.55       25[SCIP 1]TSH       -0.04       !TSHTSH ]0.34       [0.12]       #7791]reso[3820053]       E[S0077         72       119       51       0.35[122]149       21982       -0.53       !TERTEC                 #9213]sec0]38200234       E[S0077         72       1219       51       0.46       13187       20.08       !TSHTSH  0.00       [0.13]       M7262]reso[3820053]       E[S0077         72       1319       51       0.47       !TSHTS       [0.0]       [1.7]       ?4578[reso]3820053]       E[S0072         74       125       51       0.47       !S157	1
64       9       51       0.39       25/SCI P 1/TSH       -6.49       ITSHTSF       [0.32       [0.12]       INTRALISIONSCORDER       [150077         63       1.7       51       0.55       25/SCI P 1/TSH       -0.04       ITSHTSF       [0.32]       [0.12]       INTRALISIONSCORDER       ISTORYS         63       1.7       51       0.55       25/SCI P 1/TSH       -0.04       ITSHTSF       [0.34]       [0.11]       INTRALISIONSCORDER       ISTORYS         63       1.7       51       0.55       25/SCI P 1/TSH       -0.04       ITSHTSF       [0.34]       [0.11]       INTRALISIONSCORDER       ISTORYS         63       1.7       51       0.55       25/SCI P 1/TSH       -0.04       ITSHTSF       [0.32]       INTRALISIONSCORDER       CISOUL         72       11.9       51       0.46[131]       18]P 2/WD2       -0.53       ITSHTSF       [0.0]       [0.13]       N7262[Insec]38C00051]       I[50072         72       11.9       51       0.40[21]P 1/TSH       -0.08       ITSHTSF       [2.23]       [1.17]       P4578[Insec]38C00052]       I[50072         74       1.5       53       1.20[30]SCI P 1/TSH       -5.52       ITSHTSF       [1.13]       [0.27]	1
63       17       51       0.55       25       SSCIP 115K       -0.04       ITSATSK       0.34       0.11       \$\$T77211cmol3200021       \$\$\$I\$0022         74       43       51       0.79       125       26       2       VSM       -0.88       \$\$TSATSK       0.34       0.11       \$\$\$T77211cmol3200021       \$\$\$I\$0022         72       119       51       0.35       122       14       9       VR       -0.38       \$\$\$TSATSK       0.0       9.12       \$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$	1
43       51       0.79       125       26       2       1000000000000000000000000000000000000	1
1       89       51       0.35       122       14       9       14       9       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14       14 <td< td=""><td>1</td></td<>	1
72       [119] 51       0.46[131] 18[9 2]VH2       -0.53       [TENTEC         [38090]=ms0]38200000] C[5000L         [22] 52       0.40[21]SCI[P1]TSH       -0.08       [TENTEC         [38090]=ms0]38200000] C[5000L         [42] 52]       0.47[27]SCI[P1]TSH       -0.14       [TENTEC         [38090]=ms0]38200000] C[5000L         [42] 52]       0.47[27]SCI[P1]TSH       -0.14       [TENTEC         [P4578]=ms0]38200003] C[5007L         [76] 125] 53]       1.20[30]SCI[P1]TSH       -6.50       [TENTEC         [P4578]=ms0]38200052] E[60072         [77] 17] 53]       1.06[27]SCI[P1]TSH       -6.50       [TENTEC         [P4578]=ms0]38200052] E[60072         [77] 17] 53]       1.06[27]SCI[P1]TSH       -5.52       [TSHTSH  1.13][0.27]       [T7791]=ms0[33500052] E[60072         [78] [1] 0.65] 18[SAI   2]TSH       -1.98       [TSHTSH  1.13][0.27]       [T7791]=ms0[33500052] E[50072         [78] [25] 53]       0.30[245] 12[P2]VH1       -0.75       [TENTEC         [       [L9158]Frist]88C000051       [50072         [80] [21] 54       2.06[33]SCI[P1]TSH       -5.55       [TSHTSH [2.45][2.45][2.33]       [T174]=ms0[33200051       [50072         [81] 82[54] 0.78[128] 25[P2]VH3       -0.61       [TENTEC         [       [R174]=ms0[33200053]       [50072         [82] 140] 55[0.30] 73] 14[P3]DBH <td>1</td>	1
22       52       0.40       21       SCIP 11TSR       -0.08       TSATSR       0.0       0.13       N7262[reso]8200053]       3[60029         [42]       52       0.47       17       SCIP 11TSR       -0.14       TSATSR       1.23       1.17       P4578[reso]8200053]       3[60029         75       88       52       0.52       18       18       P2       VN2       -0.87       TENTSR       1.23       1.17       P4578[reso]8200053]       3[60029         76       15       53       1.20       30[SCIP 1]TSR       -6.50       TSETSE       1.29       0.32       N7262[reso]8200052]       3[60029         77       17       53       1.06       27[SCIP 1]TSR       -5.52       ITSETSE       1.29       0.32       N7262[reso]8200052]       3[60029         78       0.65       18[SAI]       2]TSR       -1.98       TSETSE       1.29       0.32       N7262[reso]8200052]       3[60029         79       125       53       0.30[145]       12]P2       PN       -0.75       TENTSE       1.21       1       12938200051       3[60029         80       2]S4       2.06[33]SCIP 1]TSH       -5.55       TSETSE       12.33       12148250832000	. 1
[42] 52]       0.47]       17 SCI[P 1 TSR       -0.14       [TSHTSR ].23       [.17]       P4578[Tss0]82E00106]       If 50022         75       88  52]       0.52  18  18 P 2 VH2       -0.87       [TEHTEC ]       [P4578[Tss0]82E00106]       If 50022         76       15  53        1.20  30 SCI[P 1 TSH       -6.50       [TSHTSE]       [1.29]       [0.32]       M7252[Tss0]82E00052]       If 60022         77       17  53        1.06  27 SCI[P 1 TSH       -5.52       [TSHTSH]       [1.13]       [0.27]       E7791[Tss0]88E00052]       If 60022         78               0.65  18 SAI       2 TSH       -1.98       [TSHTSH]       [1.13]       [0.27]       E7791[Tss0]88E00052]       If 60022         78               0.65  18 SAI       2 TSH       -1.98       [TSHTSH]       [1.13]       [0.27]       E7791[Tss0]88E00052]       If 60022         79       [125] 53        0.301445       12[P 2 VH1       -0.75       [TEHTEC ]               L9158[ptin]88E00052]       If 60022         80       [2] 54        2.06[35]SCIP1[TSH       -5.55       [TSHTSH][2.45]       [2.33]       E1748[Tss0]83E00051]       If 50022         81       82  54        0.78[128]25]P2[VH3       -0.61       [TEHTEC ]	1
75       88       52       0.52       13       13       P 2       vic       -0.87       TENTEC       P4578       P4578       P300393       C 5000L         76       15       53       1.20       30       SCIP       1       TSHTEC       P4578       P4578       P300393       C 5000L         77       17       53       1.06       27       SCIP       1       TSH       -6.50       TSHTSH       1.13       0.27       E7791       E780       E860092         78       1       0.65       18       SAI       2       TSH       -1.98       TSHTSH       1.13       0.27       E7791       Erso       E860092       E160022         78       1       0.65       18       SAI       2       TSH       -1.98       TSHTSH       1.13       0.27       E7791       Erso       E860092       E160022         79       125       53       0.30       145       12       P2       VH       -0.75       TSHTSH       [2.45       [2.33]       E1748       Erso       E160022       E160022         80       2       54       0.78       128       25       P2       VH3       -0.61       TEN	I I
76       15       53       1.20       30       SCI [P 1] TSH       -6.60       [TSHTSE ] 1.29       [0.32]       M7252[reso]33E00053]       #[600P2         77       17       53       1.06       27/SCI [P 1] TSH       -5.52       [TSHTSH ] 1.13       [0.27]       #7791[reso]83E00052]       #[600P2         78                       0.65       18/SAT       2/TSH       -1.98       [TSHTSH ] 0.56       [0.19]       #7791[reso]83E00052]       #[600P2         78                       0.65       18/SAT       2/TSH       -1.98       [TSHTSH ] 0.56       [0.19]       #7791[reso]83E00052]       #[600P2         79       125       53       0.30]145       12/P 2/VH1       -0.75       [TSHTSH ] 2.45       [0.33]       #1748[reso]83E00052]       #[600P2         80       [2]54       2.06[35]SCI[P 1]TSH       -5.55       [TSHTSH ] 2.45       [2.33]       #1748[reso]88E00052]       [5000D2         81       82       54       0.78       128       25/P 2/VH3       -0.61       [TEHTEC]               R3273[seco]83C00053]       [500D2         82       121       55       0.28       128       12/P 3/DBH       +1.39       [TEHTEC]               R3273[seco]83C00052]       <	1
77       17       53       1.06       27       SCIP       1TSH       -5.52       ITSHTSH       1.13       0.27       3792       3792       360092       360092         78       1       0.65       18       SAI       2       TSH       -1.98       ITSHTSH       1.13       0.27       3792       1250       33200052       3160022       3160022         79       125       53       0.30       1245       12       2       VH       -0.75       ITSHTSH       0.356       0.19       37792       1250       33200052       3160022       3160022         80       2       54       2.06       35       SCIP       1TSH       -5.55       ITSHTSH       12.45       12.33       12743       12800052       31600022         81       82       54       0.78       128       25       2       VH       -0.61       ITSHTSH       12.45       12.33       12743       12800053       1260022         82       21       55       0.28       128       129       2       VH       -0.61       ITSHTSH       12.45       12.33       12743       12800053       C       1260002         83       119	-1
78       0.65       18[SAL] 2[TSH       -1.98       [TSHTSH       0.35       0.19       [TSHTSH][END[SEE00052]       E]50022         79       125       53       0.30[245]       12]P 2[VH1       -0.75       [TSHTSH]       [0.35]       [0.19]       [T792][TEND[SEE00052]       E]50022         80       2]S4       2.06[33]SCI[P 1]TSH       -5.55       [TSHTSH]       [2.45]       [2.33]       [E1743][TEND[SEE00052]       E]50022         81       82       54       0.78[128]25[P 2]VH3       -0.61       [TEHTEC]       [       [R3273]seco]33C00053]       C[500UL         82       21       55       0.28[128]11P 3[DBH       -1.39       [TEHTEC]       [       R3273]seco]33C00053]       C[500UL         83       119[55]       0.30[73]14[P 3]DBH       -1.39       [TEHTEC]       [       R7252]reso]33C00052]       C[500UL         84       125[55]       0.28[132]12[P 2]VH1       -0.83       [TEHTEC]       [       P2005[prin]33C00051]       C[500UL         85       133[55]       0.28[132]12[P 2]VH1       -0.82       [TEHTEC]       [       D2003[prin]33C00051]       C[600UL         86       84[56]       0.65[27]SCI[P 1]TSH       -0.15       [TSHTSH       [0.75][0.24]       E4963[reso]88E00	I
79       125       53       0.30       128       129       2000       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       129       1	I
80       2       54       2.06       35       SCIP 1       555       TSRISH       2.45       1.33       H1743       H26000001       H16000001       H16000001       H16000001       H16000001       H16000001       H160000001       H160000001       H160000001       H160000001       H160000000000       H1600000000       H1600000000       H16000000000       H160000000000       H1600000000000       H1600000000000000000       H16000000000000000000000000000000000000	1
81       82       54       0.78       128       25       21       55       0.28       13       23       13       23       13       23       13       23       13       23       13       23       13       23       13       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       25       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23	I
82       21       55       0.28       13       P       3084       +1.39       TENTEC               M7252       TENO 32C30053       C 5000L         83       119       55       0.30       73       14       P       3084       +1.66       TENTEC               P1465       PTIM 182C00052       C 5000L         84       125       55       0.25       14       P       VEL       -0.83       TENTEC               P1465       PTIM 182C00052       C 5000L         85       133       55       0.28       129       2       VEL       -0.83       TENTEC               D2003       PTIM 28C00091       C 5000L         85       133       55       0.28       129       2       VEL       -0.82       TENTEC               D2003       PTIM 28C00091       C 16000L         86       84       56       0.65       27       SCI P       1758       TENTEC               D2003       PTIM 28C00091       C 16000L         87       132       56       0.29       118       12       P       VEL       -0.82       TENTEC               D2003       PTIM 38C00021       E 60025         87       132	l I
83        119  55  0.30  73  14 P 3 DBH       +1.66        TENTEC                 P1465}prim BSC00092  C 500UL         84        125  55  0.25 140  11 P 2 VH       -0.83        TENTEC                         P1465}prim BSC00092  C 500UL         85        133  55  0.28 132  12 P 2 VH       -0.83        TENTEC                         D2003 prim BSC00092  C 500UL         86        84  56  0.65  27 SCI P 1 TSH       -0.82        TENTEC                         D2003 prim BSC00092  C 600UL         86        84  56  0.65  27 SCI P 1 TSH       -0.15        TENTEC                         D2003 prim BSC00092  C 600UL         87        132  56  0.29 118  12 P 2 VH       -0.82        TENTEC                         D2003 prim BSC00092  C 600UL         87        132  56  0.29 118  12 P 2 VH       -0.82        TENTEC                         D2003 prim BSC00092  C 600UL	I
84       125       55       0.25       11       P       VEL       -0.83        TERTEC                 D2003       D2003       D2003       C       6000L         85       133       55       0.28       12       P       VEL       -0.82        TERTEC                 D2003       D2003 <td< td=""><td>1</td></td<>	1
85        133  55  0.28 132  12 P 2 VE1 -0.82        TENTEC                 D2003 pria SEC00091  C 60002         86       84  56  0.65  27 SCI P 1 TEE -0.15        TENTEC                 D2003 pria SEC00091  C 60002         87        132  56  0.29 118  12 P 2 VE1 -0.82        TENTEC                 D2003 pria SEC00091  C 60002         87        132  56  0.29 118  12 P 2 VE1 -0.82        TENTEC                 D2003 pria SEC0092  C 60002	Į.
86       84       56       0.65       27       SCI       P       ITSH       -0.15       ITSHTSH       [0.75       [0.24]       E4963       Image: Science 20       Image: Sci	I
87  132  56  0.29 118  12 P 2 VH1 -0.82  TENTEC     D2003 DTia  SC00091  C;6300L	F
	E .
88   20  53  0.22  20 SCI 71 TSH -0.04  TSKTSH  0.00  0.13   E1743 Teso 85E00045  H 60077	I
	I
89   38 58 0.40 16 SAL 2 TSH -0.85   TSHISH   0.50   0.35   C3360 zeso 38800044 ] E 50022	J
90   44  58  0.37 146  15 P'2 VSM -0.50   TENTEC     15144 seco 83C00054  C 500UL	1
92  119  59  0.49 103  19 2 2(03H -0.00  TEHTEC     M7262[Teso]33C30092] C 500UL	1
92     0.37 76 15 2 VEL -0.52   TEATEC     38090 Teso BaC30092   C 500UL	i
93  125  59  0.27 155  11 P 2 VH -0.75  TEHTEC     D2003 prim 88C00091  C[6000L	1
94   26 60 0.51 16 SAI 2 TSH -0.36  TSHTSH 0.50  0.20   H1743 TESO 88800045   H16027	1
95   28 60 1.93 23 SAL 2 TSH -4.10   TSHTSH 2.25  1.2   HI748 Teso 88800044   H 60022	Ì
113  60  0.25 154  9 9 2 VC1 -0.75  TENTEC       E4963 reso 83C00125  C 600UL	1
9 128 60 0.46 117 19 P 2 10H -1.00 [TENTEC ]   G4841 reso 8800092 C 6000L	i
98   37   61   0.45   134   17   P 2   VSM +0.97   TEHTEC     D3853   reso   88C00059   C   6000L	
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 $\sum z^{\prime}$ 

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moentice mopection of Steam Generator tubes • Sheman Vehnir Appendix 3 Page 4 of 13 SG88 MAI, MCI. MMI, MVI, SAI, SCI, SVI, 0-100*TWD UTILITY: Southern California Edison. NOV. 8,2000 8:44 PLANT: San Onofre UNIT: 2 . SG: 88 DATABASE : SONGS_U2_1000_SG88_FINAL PAGE 1 ROW COL VOLTS DEG PCT CEN FLAW LOCATION EXTENT UTIL2 NAME TYPE CAL GROUP LEG PROBE SIZE ٠ 1117 61 0.26 77 9 P 2 WH2 +0 80 ~~~

99  117  61	0.26 77 9 P 2 VH2	+0.80	TEHTEC	I	32027  prim   88C00093   C 6	0000. 1
100  133  61	0.25 139  9 P 2 VH1	-0.85	TENTEC	i		OOUL
101   24   62	0.43 92 SAI 2 07H	+0.09		0.31 1.37		0022
102   72   62	0.40 17 SCI P 1 TSH	-0.06		0.0 [0.1a		0092 -[
103   92   62	0.45; 57  16 P 2 VH2	+0.84	TEHTEC	1		
104  120  62	0.34 122 12 2 VH1	-1.11	TEATEC	1		300L
105	0.25 137 9 9 2 191	+0.33	TEATEC	1		
106  126  62	0.65 100 24 P 2 10H	-0.96	TEXTEC	1		000L
107   23   63		+1.06	TERTEC	1		000E
108  129  63		-0.06	TERTEC	· '-		
109   62   64		-0.10		, 0.91 [0.21		0055   
110  124  64		-0.92	TERTEC	l		
111   27   65		-6.02		، 5.38 [3.24		1029 }
112	0.44 11 SAI 2 TSH	-0.60		0.80 [0.10	27791 [resc] 38500040 [ 3[50	
113   75  65		-0.16		0.79  0.22	W3386[zaso]88800099] E[6	
114   93   65	•	-0.91	TERTEC	1	32027[pria]38C00093  C 5	
	0.40 129  18 P 3 DBK	+0.35	DERTEC	1	j G4341 [7950 [38C30094] C[66	•
115  141   65		+0.71	TENTEC	s T	75144  seco 28C20130  C 50	
117   50  66		+1.68		LAR [	M7252 reso 38C30061 C15	
118   60   66		+1.12		0.30 [C.38	E7791 [reso   33E90041   E  50	
- 2 85 67	0.36 76 13 P 2 VH2	-0.48	TENTEC	1	32027 [pria   33C30092   C  50	
1 123 67	0.31 132 14 P 2 VH1	-0.80	TEATEC	1	[ 22003 [prin; 38C3C056] C[ 50	
121  137   67	0.24 153 . 11 P 2 VEL	-0.78	TENTEC	1	22003 [prin] 38C00095] C 50	
22 63	1.10 66 32 P 2 VSM	+0.84	TERTEC	1	[ 33858 [ reso ] 38C30051 ] C] 53	
180   68   Ea	0.65 21 SAL 2 TSR	-0.90		.05 0.25	27791;zeso[83500035; 3]60	
124   98] 68]	0.45 49 18 P 2 VE2	-0.71	TERTEC	1	34953 [==se   33C20095   C  50	
125	0.421148 17 P 2 VC2	+0.86	TERTEC	1	[ 34963[zeso]88C00096] C[60	
126   33  69	0.61 22 SAL 2 TSH	-0.26		.54  0.12	37791[reso]88200036] 3[50	
127   77   69	0.40 24 SCI 7 1 TSH	-0.07		0.00 [0.19	H7262 [ meso ] 88800095   1   60	
128   72  70	0.43 108 18 2 2 103	-0.53	TENTEC	1	W9658 seco 38C00056   C160	
129   84   70	0.35  26 MCI   P 1 TSH	-0.05		1.00 [0.39	M7252 == 50 38200035 = 2 60	
130  130  70	0.50 127  20 2 2 VH1	-0.80	TENTEC	1	[ D2003 [prim [ \$8C00095 ] C  60	
.131   33  71	0.38 154 18 P 3 DBC	-1.31	TEXTEC	i	D3858 ===== 33C30051 C 50	
132   49 71	0.33 150 13 P 2 VSM	-0.80	TERTEC	i	23854 zeso [88039662] C 50	
133   97   71	0.40 20 SCI P 1 TSH	-0.09	TSHTSH  0	.00 0.18	M7262 === 0 38200095 E 50	
134 [123] 71]	0.30 128 13 2 2 VH1	-0,70	TERTEC	i i	19158 prim   83C36093  - C  50	
135   34   72	0.53 103 23 2 3 DBC	+1.21	TERTEC	Ē	1 03858 7950 83C90061 C 50	
136   44   72	0.56  15 SAI  2 TSH	-1.65	TSHTSH  0	.42 0.17	1 C0360 Teso   38200035   #160	
137 [ 48 ] 72 ]	0.25  11 SAI  2 TSH	-4.05	TSHTSH 10	.00  0.17	C0360 zeso 2220033   H 60	
138   58  72	0.65 18 SAI 2 TSR	-2.42	TSHTSH O	.82  0.13	1 17791 1 100 381000341 H 60	•
139  120  72	0.68 87 23 P 2 09C	-1.07	TERTEC	1	[ 21455]prim[38C30097] C 50	
140  142  72	0.58] 54  20 P 3 DBC	+1.58	TERTEC	Ì	C4330[prin[88C00130] C]50	
141   37  73	0.58 18 SAI 2 TSH	-5.20	TSHTSH  0	.51  0.14	[ C0360 ] z=se [ 38200035   H] 50	
142	1.28 89 38 P 3 DBH	-1.49	TEHTEC	!	[ D3858 ]==== 88C00061   C160	•
143   41  73	0.34 130 14 P 2 VSM	-0.87	TEXTEC	i	D2003   prim   38C30061   C150	
144   45   73	0.32 131  15 P 3 DBC	-1.36	STRIEC	1 .	D3858 ===== 0 48C00061   C 60	
5 53 73	0.34 11 SAI 2 TSH	-1.01	TSHTSH  0	.66  0.13	1 27791 zeso 88800034 [ H 60	
73   73   منه - 1	0.57 123 21 P 2 VSM	+0.92	TERTEC	Í	T0854  seco   88C00099   C 60	
147   89  73	0.28 76 12 2 VC2	-1.18	TEATEC	Î	T0854   seco   88C00099   C  50	
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	Appendix 3			•			Page 5 of 13	
•		SG88 MAI, MCI.	MMI. MVI.	SAI, SC	I. SVI.	0-100%TWD	1 age 5 61 15	
	UTILITY:	Southern California Edi:					NOV. 8,2000 8:44	
	PLANT :	San Onofre						
	UNIT:	2		•				
	SG:	88						
, f	DATABASE :	SONGS_U2_1000_SG88_FINAL	6				PAGE 4	
· · · · · · · · · · · · · · · · · · ·								
ROW C	OL VOLIS DEG PCT CH	N FLAW LOCATION	EXTENT	UTIL1	UTIL2	NAME TYPE CAL GROU	P LEG PROBE SIZE	
148  129	73 0.33 148 14 2	2 VHI -0.76	TENTEC	1	1	33170 prim 88C00099	CGOOUL	t
149 [133]			TEXTEC	•	1	33170 prim 88C00099	•	1
150 [145]	73 0.84 92 27 P	3 DBH +2.07	TENTEC	1	1	C4330 prim 88C00130	•	· 1
• •	74 0.96 112 29 9		TEHTEC	1	1	M7262 zeso 8800062	• •	1
152	0.49 63 18 2	-	TEHTEC	, I		M7262 reso 8800062		1
153   58				10	, 10.18	RS535 reso 88200034	• •	1
	74 0.27 153 12 2	2 VC2 +0.75	TENTEC	1	1	33170 prim 88C00099		
155  120		•	TEHTEC	i I	1	M7262  zeso   98C00097	, .	1
156  130			TERTEC	1	, }	33170 prim 88C00099	• •	1
157  136			TEATEC		с. Т	C4330 prim 38C00097	• •	1
158 [138]			TERTEC	1	1 1-	33170 prim 88000099		.1
159 42			STRIEC	•	1	R8278   Seco   88C00063		1
160   43		•	TEATEC	1	1	32027 prim 38C00062	• •	I
161   45			TERTEC	1	1	R5278   Seco   38C00063	• •	1
162	0.75 138 26 P		TERTEC	1	1 	E4963 [reso   88C00063		1
• •	75  0.36  92  15 P		TENTEC	• 1	• •	33278   seco   88C00063		1
164 77				11.03	0.26 ·	M7262   reso   88800096		L L
165   79			TENTEC	1	10.20	T0854   seco   88C0099		ь •
156   85				1 I	r I	H1748 reso 9800097		.t
157	0.20 101 SAI		0900ac ·	•	0.36	W3386 reso 89C00194		1
• •			TEATEC	19.23 1	1.	G4841 [ 7850 ] 38C30126		1 ]
121	0.25 139 11 2		TSHIEC	ł 1	1			1
170 125			TEXTEC	1 F	1	E1748 Teso 83C00097		1
71 127			TENTEC	1 t	i I	C4330 prim 88C00097	•	1
	0.31[143] 14[P		TERTEC	6 t	1	33170 prim 88000099   33170 prim 88000099		1
173  131  5			TENTEC	1	1 1		<u>.</u> .	1
174  133			TEATEC	1. }	1	B3170 prim 28C00099 M7262 reso 88C00097	· .	1
175 145			TENTEC	1	<b>i</b> ,	38090   xeso   88C00130		l l
176	0.32 148  11 P :	•	•	1	· ·			4
- 177 46 1			TENTEC .	l r	1 r	] C4330[prim]88C90130	•	1
178   50  1		-	TENIEC	1 1	5 P	R8278 seco 88000063		1
179   54   5				1 1	1	R8278 seco 88000063		1
130   64   7		•	TEHIEC		1	R8278   seco   88C00063   H1748   reso   89R00033	-	1
181   80  1	•				10.35	• • •		.1
182 [124] 7			TEATEC	0.52 1	0.41 1	M7262   TESO   88300096		i f
183   51   7			TERTEC	1 1	1 f	X3270 seco 88C00103		F I
184   69  7				1 Ea 30	1 . 10 75	R8278   seco   88C00063		L L
185  123  7			TERTEC	0.30 1	0.25 1	H1748   2880   88900032     R4014   prim   88000101		F t
196 [131] 1		•	TERISC	1	i t	34014 prim 88C00101    V1371 prim 83C00100		E I
187 ] ]	0.35 117  15 P			4 1	: 1			i I
138 [ 48] 7			TENTEC	1 10 30	10.10	E4963   reso   88C00100		i I
199 72 7					0.19  0.73	24963 [reso  88800030]		i F
190 90 1				0.85		M7262 reso 38H00095		н . Т
191   96   1	, , ,		TEHTEC			[ G7112   seco   38C00104		· i
192			•	•		M7262 zeso 88300094	•	1
192   1	0.17 82 SVI	•		0.79	0.53	G4841   Teso   38C00194		i t
ו   אנגן נייג ד ו ג'	• • • • •		TERTEC	i :		[ V1371 prim 88C00125]		E I
-	0.24 117  9 P 2	-	TEHTEC	l	l .	V1371 prim 88C00126		1
138 7			TEHTEC		l	V1371   prim   88C00126		F
196	0.23 90 10 P 2	2 VH1 +0.97	TEHTEC		I	V1371 [prim 88000126]	CIEDOUL	t -
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$ \begin{array}{                                    $		T614	-						
			-		-0.84			_	<u>ر</u>
		•		TENTE	+0.86		0.29 127	-	~ <u>~</u>
		] ] 7614	-		-1.75		0.30/115	7 85	- <u>1</u>
$ \begin{array}{                                    $		[ ] [ ] ]	-	(1111) 	+0.39		0.40[140]		241 [
		1   3371	-	73HTS	+0.83		0.39  95	_	240 [
$ \begin{array}{                                    $				TEHTE	-0.82		1.40[116]	-	239 [
$ \begin{array}{                                    $	~ ~ ~ ~ ~ ~ ~ ~			TENTS!	-0.36		0.31 152		
$ \begin{array}{                                    $		3171		TEATE	-0.90		0.37 131		
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CITLETT:         Southern California Editor.         Extent.         Southern California Editor.         Southern Californi Editori Editor.         Southern California Editor. <td>~</td> <td>    LJ 02</td> <td>-</td> <td>-   TEHTS</td> <td>-0.83</td> <td></td> <td>0.37 132</td> <td></td> <td>226   7</td>	~	LJ 02	-	-   TEHTS	-0.83		0.37 132		226   7
CTILITY:         Southern Clineria Edison.         Not. Southern Clinerra Edison.         Not. Southern Clineria Edison. <td></td> <td>1 . j 3514</td> <td></td> <td> IIII</td> <td>+0.89</td> <td></td> <td></td> <td></td> <td>225. 14</td>		1 . j 3514		IIII	+0.89				225. 14
CTILITY:         Southern Clinents Zitton.         Formation of the second secon	~	6434		TENTE	-0.97				
OTILIFT:         Southern Galifornia Edison.         NULL Relation.         NULL Relation. <thn< td=""><td>~</td><td>2011</td><td></td><td>[1213]</td><td>-1.92</td><td></td><td></td><td></td><td></td></thn<>	~	2011		[1213]	-1.92				
UTILITY:         Southern GLIJOTILA Edison.         NV. 8, 2000           PLANE:         San Gnote         San Gnote         San Gnote         San Gnote           SS:         San Gnote         San G	~	GT1	-	<b>[</b> ]	-2.17		0.63 [121]		_
UTILITT:         Southern Cliffornia Edison.         Not. 4. 2000         Not. 4. 2000           PLANE:         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe           UNIT:         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe           UNIT:         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe           Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe         Sa Gnoffe				EINEL	-9.91		0.85[139]		
UTILITT:         Southern Gliffornia Edison.         Nov. a. 2000         Nov. a. 2000           PLANT:         San Onoffe         Nov. a. 2000         Nov. a. 2000         Nov. a. 2000           SS:         as         San Onoffe         Nov. a. 2000         Nov. a. 2000         Nov. a. 2000           SS:         as         San Onoffe         Nov. a. 2000         Nov. a. 2000         Nov. a. 2000           SS:         as         San Onoffe         San Onoffe         Nov. a. 2000         Nov. a. 2000         Nov. a. 2000           SS:         as         San Onoffe         San Onoffe         Nov. a. 2000         Nov. 2000         Nov. a	~			60360 [	-1.49		0.09[ 97]:		_
UTILITY:         Southern California Edison.         Not. 3.000           PLANT:         Southern California Edison.         Not. 3.000           Southern California Edison.         Southern California Edison.           Southern California Edison.           So	~				-1.27	<b>'</b> U	0.29 98	_ _	•`( 
UTILITY:       Southern California Edison.       Not. 5. 000         PLANT:       Sau Contro         Sau Contro       PART:       Sau Contro         Sau Contro       PART:       Sau Contro       PART:        PART:	**** ·			TSHIS	+0.96		0.17[108]		انهيبو 
UTLLITT:       Southern Glifformia Bdison.       WW. WW. S. 2000         PLANT:       San Gnoffe         UNITI:       San Gnoffe         UNITI:       San Gnoffe         UNITI:       San Gnoffe         UNITI:       San Gnoffe         SG:       88         SG:       88         SG:       88         DATABASE:       SDM GOL VOLTS DEG PET GNF FLAW LOCATION       ENTERT       UTLLI       UTLLI       UTLLI       SDM GOL GROUP Lag       PAGE 5         SG:       119       0.46       90       119       JDBC       -0.00       ITEXTEC               3335       ISSCIERCONO64       Cleoner.         131       79       0.46       129       JDBC       -0.00       ITEXTEC               3335       ISSCIERCONO54       Cleoner.         141       10       0.46       129       JDBC       -0.00       ITEXTEC               3335       ISSCIERCONO54       Cleoner.         151       79       0.46       129       JDBC       -1.00       ITEXTEC               3335       ISSCIERCONO51       Cleoner.         151       10       0.46       129       JDBC       -1.03       ITEXTEC	·		- ·	1.0012	-1.62		0.68[107[	<u> </u>	
NULLITT:         Southern Glifformia Bdison.         Nur. and Out of a state of				INI	-0.24		0.52 115		
UTILITY:       Southern Chiffornia Edison       Nov. 51. 00.       Southern Chiffornia Edison       Nov. 51. 00.       Southern Chiffornia Edison       Nov. 51. 00.         SG:       SG:       SG       SG:       SG       SG:       SG       SG:	-				÷0.39		0.74 132		<u> </u>
UTILITY:         Southern California Edison.         Way.         Southern California Edison.         Sout	~ ~				68.0-		0.42 138		
UTILITY:       Southern California Edison.       NAV. 5. 2000         PLNT:       2         SG:       38         SG:       39         SG:       3000 CCI         SG:       3010 SCIP         SG:       3013 SCIP         SG:       31146         SG:       31175         SG:       31146         SG:       31178         SG:       31146         SG:       31178         SG:       31178         SG:       31178         SG:       31179         SG:	··				-1.42		0.801 971		
UTILITY:       Southern California Edison.       Nov. 50. 50. 50. 50. 50. 50. 50. 50. 50. 50				summer l	-0.79		lerier.a		
UTILITY:       Southerm Childrenia Edison.       Nov. 50. 50. 50. 50. 50. 50. 50. 50. 50. 50		1 4538			-1.26		0.77  96		
UTILITY:       Southern California Edison.       NOV. 8.2000         PLANT:       San Gnoffe       NNT:       2         SG:       88       SG:       88         SG:       88       SG:       88         DATA:       SG:       88       SG:         SG:       88       SG:       88         DATABASE:       SONGS_UT_LOOD_SG88_FINAL       SONGS_UT_LOOD_SG88_FINAL       SOUTE         SG:       90       0.19       1.3       3100C       -2.00       ITEXTEC       1       91.25       SOUTE       SOUTE </td <td>[seco]a\$CO0136] 0</td> <td>  7514</td> <td></td> <td>12212</td> <td>+2.00</td> <td>HECLE 4191</td> <td>0.41129</td> <td></td> <td></td>	[seco]a\$CO0136] 0	7514		12212	+2.00	HECLE 4191	0.41129		
UTILITY:       Southern California Edison.       Nov. 50. 50. 50. 50. 50. 50. 50. 50. 50. 50	==so 88300243  · 3	_		04204	-0.31		0.26 94		
UTILITY:       Southern Glifornia Edison.       NOV. 8,2000         PLANT:       San Onofre       NUTI:       2         UNIT:       2       San Onofre       NUT:       2         UNIT:       2       San Onofre       NUT:       2         San Onofre       NUT:       2       NUT:       NUT:       NUT:         San Onofre       NUT:       2       NUT:       NUT:       NUT:       NUT:         San Onofre       NUT:       San Onofre       NUT:       NUT:       NUT:       NUT:         San Onofre       NUT:       San Onofre       NUT:       NUT:       NUT: <td< td=""><td>_</td><td>    C433</td><td>-</td><td>TEATS</td><td>-1.86</td><td>HEG I G OL</td><td></td><td>_</td><td>207 112</td></td<>	_	C433	-	TEATS	-1.86	HEG I G OL		_	207 112
UTILITY:       Southern California Edison.       NOV. 50.0000000000000000000000000000000000		2026		<b>112112</b>	-0.64	4	0.32   125		206   8
UTILITY:       Southern California Edison.       Southern California Edison.       NOV. 8,2000         PLANT:       2         UNIT:       2         SG:       88         SG:       88         SG:       88         DATABASE:       SONGS_UT_1000_SG88_FINAL       PAGE 5         PAGE 5       DATABASE:       SONGS_UT_1000_SG88_FINAL       PAGE 5         ROW COL       VOLTS DEG PCT CHW FLAW LOCATION       EXTENT       UTIL1       UTIL2       NAME TIPE CAL GROUP LEG       PAGE 5         1 51       79       0.45       90       15       310BC       -2.00       ITEXTEC               1 32153       seccl88C00064       C 600072         1 61       79       0.45       90       15       1757       -0.14       ITEXTEC               1 3152       38050       1360094       360022         1 91       79       0.46       14       50       ITEXTEC               1 37262       1 80091       160029         1 191       79       0.46       14       1758       -0.08       1758758        0.36        0.17       1 380901=zeso188000951       160029         1 191       79       0.46       136       158		916T		SINGL	+1.83	HEG  C 4   ST	0.45[111]		205   6
UTILITY:       Southerm California Edison.       NOV. 8.2000         PLANT:       2         SG:       88         SG:       88         SG:       88         DATABASE:       SONGS_UT_1000_SG88_FINAL         SG:       88         DATABASE:       SONGS_UT_1000_SG88_FINAL         PA       SG:         SG:       88         DATABASE:       SONGS_UT_1000_SG88_FINAL         PA       SG:         SG:       88         PA       SG:         SG:       88         DATABASE:       SONGS_UT_1000_SG88_FINAL         PACE:       SOUTE         SOUTIS DEG PCT CHW FLAW LOCATION       EXTERT         SG:       1179         SG:       1179         SG:       11757	~			STFEL	-2.00				_
UTILITY:       Southern California Edison.       NOV. 8,2000         PLANT:       San Onofre       NOV.         UNIT:       2         SG:       88         SG:       88         DATABASE:       SONGS_UT_1000_SG88_FINAL       PAGE 5         ROW COL       VOLTS DEG PCT CHA FLAW LOCATION       EXTENT       UTIL1       UTIL2       NAME ITTE CAL GROUP LEG       PAGE 5         1 51       79       0.45       90       15       JIDBC       -2.00       ITEXT2C         93.352       Exact Hand Hander 1       10002       PAGE 5         4 39       79       0.46       13       15       JIDBC       -2.00       ITEXT2C         1       93.3253       93.47       10.29       54.963       125000011       260022         1 43       79       0.46       13       175       -0.14       ITEXT2C         1       17252       12800094       160022         1 19       0.46       13       175       1.008       ITEXT2C         1       17252       18000124       160022         1 19       179       0.46       13       15.5       17252       18000125       160022         1 19       19       0.46       13 </td <td>~</td> <td>    7514</td> <td>n </td> <td>.   T2HT2</td> <td>•1.63</td> <td></td> <td></td> <td></td> <td></td>	~	7514	n 	.   T2HT2	•1.63				
UTILLITY:       Southern California Edison.       NOV. 8,2000         PLANT:       San Gnoffe       NOV.         UNIT:       2         SG:       83         SG:       83         SG:       83         DATABASE:       SONGS_UT_1000_SG88_FINAL       PARE         ROW COL       VOLTS DEG PCT CHN FLAN LOCATION       EXTENT       UTIL1         I 51       79       0.45       90       15         I 63       79       0.45       90       15       108C         I 63       79       0.46       18       51       158       -0.08       ITENTEC               1       32155       158C00054       C 60022         I 89       79       0.46       18       51       158       -0.08       ITENTEX       0.36       32155       160022       160022         I 91       79       0.46       18       51       158       160022       160022       160022       160022         I 91       79       0.46       18       50       175873       0.36       317       17252       5800025       360022         I 91       79       0.46       179       179       160		1	а — .	STREE	+0,95				_
UTILLITY:       Southern California Edison.       NOV. 8,2000         PLANT:       San Onofre       NOV.         UNIT:       2         SG:       88         SG:       88         DATABASE:       SONG_UZ_1000_SG88_FINAL         PLOW COL       VOLTS DEG PCT CHN FLAM LOCATION       EXTENT         I 51       79       0.45       90         I 51       79       0.45       90         I 63       79       0.45       91         I 63       79       0.38       23         I 89       79       0.38       23         I 91       79       0.46       18         I 91       79       0.46       19         I 91       1753       -0.16       1753         I 91       1754       -0.16       17534753	- •			TERTE	+1.60		5		
UTILLITY:       Southern California Edison.       NOV. 8,2000         PLANT:       San Onofre       NOV.         UNIT:       2         SG:       88         SG:       88         DATABASE:       SONGS_UT_1000_SG88_FINAL         PROW COL       VOLTS DEG PCT CEN FLAN LOCATION       EXTENT         I 51       79       0.45       90         I 63       79       0.45       90         I 89       79       0.38       23         I 89       79       0.38       23         I 89       79       0.38       11534         I 89       79       0.38       23	[=eso  88300095 j	<u> </u>			-0.16				<b></b> .
UTILITY:       Southern California Edison.       NOV. 8,2000         PLANT:       San Gnofre       NOV.         UNIT:       2         SG:       88         SG:       88         DATABASE:       SONGS_UZ_1000_SG88_FINAL         NOW COL VOLTS DEG PCT CHW FLAW LOCATION       EXTENT UTILI UTIL2         NOW COL VOLTS DEG PCT CHW FLAW LOCATION       EXTENT UTILI UTIL2         NOW COL VOLTS DEG PCT CHW FLAW LOCATION       EXTENT UTILI UTIL2         NOW COL VOLTS DEG PCT CHW FLAW LOCATION       EXTENT UTILI UTIL2         NOW COL VOLTS DEG PCT CHW FLAW LOCATION       EXTENT UTILI UTIL2         NOW COL VOLTS DEG PCT CHW FLAW LOCATION       EXTENT UTILI UTIL2         NOW COL VOLTS DEG PCT CHW FLAW LOCATION       EXTENT UTILI UTIL2         NOW COL VOLTS DEG PCT CHW FLAW LOCATION       EXTENT         NOW COL VOLTS DEG PCT CHW FLAW LOCATION       EXTENT         NOW COL VOLTS DEG PCT CHW FLAW LOCATION       EXTENT         NOW COL VOLTS DEG PCT CHW FLAW LOCATION       EXTENT         NOW COL VOLTS DEG PCT CHW FLAW LOCATION       EXTENT         NOW COL VOLTS DEG PCT CHW FLAW LOCATION       EXTENT         NOW COL VOLTS DEG PCT CHW FLAW LOCATION       EXTENT         NOW COL VOLTS DEG PCT CHW FLAW LOCATION       EXTENT	[] 3300094 ]				-0.08				
UTILITY:       Southern California Edison.       NOV. 8,2000         PLANT:       San Onofre       NOV.         UNIT:       2         SG:       88         SG:       88         DATABASE:       SONGS_U2_1000_SG88_FINAL         NOW COL VOLTS DEG PCT CHN FLAN LOCATION       EXTENT UTIL1 UTIL2 NAME TIPE CAL GROUP LEG PROBE :         NOW COL VOLTS DEG PCT CHN FLAN LOCATION       EXTENT UTIL1 UTIL2 NAME TIPE CAL GROUP LEG PROBE :         NOW COL VOLTS DEG PCT CHN FLAN LOCATION       EXTENT         NOW COL VOLTS DEG PCT CHN FLAN LOCATION       EXTENT         NOW COL VOLTS DEG PCT CHN FLAN LOCATION       EXTENT         NOW COL VOLTS DEG PCT CHN FLAN LOCATION       EXTENT         NOW COL VOLTS DEG PCT CHN FLAN LOCATION       EXTENT         NOW COL VOLTS DEG PCT CHN FLAN LOCATION       EXTENT         NOW COL VOLTS DEG PCT CHN FLAN LOCATION       EXTENT         NOW COL VOLTS DEG PCT CHN FLAN LOCATION       EXTENT					-0.14		0.19 103		
UTILITY:       Southern California Edison.       SU, 51, 51, 51, 51, 51, 51, 51, 51, 51, 51			-	] TEXTS	-2.00		0.45 90	•	_
Southern California Edison. Nov. 51, 54, 01,000,000 San Gnofre 2 88 SGNGS_U7_1000_SG88_FINAL PAGE 5	TIPE CAL GROUP LEG PROBE			EXTE	LOCATION		VOLTS DEG	8r 8	8
Southern California Edison	ы			TYNTA BI	_U2_1000_SG	SONCES	DATABASE:		
Southern California Edison. Nov. 542, 542, 042004-000 San Gnofre 2						88	SG:		نور سور الأفر سور
Southern California Edison. Nov. 312, 312, 912, 912, 912, 912, 912, 912, 912, 9						2	UNIT:		1
Southern California Edison. Not, Str. Str. U.L. V. M. Southern California Edison.					lofre	San Or	PLANT :		
	NOV. 8,2000				ern Califor	South	UTILITY:		

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การรากกราการครามปาก เปลือบการเราระจะเปล่าเปรื่อง Appendix 3

Appendix 3         Description         Description <thdescription< th=""> <thdescription< th=""></thdescription<></thdescription<>	
UTLLITY:         Southert GLIGenia Editor, PLANT:         Southert GLIGenia Editor, Souther GLIGENIA         Southert GLIGENIA         Southert GLIGENIA           VALUE:         Sauthoff GLIGENIA Souther GLIGENIA         Sauthoff GLIGENIA Souther GLIGENIA         Sauthoff GLIGENIA Souther GLIGENIA         Sauthoff GLIGENIA Souther GLIGENIA So	•
UNKT:         2           SE:         BS           DATABLE:         BURD_UP_LOUD_GOULTON           AMO COL VOLTS DEG PET CON FLAN LOCATION         ETEMT TILL UTLL RAME TITE CL GLOOPP LES PARE SIZE           246                   0.971[132] 2912 21001_GOULTON         ETEMT TILL UTLL RAME TITE CL GLOOPP LES PARE SIZE           247                   0.971[132] 2912 21001_GOULTON         ETEMT TILL UTLL RAME TITE CL GLOOPP LES PARE SIZE           246                   0.971[132] 2912 21001_GOULTON         ETEMT TILL UTLL RAME TITE CL GLOOPP LES PARE SIZE           247                   0.971[132] 2912 21001_GOULTON         ETEMT TILL UTLL RAME TITE CL GLOOPP LES PARE SIZE           248                   1.971[132] 2912 21001_GOULTON         ETEMT TILL UTLL RAME TITE CL GLOOPP LES PARE SIZE           250                   1.561[132] 1218 CL 1.71         TETERC                     2023[1210] 1016 CL 1.71         (6007L           252                   0.301[121] 1219 21001_0.013         TETERC                     2023[1210] 1016 CL 1.71         (6007L           252                   0.301[121] 1219 21001_0.015         TETERC                     1023[1210] 1016 CL 1.71         (6007L           253                   0.301[121] 1219 12001_0.015         TETERC                     07111[100000000000000000000000000000000	
Set         94         DIMPARE         SCHE_UI_DIMPERSIMATION         DIMPERSIMATION         DIMPERSIMATION <thdimpersimation< th=""> <t< td=""><td></td></t<></thdimpersimation<>	
DATABLE:         DUTLIG USE PCT CBM FLAM LOCATION         DIM CGL         DIM CGL         ULICS DEG PCT CBM FLAM LOCATION         DIM CGL         DIM CGL         ULICS DEG PCT CBM FLAM LOCATION         DIM CGL         UTILI         UTILI         UTILI         UTILI         UTILI         DIM CGL         GENOME DEG         PROME DEG           247         1         0.571 (5) 2017 21000         -0.66         [TEMTSC   1         [CEAJO] PELAN RECORDER (CEADOR)         CEAOUL           250         154 (64         0.571 (5) 2018         -1.71         [TEMTSC   1         [M 2012] Haeen RECORDER (CEADOR)         CEAOUL           251         150 (64         0.518 (1562 PCT 10 PELAN RECORDER (CEADOR)         CEAOUL         [M 2012] Haeen RECORDER (CEADOR)         CEAOUL           252         150 (64         0.518 (157 (121 (158) - 0.55)         [TEMTSC   1         [M 2012] Haeen RECORDER (CEADOR)         CEAOUL           253         150 (64         0.51123) Lable 121 (128 (10.00)         -0.55         [TEMTSC   1         [M 2012] Haeen RECORDER (CEADOR)         CEAOUL           254         1.41 (64         0.51123) Lable 121 (128 (10.00)         -0.55         [TEMTSC   1         [TEMTSC	
DATABLE:	
Rem Col. Voli55 DEG PCT GM FLAW LOCATION         EXTENT         CTILL         UTILL         UNIL         UTILL	
246                             0.97 132         29 2  VCL         -0.12         [TBETEC                     T5144  sec]#COD306  C (400TL           247                   0.55   64 30  P 3  SEC         -1.66         [TERTEC                     F5144  SEC]#COD306  C (400TL           248                   1.95 [105   712  SDEK         -1.57         [TERTEC                     F7321  sec]#COD306  C (400TL           250                   1.95 [105   712  SDEK         -1.72         [TERTEC                     F7321  sec]#COD306  C (400TL           251                   1.95 [105   712  SDEK         -1.72         [TERTEC                     F7321  sec]#COD306  C (400TL           252                             0.32   120   45   712   120   4-4.73         [TERTEC                     J3225   jac1#45000001  C (400TL           253                   0.30   45   17   710   40   40   712   710   4-4.73         [TERTEC                               17121   sec3#COD306  C (500TL           254                   0.30   45   17   710   10   4-7.03         [TERTEC                               17121   sec3#COD306  C (500TL           255         124   46   0.351124   17   710   4-5.95         [TERTEC                     07121   sec3#COD306  C (500TL           256         1.316   17   710   710	
227                   0.59         69         20         2100         -1.66         [TERTE                     C330 [prim]#EC0120         C[GOUL           243                   1.92         66         0.90         66         20         10000         -1.72           244                   1.95         1001         66         1.72         1201700                   12012         1201         1201         1201         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200 <td></td>	
148         521         64         0.90         64         201         1TENTEC         1         1W3213 secolssC02208         C (400TL           148                   1         1.95         150         157         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         100000         100000         100000         100000         100000         100000         100000         100000         100000         100000         1000000         1000000         1000000 <td< td=""><td>1</td></td<>	1
243               1       1.95/105/37/P 3/08K       -1.72       TENTEC                 M9213/secs/staccourde       C(400TL         250       [66]       66       1.05/7 12/23/23/08K       -1.71       TENTEC                 R2772/grass/staccourde       C(400TL         251       [94]       66       0.31       15/57/122/128       C(400TL       C(400TL         253       [120]       66       0.32       10/14/22/128       C(400TL       C(400TL         253       [120]       66       0.36/112/1158       C(400TL       C(400TL       C(400TL         254               0.36/112/1168       C(10/11/118)       C(400TL       C(400TL       C(400TL         255       [126]       66       0.50/112/112       P1308       -0.75       TENTEC                 C7122/secolstaccourde       C(400TL         256       [126]       66       0.50/112/112       P1308       -0.75       TENTEC                 C7122/secolstaccourde       C(400TL         258       [126]       66       0.51/12/12/108       P1008       -0.05       TENTEC                 C7122/secolstaccourde       C(400TL         258       [126]       6.33/12/12/10/108       P1008       -1.02	1
250         541         641         1.051         710         TERRE         1         REATE ALL         REATE ALL <threate all<="" t<="" td=""><td>1</td></threate>	1
252         94         66         0.32         10         215         100         66         0.32         101         217         100         66         0.32         101         217         100         66         0.32         101         217         100         66         0.32         101         217         100         218         100         217         100         217         100         217         100         217         100         217         100         217         100         217         100         217         217         217         217         217         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218         218 <th218< th=""> <th218< th=""> <th218< th=""></th218<></th218<></th218<>	1
252       94       66       0.32       18       97.1       15       1500       16       0.32       100       16       0.32       100       14       2170       100       16       0.32       100       14       2170       100       16       0.32       100       14       2170       100       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023       12023	1
1252       1001 661       0.221 001 141P 21VEZ       -0.69       TENTEC       1       L12251prim(8600207)       C(600TL         253       1201 661       0.381122 1461P 21081       -0.65       TENTEC       1       L10251prim(8600207)       C(600TL         254       1       0.201167       219 31088       +1.73       TENTEC       1       071121sec)8400021       C(600TL         255       1241 661       0.531129 1481P 21087       -0.55       TENTEC       1       071121sec)84000210       C(600TL         256       1341 661       0.551129 129 1087       +1.73       TENTEC       1       071121sec)84000210       C(600TL         257       1       0.55124 131P 21087       +1.02       TENTEC       1       071121sec)8400010       C(600TL         258       1244 861       0.2611471 101P 31285       2129 1088       +2.00       TENTEC       1       TENTES       1       151461860012010       C(600TL         261       1631 71       0.19 21VT       -0.68       TENTEC       1       151461860012010       C(600TL         262       127 187       0.391125 112 2108       +1.08       TENTEC       1       151461860012010       C(600TL         263       1327 10.30147 1178	1
223       120       861       0.36       17875C       1       LD251prim(MSC00207)       C(500TL         254       1       0.201477       919       31208       -0.70       17875C       1       150757       C(500TL         255       1226       0.531228       1219       31208       -0.70       17875C       1       0.71113ecc014500126       C(500TL         256       1214       66       0.551128       1219       3108       -0.75       17875C       1       0.71113ecc014500166       C(500TL         257       1       0.50       65       1719       2108       -0.75       17875C       1       0.71113ecc014500166       C(500TL         258       1316       66       0.51124       319       2108       -0.95       17877C       1       0.71113ecc014500166       C(500TL         258       1316       66       0.51124       1319       2108       -0.05       178776       1       0.7113ecc014500166       C(500TL         258       1318       71       0.21108       3214       1019       1008       178776       1       0.7113ecc014500166       C(500TL         256       131       71       0.3150       119	1
254               0.20157       9       9       3088       -0.70       TSETEC               L3025]prin[#CC0107       C \$600L         255       126       66       0.53121       127       9       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100 <t< td=""><td>1</td></t<>	1
125       126       66       0.36[110]       12]P 3]DEK       -1.73       TENTEC       [       07112]seco]sC0016       C[S00TL         126       134       66       0.53[129]       18]P 3[09K       -0.95       TENTEC       [       07112]seco]sC0016       C[S00TL         126       136       66       0.55[124]       19]P 2[10K       -1.02       TENTEC       [       07112]seco]sC0106       C[S00TL         126       144       66       0.55[124]       19]P 2[10K       -1.02       TENTEC       [       [       07112]seco]sC0106       C[S00TL         1261       69       0.15[106]SAC       415K       -0.63       TENTEC       [       [       TE44[seco]sC0102]       C[S00TL         1261       69       10.22[140]       10P 2[VE       -0.68       TENTEC       [       [       07112]seco]sC010217       C[S00TL         1261       121       2.02[140]       10P 2[VE       -0.68       TENTEC       [       [       07112]seco]sC010217       C[S00TL         1261       121       0.0127       131P 2[VE       -0.99       TENTEC       [       [       07112]seco]sC010217       C[S00TL         1265       1318       121P 3[DEC       -0	ì
114       86       0.53]129       18 P 2 09X       -0.95       [TENTEC         [ 07112]seco]sEC0106       C 500TL         257               0.50       85       17       P1210       -0.95       [TENTEC                 07112]seco]sEC0106       C 500TL         258       134       66       0.50 130       12 P 3 DBK       -2.00       [TENTEC                 07112]seco]sEC01016       C 500TL         260       144       66       0.24147       10 P 3 DBK       -2.00       [TENTEC                 TS144[seco]sEC01016       C 600TL         261       69       0.51       6105XT       -0.68       [TENTEC                 TS144[seco]sEC01017       C 600TL         262       81       67       0.22140       10 P 2 VC1       -0.68       [TENTEC                 07112]seco]sEC01016       C 600TL         263       133       67       0.30127       13 P 2 VK1       -0.98       [TENTEC                 0712]seco]sEC01016       C 600TL         264               0.25150       13 P 2 VK1       -0.94       [TENTEC                 0712]seco]sEC01016       C 600TL         275       135       87       0.51       10255LS01       12 P 2 DK1       -0.	1
257           0.50       45       17       9 2400       -0.95       [TENTEC     0.7112]seco]48500166       C[500L         258       [136] 86       0.55       124       199       2108       -1.02       [TENTEC     0.7112]seco]48500166       C[500L         259       [126] 86       0.05       127       1088       -1.02       [TENTEC     0.7112]seco]48500166       C[500L         260       [144] 86       0.24       147       109       31088       -2.00       [TENTEC     1.75144]seco]48500166       C[500L         261       [6] 87       0.51[166[SXL] 4[TEST -0.66       [TENTEC     1.75144]seco]48500166       C[500L         264       [137] 87       0.29[115] 119       21087       -1.02       [TENTEC     1.75155c]seco]48500166       C[500L         264       [167] 0.30[47] 119       21087       -1.03       [TENTEC     1.75155c]seco]48500166       C[500L         265       [136] 87       0.35       50       139<2[098	
236       136       86       0.55       124       19       2108       -1.02       TERTEC               G7112       Secol#SCON166       C (5000L         259       144       86       0.30       120       123       3108       -2.00       TERTEC               T5144       Secol#SCON166       C (5000L         260       144       86       0.30       120       123       3108       -2.00       TERTEC               T5144       Secol#SCON166       C (5000L         261       69       871       0.22       106       107       107       1000       10.31       W3346       TERCO#E               G7112       Secol#SCON166       C (5000L         264       1       0.30       127       139       2108       -0.08       TERTEC                       G7112       Secol#SCON166       C (5000L         264       1       0.30       127       139       129       108       -0.94       TERTEC                       G7112       Secol#SCON166       C (5000L         265       54       83       0.51       20       156       107       129       108       -0.92       TERTEC	•
259       142       46       0.30       129       2108       -2.00       TENTEC       1       T5144       SecolsC0110       C1600TL         260       144       86       0.24       147       1019       3108       -2.00       TENTEC       1       T5144       SecolsC0110       C1600TL         261       69       77       0.25       144       86       0.24       147       129       41587       0.00       121       H336       T5144       SecolsC0116       C1600TL         261       69       77       0.25       1215       1129       2098       -0.68       TENTEC       1       12025       C1600TL       C1600TL         264       1       0.30       47       1219       2098       -0.68       TENTEC       1       10712       SecolsC0107       C1600TL         265       134       87       0.31       2159       147       -0.99       TENTEC       1       10712       SecolsC0107       C1600TL         266       54       63       0.51       2015       121       TENTEC       1       1712       SecolsC0107       C1600TL         271       59       84       0.351       <	1
240       144       86       0.24/147       10/P 3/DBE       +2.00       TERTEC                 T5144/secolstCO0130       C/600TL         261       69       67       0.52/166/SSL   4/TSH       +0.69       TSHTEC                 L3036/secolstCO0130       C/600TL         262       61       67       0.22/160/10/P 2/VCL       -0.66       TSHTEC                 L3036/secolstCO0160       C/600TL         263       1137       67       0.30/17/13/P 2/09H       -1.02       TSHTEC                 C7112/secolstCO0160       C/600TL         264               0.30/17/13/P 2/07H       -0.68       TSHTEC                 C712/secolstCO0160       C/600TL         265       133/87       0.30/17/13/P 2/07H       -0.89       TSHTEC                 UT12/secolstCO0160       C/600TL         265       134/841       0.51       20/58L       217B       -0.99       TSHTEC                 UT12/secolstCO0160       C/600TL         271       0.38       12/2       13/80       12/2       13/80       12/2       16/80TL       14/87       16/80TL       16/80TL         272       15/8       84       0.41       19/2       12/9       10/80C       -1.63       TSHTEC	1
261       69       87       0.15       106       9.32       H3346       H3446       H346       H3	1 . 1
262       81       87       0.22       140       10       P 2       VC3       -0.68       TEXTEC               SJ025       SJ0075       SJ0075 </td <td>1</td>	1
263       127       87       0.29       115       11       2109       -1.02       TEFTEC       I       GT112]seco]sEC03036       C[500TL         264       I       0.30       47       11       2108       -1.08       TEFTEC       I       GT112]seco]sEC03036       C[500TL         265       133       67       0.30       127       1319       2198       -0.88       TEFTEC       I       GT121]seco]sEC03036       C[500TL         265       133       67       0.35       50       1219       2198       -0.94       TEFTEC       I       GT121]seco]sEC0306       C[600TL         266       54       84       0.51       2219       10BC       -1.63       TEFTEC       I       IG7121]seco]sEC0204       C[600TL         272       156       84       0.44       191       1219       10BC       -1.63       TEFTEC       I       H9213]seco]sEC0204       C[600TL         272       172       86       0.28       136       1219       10BC       -1.63       TEFTEC       I       L3025[prisiseC01077       C[600TL         274       1       0.28       136       1219       2198       -0.90       TEFTEC       I	1
224               0.30       47       11/P       210R       -1.04       ITERTEC               07112[sec0]84C00106       C[5000L         265       133       87       0.30       127       13/P       2/M1       -0.84       ITERTEC               13025[prim[84C00107]       C[5000L         265       13/F       0.35       50       13/P       2/08       -0.99       ITERTEC               G7112[sec0]84C00106       C[5000L         266       54       84       0.55       20[85,12]       2/P       10BC       -0.94       ITERTEC               G7112[sec0]84C00206       C[5000L         266       54       84       0.55       20[85,12]       2/P       10BC       -1.76       ITERTEC               W9213[sec0]84C00208       C[6000L         271       568       64       0.32       13P       10BC       -1.55       ITERTEC               U3025[prim[84C00107]       C[6000L         272       568       64       0.32       14P       2/WS       -0.90       ITERTEC               L3025[prim[84C00107]       C[6000L         273       76       486       0.36       14P       2/WS       -0.90       ITERTEC	4
265       1131       871       0.30       1271       131       92       131       877       0.35       50       131       2108       -0.99       TERTEC                       103025       print       (6300L)         268       154       831       0.51       201       311       2108       -0.99       TERTEC               (7122       secolssconce)       (6000L)         268       54       831       0.51       2015841       21758       -0.92       TERTEC               (7122       secolssconce)       (6000L)         268       54       831       0.51       2015841       -0.92       TERTEC               (89213       secolssconce)       (6000L)         21       56       881       0.321191       819       10BC       -1.63       TERTEC               (89213       1260001       (6000L)         271       76       861       0.541191       219       10BC       -1.63       TERTEC               L0025       print       16000L       (6000L)         272       72       861       0.541191       2197       0.050       TERTEC               L0025       print       16000L       (6000L)	1
135       87       0.35       50       131       2109R       -0.99       TERTEC       [ G7112]seco]\$\$C00106       C[600TL         266       54       84       0.51       20[5AL]       2175K       -0.92       TERTEC       [ G7112]seco]\$\$C00106       C[600TL         266       54       84       0.51       20[5AL]       2175K       -0.92       TERTEC       [ G7112]seco]\$\$C00208       C[600TL         2       56       88       0.41       98       121P       31DBC       -1.76       TERTEC       [ W9213]seco]\$\$C00208       C[600TL         271       58       88       0.32       13       81P       31DBC       -1.63       TERTEC       [ W9213]seco]\$\$C00208       C[600TL         272       72       88       0.54       13P       21VST       -0.90       TERTEC       [ L025]pris       L025]pris       600TL         274       [ [ 0.32]       94       14P       21VST       -0.90       TERTEC       [ L025]pris       600TL       C[600TL         275       94       84       0.36       14P       21VST       -0.76       TERTEC       [ L025]pris       600TL       C[600TL         276       118       84 <t< td=""><td>1</td></t<>	1
1       0.28       94       11       P 210R       -0.94       TERTEC       07112 secol\$8C00106       C 600UL         268       54       83       0.51       2015AL       21TER       -0.92       TERTEC       07112 secol\$8C00206       C 600UL         268       54       83       0.51       2015AL       21TER       -0.92       TERTEC       07112 secol\$8C00206       C 600UL         271       56       86       0.48       99       1217 31DEC       -1.63       TERTEC       08213 secol\$8C00206       C 600UL         272       56       86       0.32       136       12P 31DEC       -1.63       TERTEC       1       M9213 secol\$8C00206       C 600UL         272       56       86       0.32       94       14P 21VC3       -0.90       TERTEC       1       L3025 prist\$8C00107       C 600UL         274       1       0.35       12P 21VE3       -0.76       TERTEC       1       L3025 prist\$8C00107       C 600UL         275       98       88       0.51       13P 21VE1       -0.62       TERTEC       1       L3025 prist\$8C00107       C 600UL         277       1       0.35       13P 21VE1       -0.62       TERTEC	1 1
268       54       881       0.51       20       175KTSH       1.27       1.38       24576       140029         1       0.99       81       22       9       9       0.92       175KTSH       1.27       1.38       24576       140029       160029         1       0.99       81       22       9       1000       155       15KTSH       1.27       1.38       24576       140029       16007L         271       156       88       0.32       119       1000       -1.63       15ETEC       1       19223       156007L       16007L         272       172       88       0.32       12       9       1000       17ETEC       1       1923       16007L       16007L         273       76       185       0.32       14       19       1000       17ETEC       1       13025       16007L       16007L         274       1       0.32       94       14       19<2	3
[ ] 0.99] &1 22] F 3 [DBC       -1.75       [TSKTEC ] . [ W9213]seco]88C00208] C[600UL         271       56[ 88] 0.48] 98 12] F 3 [DBC       -1.60       [TERTEC ] . [ W9213]seco]88C00208] C[600UL         272       58] 88       0.32]119       8] P 3 [DBC       -1.63       [TERTEC ] . [ W9213]seco]88C00208] C[600UL         272       58] 88       0.32[119] 8] P 3 [DBC       -1.63       [TERTEC ] . [ W9213]seco]88C00208] C[600UL         273       76[ 88] 0.26[116] 12] P 2[WSM       -0.90       [TERTEC ] . [ L3025]prim]88C00107] C[600UL         274       [ 0.32] 94 14[ P 2[VSM       -0.90       [TERTEC ] . [ L3025]prim]88C00107] C[600UL         275       98[ 88] 0.36[110] 15[ P 2[VK2       -0.76       [TERTEC ] . [ L3025]prim]88C00107] C[600UL         276       118       88       0.35[109] 15[ P 2[VK1       -0.63       [TERTEC ] . [ W3336]reso]88C00107] C[600UL         276       118       88       0.55[122] 19[ P 2[VK1       -0.63       [TERTEC ] . [ W3336]reso]88C00106] C[500UL         277       I [ 0.35[109] 15[ P 2[VK1       -0.64       [TERTEC ] . [ W3336]reso]88C00107] C[600UL         277       I 28       88       0.55[122] 19[ P 2[VK1       -0.64       [TERTEC ] . [ G7112]seco]88C00106] C[500UL       C[600UL         277       I 20.88       0.55[122] 19[ P 2[VK1       -0.64       [TERTEC ] . [	1
1       56       84       0.42       99       12 [P 3]DBC       -1.60       [TERTEC                 1 9213]seco]82C00208       C[600TL         271       58       88       0.32 [119]       8 [P 3]DBC       -1.63       [TERTEC                 1 9213]seco]82C00208       C[600TL         272       72       88       0.54 [119]       21 [P 3]DBC       -1.55       [TERTEC                 L3025]prim[seC0107]       C[600TL         273       76       88       0.32 [94]       14 [P 2]VC3       -0.90       [TERTEC                 L3025]prim[seC0107]       C[600TL         274                       0.32 [94]       14 [P 2]VC3       -0.76       [TERTEC                 L3025]prim[seC00107]       C[600TL         275       98       88       0.31 [70]       14 [P 2]VR1       -0.63       [TERTEC                 L3025]prim[seC00107]       C[600TL         277               0.35 [109]       15 [P 2]VR1       -0.63       [TERTEC                 G7112]seco]82C00107]       C[600TL         278       128       84       0.45 [136]       21 [P 2]09H       -0.96       [TERTEC                 G7112]seco]82C0106       C[500TL         280       136       88<	
272       58       84       0.32119       819 31DBC       -1.63       TERTEC               K9213[secc]48C00208       C[600UL         272       72       88       0.54119       2119 31DBC       -1.55       TERTEC               L3025[prim]88C00107       C[600UL         273       76       48       0.281136       1219 21VSM       -0.90       ITERTEC               L3025[prim]88C00107       C[600UL         274       [               0.32       94       1419 21VC3       -0.90       ITERTEC               L3025[prim]88C00107       C[600UL         275       98       88       0.36110       1519 21VR1       -0.63       ITERTEC               L3025[prim]88C00107       C[600UL         276       118       84       0.31<70	
272       72       68       0.54       119       21P       31DBC       -1.55       ITENTEC               L3025       L3025       C000L         273       76       68       0.28       136       12       P 2       VSM       -0.90       ITENTEC               L3025       prim       SC00107       C600UL         274       [       0.32       94       14       P 2       VC3       -0.90       ITENTEC               L3025       prim       SC00107       C600UL         275       98       68       0.36       110       15       P 2       VR2       -0.63       ITENTEC               L3025       prim       SC00107       C600UL         276       118       68       0.55       122       19       2       VR1       -0.63       ITENTEC               K3365       reso/stc00107       C600UL         277               0.35       109       15       P 2       VR1       -0.63       ITENTEC               G7112       secoistC00106       C1500UL         278       1128       84       0.55       122       19       2       109       -0.98       ITENTEC               G7112	1
273       76       88       0.28       136       12       P       2VSM       -0.90       ITERTEC               L025       L025<	1
274       [       0.32       94       14       P 2       VC3       -0.90       [TEXTEC ]       [       L3025]prim[\$3000107]       C[600UL         275       98       84       0.36[110]       15       P 2       VR2       -0.76       [TEXTEC ]       [       L3025]prim[\$3000107]       C[600UL         276       118       84       0.31       70       14       P 2       VR1       -0.63       [TEXTEC ]       [       E4963]reso[\$3000107]       C[600UL         277       [       [       0.35[109]       15       P 2       VR1       +0.63       [TEXTEC ]       [       R336]reso[\$3000107]       C[600UL         278       128       84       0.55[122]       19       P 2       108       -0.98       [TEXTEC ]       [       G7112]seco[\$3000106]       C[500UL         279       132       84       0.65[136]       21       P 2       1098       -0.96       [TEXTEC ]       [       G7112]seco[\$3000106]       C[500UL         280       136       88       0.65[136]       21       P 2       1098       +1.68       [TEXTEC ]       [       G7112]seco[\$3000106]       C[500UL         281       144       881       0.771 <td>ŀ</td>	ŀ
275       98       88       0.36       110       15       P 2       VNR2       -0.76       TENTEC       I       L3025       L3025 <t< td=""><td></td></t<>	
276       [118] 88]       0.31       70       14]P 2]VH1       -0.63       [TERTEC]       [ E4963] reso]\$8000107]       C[600UL         277       [ ]       [ 0.35]109       15]P 2]VH1       +0.83       [TERTEC]       [ R3386] reso]\$8000107]       C[600UL         278       [128] 88]       0.55[122]       19]P 2]10H       -0.98       [TERTEC]       [ G7112] secs]\$8000106]       C[500UL         279       [132] 88]       0.49]145       17]P 2[09H       -0.96       [TERTEC]       [ G7112] secs]\$8000106]       C[500UL         280       [136] 88]       0.65[126]       21]P 2[09H       -0.98       [TERTEC]       [ G7112] secs]\$8000106]       C[500UL         281       [140] 88]       0.72] 70]       25[P 3]DBC       +1.66       [TERTEC]       [ G7112] secs]\$800106]       C[500UL         282       [144] 88]       0.77] 70] 25[P 3]DBC       +1.66       [TERTEC]       [ G7112] secs]\$800106]       C[500UL         283       [123] 69]       0.72] 96       23[P 2]10H       -0.89       [TERTEC]       [ G7112] secs]\$800106]       C[500UL         284       [127] 89]       0.33]154       12[P 2]09H       +1.00       [TERTEC]       [ G7112] secs]\$800106]       C[500UL         286       [ 131] 89]	I
277               0.35 [109]       15 P 2 [VH1       +0.81        TENTEC               #3386]==so]#3C00107       C:600UL         278       128       84       0.55 [122]       19 P 2 [10H       -0.98       !TENTEC               G7112]=sec]##C00106       C:600UL         279       132       84       0.49 [145]       17 P 2 [09H       -0.96       !TENTEC               G7112]=sec]##C00106       C:600UL         280       136       84       0.65 [136]       21 P 2 [09H       -0.98       !TENTEC               G7112]=sec]##C00106       C:600UL         281       140       88       0.65 [136]       21 P 2 [09H       +0.98       !TENTEC               G7112]=sec]##C00106       C:600UL         282       144       88       0.77 P 2 S:P 3 [DDC       +1.66       !TENTEC               G7112]=sec]##C00106       C:600UL         283       123 B9       0.72 P 6       23 P 2 [10H       -0.89       !TENTEC               G7112]=sec]##C00106       C:600UL         284       127 B9       0.33 [154]       12 P 2 [09H       +1.00       !TENTEC               G7112]=sec]##C00106       C:600UL         285               0.46       91       16 P 2 [10H       +1.00 <td>I</td>	I
278       128       88       0.55       122       19       7       108       TEXTEC               G7112	I
279       132       88       0.49       145       17       P 209H       -0.96       TENTEC               G7112       Sec0       SEC00106       C 500UL         280       136       88       0.65       136       21       P 209H       -0.98       TENTEC               G7112       Sec0       SEC00106       C 500UL         281       140       88       0.22       137       8       P 30BH       +1.88       TENTEC               G7112       Sec0       SEC00106       C 500UL         282       144       88       0.77       70       25       P 30BC       +1.66       TENTEC               G7112       Sec0       SEC00106       C 600UL         283       123       89       0.72       96       23       P 210H       +0.89       TENTEC               G7112       Sec0       SEC00106       C 600UL         284       127       89       0.33       154       12       P 209H       +1.00       TENTEC               G7112       Sec0       SEC00106       C 600UL         285               0.46       91       16       P 210H       +1.00       TENTEC               G7112       Sec0	I
280       136       88       0.65       136       21       P       209H       -0.98       TENTEC               G7112       seco       86C00106       C 500UL         281       140       88       0.22       137       8       P       3       DBH       +1.88       TENTEC               G7112       seco       86C00106       C 500UL         282       144       88       0.77       70       25       P       3       DBH       +1.66       TENTEC                       G7112       seco       86C00106       C 500UL         283       123       89       0.72       96       23       P       10H       -0.89       TENTEC                       G7112       seco       86C00106       C 600UL         284       127       89       0.33       154       12       P       209H       -1.00       TENTEC                       G7112       seco       86C00106       C 600UL         285               0.46       91       16       P       210H       -1.00       TENTEC                       G7112       seco       86C00106       C 600UL         286       132	1.0
281       140       88       0.22 137       8 P 3 JDBK       +1.88       TENTEC               G7112/seco/88C00106       C 500UL         282       144       88       0.77       70       25/P 3/DBC       +1.66       TENTEC               C4330/prim/88C00130       C 500UL         283       123       89       0.72       96       23/P 2/10H       -0.89       TENTEC                       G7112/seco/88C00106       C 600UL         284       127       89       0.33/154       12/P 2/09H       -1.00       TENTEC                       G7112/seco/88C00106       C 600UL         285                       0.46       91       16/P 2/10H       -1.00       TENTEC                       G7112/seco/88C00106       C 600UL         286               1.046       91       16/P 2/10H       -1.00       TENTEC                       G7112/seco/88C00106       C 600UL         286               1.046/124       21/P 2/10H       -0.98       TENTEC                       G7112/seco/88C00106       C 600UL         287               0.64/124       21/P 2/10H       -0.98       TENTEC                       G7112/seco/88C00106       C 600UL	1
282       144       88       0.77       70       25       P       3       DBC       +1.66*       TENTEC               C4330       Prim       85C00130       C       500UL         283       123       89       0.72       96       23       P       210H       -0.89       TENTEC               G7112       secols8C00106       C       600UL         284       127       89       0.33       154       12       P       209H       -1.00       TENTEC               G7112       secols8C00106       C       600UL         285               0.46       91       16       P       10H       -1.00       TENTEC               G7112       secols8C00106       C       600UL         285               0.46       91       16       P       10H       -1.00       TENTEC               G7112       secols8C00106       C       600UL         286       132       89       0.70       137       22       P       210H       -0.98       TENTEC               G7112       secols8C00106       C       600UL         287               0.64       124       21       P       210H       <	ł
283       123       89       0.72       96       23       P 210K       -0.89       TERTEC               G7112	ŀ
284       [127] 89[       0.33[154] 12]P 2[09H       -1.00       [TEHTEC         [G7112]seco]88C00106[       C[600UL         285       [       0.46] 91       16]P 2[10H       -1.00       [TEHTEC         [G7112]seco]88C00106[       C[600UL         286       [131] 89]       0.70[137] 22]P 2]09H       -0.98       [TEHTEC         [G7112]seco]88C00106[       C[600UL         287       [       0.64] 124[21]P 2]10H       -0.98       [TEHTEC         [G7112]seco]88C00106[       C[600UL         288       [135] 89]       0.75[137] 23]P 2]09H       -0.95       [TEHTEC         [G7112]seco]88C00106[       C[600UL         289       [       [0.42]124] 15]P 2]10H       -1.02       [TEHTEC         [G7112]seco]88C00106[       C[600UL         290       [137] 89[       0.36[136]SAI[2]06H       -0.11       06H06H       0.00       [0.41]       M7262[reso]88H00144] H 600PP	1 -
285               0.46       91       16       P 210H       -1.00       TENTEC               [G7112]seco]88C00106       C 600UL         296       131       89       0.701137       22       P 209R       -0.98       TENTEC                       G7112]seco]88C00106       C 600UL         287                       0.64       124       21       P 209R       -0.98       TENTEC                       G7112]seco]88C00106       C 600UL         288       135       89       0.75       137       23       P 209R       -0.95       TENTEC                       G7112]seco]88C00106       C 600UL         289               0.42       15       P 210H       -1.02       TENTEC                       G7112]seco]88C00106       C 600UL         290       [137]       89       0.36       136       SAI       2106H       -0.11       06H06H       0.00       0.41       M7262       reso]88H00144       H 600PP	1 .
285       [       0.46] 91       16] P 2[10H       -1.00       [TEXTEC ]       [       [ G7112]seco]88C00106 [       C 600UL         296       [131] 89       0.70[137] 22] P 2]09H       -0.98       [TEXTEC ]       [       [ G7112]seco]88C00106 [       C 600UL         287       [       0.64   124 [       21   P 2   10H       -0.98       [TEXTEC ]       [       [ G7112]seco]88C00106 [       C 600UL         288       [135] 89 [       0.75   137 [       23   P 2   10H       -0.95       [TEXTEC ]       [       [ G7112]seco]88C00106 [       C 600UL         289       [       0.42   124 ]       15   P 2   10H       -1.02       [TEXTEC ]       [       [ G7112]seco]88C00106 [       C 600UL         290       [137] 89 [       0.36   136   SAI         2106H       -0.11       06H06H       0.30       [0.41 ]       M7262]reso]88H00144 ]       H 600PP	I
296       131       89       0.70       137       22       P 2       99R       -0.98       TERTEC                       G7112       secol       88C00106       C       600UL         287               0.64       124       21       P 2       108       -0.98       TERTEC                       G7112       secol       88C00106       C       600UL         288       135       89       0.75       137       23       P 2       109R       -0.95               IERTEC                       G7112       secol       88C00106       C       600UL         289               0.42       15       P 2       10R       -1.02       IERTEC                       G7112       secol       88C00106       C       600UL         290       [137]       89       0.36       136       SAI       2       06H06H       0.00       0.41       M7262       resol       88H00144       H       600PP	<b>I</b> .
287               0.64 124  21 P 2 108       -0.98        TENTEC                   G7112 seco[88C00106  C 600UL         288       135[89]       0.75 137  23 2 2[09K       -0.95        TENTEC                   G7112 seco[88C00106  C 600UL         289               0.42 124  15 P 2 10K       -1.02        TENTEC                   G7112 seco[88C00106  C 600UL         290        137  89        0.36 136 SAI  2 06H       -0.11        06H06H  0.00        0.41         M7262 Teso 88H00144  H 600PP	I
288       135       89       0.75       137       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23       23	1
289         [         0.42         124         15         P 2         10H         -1.02         TENTEC         [         G7112         seco         seco <td>1</td>	1
290 [137] 89 0.36 136 SAL 2 06H -0.11  06H06H 0.00  0.41   M7262 = 50 88H00144   H 600PP	I
	1
tttestt este stand t t ttttt -	i
\$145 89 0.35 123 12 P 2 VC1 +0.80 [TEHTEC ] [ C4330 prim \$8000130] C 600UL	Ì
	1
294   52 90 0.95 86 21 F 3 DBH -2.07  STHTEC     R3710 prim 88C00208 C 600UL	

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		- "	Appendix 3	-4411-01	Steath Seriera		5						
	•				SG88 MAI, MCI.	MMI, MVT	537 6/		0-1006	<b>1</b> -m	2	age 8 of 13	
	•		UTILITY:	Souther	n California Ediso		, 3AL, 30	34.,	0-10041		NOV.	8,2000 8:44	
			2LANT:	San Ono	fre							0,2000 8:44	
			UNIT:	2									
			SG :	88									
	••		DATABASE :	SONGS_U	2_1000_SG88_FINAL						PAGE	7	
~~												•	
	•	ROW COL	VOLTS DEG PCT CH	n flaw l	CATION	EXTENT	OTILL	UTIL2	NAME	TYPE CAL GROUP	LEG	PROBE SIZE	
	295	54 90	0.36  17 SCI 2	1   TSA	+0.08	TSHTSH	10.00	0.20	M7262	==so 88H00139	HIG	0022	
	296	1 1 1	1.18 63 25 P	3   OBH	-1.99	DETREC	i	i		p=im 98C00208	-	OOUL	1
	297	1   1	0.58 143  14 9	)   DBH	+1.15	TENTEC	Ì	i		seco 88000208	•		ł
	298	65 90	0.27 23 SCI P	l   TSH	-0.10	TSHTSH	0	1.14		==so 88H00199	•	9022	1
	299	72 90	0.60 132  24 P :	2   VSM	+0.97	TENTEC	I	1	La038	prim 88C00109	•	DOUL	· · ·
	300	76] 90	0.50 61 21 3	2 VSM	-0.00	TERTEC	1	Ì		pria 88C00109]	•••		 [
	301	80[ 90]	0.19  93 SAI  2	2   02H	+9.60	02H02H	0.00	0.23		Teso 88800240	•		ł
	302	+ $+$ $+$	0.26 100  SAT   2	2   02H	+9.96	02H02H	10.00	0.25		reso 88800240	•		1
	303	126 90	0.42 121 17 2	DBH	-2.00	TEXTEC	1	i		pris[88C30109]	C] 50		, [ .
	304	128 90	0.37 99 13 7	2 1 OH	+0.94	TERTEC	1	1	-	prim 88000108	C 60		1
	305	142 90	0.26 129  11 P :	DBH	+2.00	TEATEC	1	Ì		seco   88C00130	-		
	306	144 90	0.64 40 22 P	DBC	+1.70	TEATEC	1	1		Seco   88C00130	CIEC		1
	307	146 90	1.14¦ 64  33 P 3	DBC	+1.60	TERIEC	1	1 .		[prim 88C00130]	CISC		ł
	308	85 91	0.41 82 15 7 2	5   09H	-0.15	TERIEC	1	I	•	seco   88C00132	CIEC		ł
	309	99 91	0.41  11 SCI P 1	TSH .	-0.14	TSHTSH	0.37 -	0.16		[reso 88200091]	ᆔᇵ	•	
	310	125 91	0.30 140  13 2 3	DBH	-1.96	TERTEC	I			pria 88000109[	CISC		
	311	137 91	0.43 140 19 2	10H	-1.08	DETEC	I			[pria 88C00109]	C[60	-	
	312	145 9I	0.30 151  10 P 2	VH2	+0.75	TERTEC	i i	1	-	prim 88C00130	C 60		
	313	147 91	0.39 152  14 P 2	VCI	-0.82	TERTEC	ŀ	1		pria 88000130	CIGO		
	314	72 92	0.18 104 SAT 2	TSH	+1.53	TSHTSH	10	10.40		TESO 85200091	HIGO		
	e 8.	1 1 1	0.10 119 SAI  2	TSH	+2.38	TSHISH		10.20		zeso [88200091]	3 60		
1	. ]	112 92	0.37 62 13 2	VH2	-0.51	TARTEC	1	1	•	[prim]88C00105]	CISO		
	317	120 92	0.37 85 13 7 3	DBH	-1.89	TEATEC	1		•	seco   88C00105	C 60		
	1	126 92	0.25 119 12 2 2	VH1	-0.94	TENTEC	1	I	•	pria   88C00109	C 60		
	. فر	138 92	0.28 148 13 P 2	VII	-0.73	TERTEC	1	1		pria 88C00109	C 60		
	320	[ 53  93	1.49 64 34 2 3	DBH	-1.84	07HTEC	1	1	•	pria 88C00207	C 60		-
	321	55 93	0.81 17 SAI 2	TSH	-1.45	TSHISH	1.36	.75	-	reso   88200133	R 50		
1	322	135  93]	0.29[118] 11 9 2	IOH	+0.94	TERTEC		1		prim [88000108]	C  60	•	
	323	147 93	0.26 76 8 9 2	VC1	-0.47	TEATEC	ł	1	• •	pria 88000130	CISO	-	
	324		0.78[112] 25 9 2	VCL	+0.97	TEATEC		1	•	pria 88000130	CIEO		
;	325	1 1 1	0.22 52 10 P 3	DBC	-1.90	TENTEC	1	1		TESO 88C30130	C 60		
	326	52 94	0.35 134  11 P 3	DBC	-1.90	TERTEC	1	1		zeso   88000207	C 60		
	327	84 94	0.31  22 SCI ? 1	TSH	-0.12	TSHTSH	0.29	3.21		zaso   63200090	3150		
	328	122   94	0.25 80 919 3	DBH		TENTEC	i			seco 88C00108	C  50		
:	329	230 94	0.42 129 15 9 2	108	-0.95	TENTEC	1			Teso 88C00108	C  50		
:	330	132  94	0.66 64 25 2	101		TERTEC	ł	] I		prim[88C00109]	C 60		
:	331	119  95	0.43 115 14 2 3	DBH	-1.82	TEHTEC	ĺ			seco   88C00110	C  60	•	
	332	127 95	0.25 156 10 P 2	VH1		TENTEC		1	-	seco[88C30110]	C  60		
:	333	129 95	0.43 91 17 P 3	DBE		TERTEC				prim[88C00111]	C1 50	-	
:	334	48 96	1.18 116 30 P 3	DBH	-1.75	TERIEC	l			reso 88C00207]	C  60		
:	335	50  96	3.12 19 49 P 3	DBH			LAR			rese[88000207]	C[50	•	
:	336	E E E	0.86 210 24 2 3	DBC	-1.98	TENTEC		 		zeso[83C00207[	C  50		
2	337	54 96	0.38  33 SCI 2 1	TSH			0.56	0.28		7eso 88200199	H 60		
1	338		0.41 62 13 2 3			TENTEC	1			zeso 88C90207	CIEO		
3	339	114 96	0.29 152  12 P 2	VH3		TEHTEC	i i			seco[98C00110]	C[ 500		
	340	122 96	0.41 120 13 2 3	DBH		TENTEC		   I		prim[88C00110]	C[60		
	ì	134 96	0.37[121] 15 P 2	[VH1		TEHTEC				prim[88C00110]	CIED	•	
.7	الحن .	144  96	0.39 125  13 P 3	DBH	• • • •	TEHTEC	· · ·	•		prim 88C00130	C 600		
3	143	69 97	0.15  98 SAI  2	TSH			0			reso 88H00091	H{600		
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- 1 - <i>1</i>	Inservice inspec Appendix 3	tion of Steam Generat					Special Report Page 9 of 13	
	UTILITY:	SG88 MAI. MCI, Southern California Edis		SAI, SC	:, SVI,	0-100*TWD	NOV. 8.2006 8:44	
	PLANT :	San Onofre	•,				NOV. 8.2000 8:44	
	UNIT:	2 .						
	SG:	- 88	•					
•	DATABASE:	SONGS_U2_1000_SG88_FINAL					PAGE 8	
		· · · · · · · · · · · · · · · · · · ·	•				PAGE 8	
ROW COL	VOLTS DEG PCT CH	IN FLAW LOCATION	EXTENT	UTIL1	UTIL2	NAME TYPE CAL GROUP	P LEG PROBE SIZE	
344  125  97	0.381136  14 P	2 VH1 -0.90	TENTEC		1	B8589[seco]88C00111]	CIGOOUL	 I
345 135 97	0.21146 10 P	2 10H -0.94	TENTEC	.' 1	1			1
346	0.26 130  12 P	2 10H +0.97	TEHTEC	1	1	[ L9168 [prim   68C90119]		i
347 [ 50] 98	0.36  34  14 P	2 VSM -0.75	TEHTEC	1	1	W3386 reso 88C00207		Ì
348   54  98	0.44 18 SCI P	1 TSH -0.01	TSHTSH	1.57	1.17	P4578 reso 80H00199		1
349   62   98	0.54 84 MCI 2	1/TSH +0.12			.94	24578 zesc 82200199		1
350   66  98	0.22 97 SAI	2 TSH +0.19			1.15	24578 zeso 88800199	-	ŀ
351	0.19 103 MAI	2 TSH +0.93				24578 zeso 88800199		I I
352   74   98		•			0.38	R5555 reso 88800091		1
353   47   99		•	TERTEC	1	1	RS555 200 88C00207		1
354	0.52 48 16 9	•	TERTEC	I		RSSES Teso 88000207 [	•	I
355   51   99	0.60 77 18 2		TENTEC	1	I	34165 prim 88C00207 [		F
356   85  99	0.56 122 19 9	21090 +1.28	TENTEC	LAR	1 ·	M7262   Teso   38C30111	C   500UL	1
357	0.19 103 [SAI]	2090 +1.50	1090090		0.30	H1748 reso 88C00192	C  60029	1
358 [113] 99]	0.32 91 14 9	2 1782 -0.75	TENTEC	1	1	H1748 reso \$8000110		1
359  133  99			TERTEC	, 1	1	V1371[prim[66C00110]	C  6000L	· I
360 44 100			TENTEC	1	1	R5555 Teso 88C00207	CIGOOUL	1
361	0.77 95 22 9	•	TENTEC	1	•	G4841 7950 88C00207		1
362  134 100			TERTEC	r F	1	V1371 prim 88C20110	C   6000L	1
363  146 100			TERTEC	1	1 1	C4330 prim 88C00130	C  500UL	I .
39 101		•	TEHTEC	1	1 I			1
41 101			TENTEC	<b>t</b> 1		34163 [prim] 88C30207 [		1
366   43 101	0.40 73 13 2 :		TEATEC	1		34165 prim 88C00207		1
65 101				10		34165 prim 88C00207   24578 reso 88200199		1
73 101					.39    0.19			1
369   79[101]	0.45] 27 SCI P 2					G4841 [ TESO ] 88200090 [	H 600PP	1
370 [111]101]			TERTEC	.24 	.27	P4578 [ == so   88H00088	H  600PP	i r
371  119 101	0.43[136] 13[P 3		TENTEC	•	• • •	W9213[seco[88C00132]	CIGOOCL	1 .
372 [127]101]	0:34 122 14 P 2		TERTEC	F .	i i	74578 zeso 88000110		
373	0.23 91 10 92			[   r	I I	V1371[prim]88C00110]	CLEDOT	1
374   36 102 [			TENTEC	l •	 • •	V1371 prim 88C00110	C 60005	1
375 42 102			TERTEC	!	1 3	W9213 seco 88C00205	CIGOODL	1
376 46 102					[.31 ]	24578 [reso]88500199]		1
377 701102					.16     .16	24578 [zeso]88200199]	H 500PP	1
378 80 102						74578 zeso   38H00199	H 600PP	1
379  116  102			-	.31	.14	24578 zeso 88200089	H 600PP	1
330   35 103			TENTEC			35926[seco]85C00113[	CIEDOUL	1
381   351103	0.42(43) 16 P 2		_	. !		20037 [prim   88C00205 ]	C160001	1
382   39 103			TEHTEC			W9213  seco  88C00205	CIGOOL	1
					0.19	R5555   reso   88300200	H  500PP	1
				[0.00	C.40	M7262   reso   83H00138	H 60055	l t
		•	STATEC			W3386   IESO   88C00205	C 60005	
		• • • • • •	1	LAR		H7262 [reso   88C00112 ]	CISOOUL	1
				.87		24573   reso   88H00211	H 600PP	1
	0.49 61 16 P 2		TERTEC		l 1	F0037 prim 88C00112	C 600TL	1 .
388 [ 42[106]	0.63 128 21 P 2	· · · · ·	TENTEC	I I		33170 prim 83C00203	C 6000L	1
389   76 106				0.11	0.19	24963   2650   68H00242	500PP	l
128 106 106 106	0.29 147  9 P 2		TSHIEC		l	B3170 prim 88000113	CIECOUL	I
11444	0.43 64 14 P 2		TEHTEC		1	F0037 prim 88C00112	C 600UL	1.
392  144 106	1.08 97 24 P 3	DBC +1.70	TERTEC		t	R3710 prim 88C00208	CIEDOUL	1
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		- in Ai	iservice inspec ppendix 3	tion of S	team Generato	or lubes						ecial Report ge 10 of 13		
	•	• •			SG88 MAI, MCI,	MMI. MVI,	SAI, SC	I, SVI, (	0-100%TW	ס	, d	30 10 01 10	-	
			UTILITY:	Southern	California Ediso	m,					NOV.	8.2000 B	: 44	
			PLANT:	San Onofr	e									
	-		UNIT:	2										
	<u> </u>		SG :	88										
	₹ع	•	DATABASE :	SONGS_U2_	1000_SG88_FINAL						PAGE	9		
~										,				
		row Col	VOLTS DEG PCT CH	n flaw loc	NOITE	EXTENT	UTIL1	UTIL2	NAME	TYPE CAL GROUP	P LEG	PROBE SIZ	:E	
	393	63 107	0.11 99 SAT	2   TSH	+2.32	TSHTSH	.16	1.16	880901	reso 88800201	H	60092	1	1
	394	127 107	0.40 157 17 P	2   VH1	-0.75	TEHTEC	ł	1 1	[ V1371]	prim 88C00114	cl	COOUL	ł	i
	395	24 208	0.15 109 SCI P	1   TSH	+0.01	TSHISH	0.11	0.31	W3386]:	reso   88800201	H	60029	Ī	i
	396	48 108	0.62[113] 21[P	2   VSM	-0.12	TERTEC	I	1 1	M7262	reso ( 84C00203	c	600UL	I	l
	397	106 108	0.55 17 SAT	2   VC2	+1.07	[VC2VC2	0.67	0.43	W33861	reso   88C00249	C C	560PP	1	
	398	128 108	0.33 145 11 2	2   VH1	-0.87	TERTEC	1	1	79924	seco   3\$C00114	c	SCOUL	I	ĺ
	399	23 109	0.54 131 19 9	2 į VSM	+1.06	TENTEC	1	1 1	W9213	seco   88C00203	C	6000L	ŀ	ŀ
	400	37 109	0.61 14 SAI	2 1758	-5.25	TSHTSH	.44	1.13	24578	reso 88800211	3	60022	Ī	í
	401		0.75 20 SAT	2 TSH	-3.79			1.18		reso[88H00211]		60027	i	[
	402	39[109]	• • •		+1.05			1.13		reso   \$\$200201		60029	i	;
	403	43 109			+0.71			0.20	• •	reso   ##800265		60022	i	1
	404		0.50 100 17 2		+0.32	TEATEC	1			==so 88C30203		600UL	i	ļ
	405	47 209			-1.36 TO-0.99		.81	1.36		resc 38200211		5002P		:
	406		0.37 22 SCI P	•	-0.15				-			GOOPP		2
	407		0.27 123 11 P		+0.94	TERTEC	1 - 41 1	•	• •	seco   88C00203		600UL	1	i
		79 109	0.39 19 SCI [2 ]		-0.07		0.43	• •		====0 88200084		6007P		
	408	• • •	0.24 50 11 2	-	+1.14		10.43			•		SCOUL	1	
		1111 109				TERTEC	1	•		prim(88C00114)		600CL	) 	
		123 109			-0.95	TEATEC	1			seco[\$8C00114]			1	
	411	143 109		3 DBH	-1.54	[TEATEC	1			pria [88C00131]		SOOTL	1	ı .
	412	78 110	0.36[115] 12[P		-0.74	TEATEC	1	1 1		seco   38C90114		600CL	1	
	<u> </u>		0.39[138] 13[P		-0.74	TEATEC	1			seco   92C00114		500TL	1	
	محمد ا	86 110	0.41 67 18 P		-0.56	TERTEC	1			pria   58000115		SOUTL		
	415	[114[110]	0.321108 167		-1.59		ŀ			ozia 88C90115		50002	1	
	16	142 120	0.51 55 187	3   DBH	+1.86	TERIEC	I	1 1	V1371 ;	pria 88000131		600TL	1	
<b>`~~~</b>	417	39 111	0.65 19 SAI	2   TSH	-0.01	TSHISH	0.53	•	-	<del>203</del> 0[\$8300201]	-	60025		
	418	43 111 1	0.55  11 SAI  :	2 TSH	-4.34	TSHISH	0.63	0.21	X7262  :	<b>2630 88H0</b> 0201	ם	60077	1	•
	419		0.76  20 SAI	2   TSH	-3.05	TSHTSH	2.25	0.34	M7252	2250 38200201	E]	50022	1	
	420	1.1.1	0.43  15 SCI 2	1 TSH	-2.66	TSHTSH	0.63	0.14	M7262]:	2230 88200201	R	600P2 .	1	
	421	1 1 1	1.14 13 [SAI]	2   TSH	-0.44	TSHTSH	1.67	0.15	M7262	<b>202018830</b> 0201	푀	60077	1	•
	422	49]111]	0.28  80 SAI  :	2 TSH	+0.13	TSHISH	. 27	1.15	24578	reso   \$\$200211	Ξ	60077	1	
	423	59 111	0.80 21 SCI P	l   TSH	-3.64	TSHTSH	.67	1.20	24578	reso   68200211	E	600PP	1	
	424	1 1 1	0.43 108  15 P	2   01H	+1.25	TERTEC	1		M7252	reso   \$2C00203	C]	600UL	1	
	425	123 111	0.58  32  19 P	3   DBH	+1.99	TERTEC	I	1	28278	seco \$\$C00134	C	60001	1	
	426	122 112	0.29 34 11 P	2 10H	-0.86 .	TENTEC	E	!	32027	prim \$2C00133	cl	600UL	1	
	427	126 112	0.46 23 14 P	3   DBH	+1.75	TERIEC	1	1	92027	prim ##C00133	C	600UL	1	
	429	57 113	0.53 10 SAI	2 07표	-0.23	078073	Įo	1.11	24578	reso   \$\$200223	E	60077	1	
	429	34 114	3.25 30 SCI 2	1   TSH	-6.03	TSHISH	5.29	0.51	W3386]:	reso[\$\$E00201]	3	50022 `	1	
	430	1 1 1	1.00 20 MCI P	1   TSH	-5.54	TSHISH	1.15	0.28	W3386]:	reso   88200201	ΞĮ	60092	1	i
	431	1 1 1	0.38  17 SCI P	1   TSH	-5.10	TSHISH	0.76	0.14	W3336	reso   88800201	ΞĮ	600PP	- 1	Í
	432		1.11 21 SCI P	1 TSH	-4.53					TESO 88800201	_	600PP	1	l
	433	1. I I	0.38 14 SAI	•	-1.75 TO-6.20		-	•	•		-	60077	1	I
	434	122 114	0.31  55  15 P		-0.92	TENTEC	1	•		prim 38C00117		600UL	l	i
	435	65 115	0.90 18 SAI		-5.30		11.42	•	•	reso[23300211]		60022	Ì	í
	436		0.91  18 SAI		-2.80		11.21			reso   \$8800211		60022		(
	437	107[115]	0.43 51 16 P	• •	+0.72		۱ <del>۵</del> ۰۴ ۵	1.49		-	-	5805F		1
	439		0.33 221 22 2			TECTER	1	1 I		prim[88800250]			1	1
	****	133 115		•	+0.85	TEHTEC	1	t I		zeso 88C00133		600UL	1	1
	· 7		0.41 69 19 7		-0.92		{			prim 88C00117		600UL	1	
	-	18 116	0.35  28 SCI P		-0.10		10	0.15	•	zeso   88H00204		600?P	1	}
	441	46 116	0.83  50  28 9	21058	-0.57	TENTEC	1	L I	L3038	prim 88C00230		500UL	1	
				<del> </del>										

•	، ، A	ppendix 3	2 IC 11014					-	Special r Page 11		
		THE T THE .	<b>6</b>	SG88 MAI, MCI,		SAI, SC	II. SVI,	0-100*TWD	_		
		UTILITY:		California Ediso	on,				NOV. 8,20	00 8:44	
		PLANT:	San Onof:	re							
		UNIT:	2								
3		SG:	88 ·								
		DATABASE :	SONGS_U2	_1000_SG88_FINAL					PAGE 10		
~~~~~ ^{~~}	ROW COL	VOLTS DEG PCT CH	n flaw lo	CATION	EXTENT	UTILL	OTIL2	NAME TYPE CAL GROU	p leg proi	BE SIZZ	
442	112 116	0.20 72 11 P	2 VH3	-0.77	TEHTEC	1		33170 prim 88C00117	CIGOOUL	1	
443	85 119	0.49 84 18 9	2 09H	+1.71	TEXTEC	LAR	I	G4841 reso 88C00132	C 6000L	1	
444	129 119	0.35 126 13 9	2 VH1	-0.78	TENTEC	1	1	38090 reso 88C00132	CGOOUL	1	
445	14 120	0.48 38 15 2	2 05H	+0.51	TEHTEC	ł	1	M0554 reso 88C00199	C 6000L	I	
446	1	0.35 124 SAI	2 OSH	+0.63	058058	0.00-	0.63	H8259 maso 88H00267	H 60055	I	
447	46 120	0.19 100 SCI 2	1 TSH	+0.12	TSHTSH	0.30	0.23	34260 reso 88800205	5 600PP	1	
448	49 121	0.85 21 SCI P	1 TSH ·	-2.87.	TSHISK	11.85	0.37	W3386 reso 88000205	H 600PP	. [·	· .
449	75 121	0.19 19 SCI P	1 TSH	-0.07	TSHISH	10.08	0.15	C0360 zeso 88800078		i	
450	123 121	0.47 124 17 P	VHL	-0.86	TEHTEC	i	ł	W9213 seco 88C00132		. 1	
451	133 121	0.55 156 27 9	VH1	-0.74	TEHTEC .	1		T6144[sec0 88C00118			
452	64 122	1.73 96 36 2	2 VH3	-0.90	TEHTEC	I	, ,	L9168 prim 88C00198		· 1	
	100 122	0.32 104 17 P		-0.77	TEHTEC	1	1.	P1465 prim 88000118		•	
	89 123	0.46 137 17 P	-	-1.04	TSHTEC	1	1	L3025 prim 88C30121		, i	
455		0.33 119 13 7	•	-0.81	TENTEC	1 (1 1	M7252 zeso 88000132		1	
	99 123	0.37 115 13 2		+0.84	TEATEC	1 ·	I I	M7262 reso 88C00120		1	
	42 124	0.11 66 SCI P		+0.10		10.00	+ 0.17	W3386 resc 88800205		1	
	100 124	0.31 83 11 2		-0.71	TENTEC	10.00	19-41	[32027 [prim 88C00120]	_		
	122 124	0.50 137 15 9 :	•	+1.79	TENTEC	i t	1				
460	25 125	0.60 18 MCI P		-0.12	-) 13. de - 1		J0927 secc 88C00120		1	
461		0.42 16 SCI P		-0.20			0.25	34260 zeso 88100206		1	
	41]125	0.40 136 14 P	•	-0.20		0.26	0.20	34260 zeso 88300205		1	
173					TERTEC	1	1	V1371[prim 88C00198]			
464	85 125	0.65 118 21 P		+1.35		[LAR	1	[M7252] teso [88C00120]		1	
		0.32 117 SAI :		-1.52		0.00	10.32	E1748 zeso 88C30192		. 1	
5	87[125]	0.39 118 13 P 2	-	-0.71	TEHTEC	1	1	32027 prim 88C00120		1	
	89 125	0.40 73 14 P		-0.62	TERTEC	1	1	B2027 prim 88C00120			
	107 125	0.17 98 4 P	• •	-1.44	TEHTEC	I	1	J0927 seco 88C00120	•		
	121 125	0.32 87 11 2	•	+0.60	TERTEC	1	ł	32027 prim 88C00120	•		
	125 125	0.36 127 13 P	•	-0.73	TENTEC	1	ł	32027 prim 88C00120		•	
	127 125	0.36 93 13 9 2	•	-0.64	TENTEC	l	E	32027 prim 88000120		[·	
471	15 126	0.19 21 SCI P 1		-0.08		.24	1.14	P4578 zeso 38200075	H 60033	1	
472	39 127	0.36 83 13 P 2	•	-0.69	TEHTSC	1	1] 32265[prim]88C00047[•		
473	89 127	0.37 148 15 P 2		-0.72	TEHTEC	I	1	T5144 seco 88C00032	•		
474		0.20 160 B P 1		-0.72	TERTEC	I	I <u>.</u>	32265 prim 88C00032	CIGOOTL	l	
475	95 127	0.23 19 SCI P 1		-0.08		0.21	9.15	27791 reso 88300054	H EGOSB		
	131 127	0.5011301 1919 2	•	+9.82	TEHTEC	l	1	T6144 seco 88C00032	C 60002	1	
	90 128	0.29 106 12 P 2	-	+0.85	TERTEC	t	I	T0854 seco 88C00034	CISCOL	ł	
478	130 128	0.321.65 1319 2		-0.51]TEHTSC	1	I	T5144 seco 88C00032	- C 60002	1	
479	51 129	0.53 19 SCI P 1		-0.08	TSHTSH	0.19	0.15	R5555 reso 88300074	51 6007P	l	
480	83 129	0.39 133 16 P 2	2 VC2	-0.82	TERTEC	I	I	G4841 reso 88C00033	C 600CL	l	
481	85 129	0.22 102 9 P 2	VH2	-0.63	TEHTEC	ł	1	T6144 seco 88C00032	CIECOL	I	
482	24 130	0.54 22 SCI P 1	TSH	-3.65	TSHTSH	0.48	10.16	R5555 reso 88H00074	H 6007P	!	
483	44[130]	0.21 20 SCI[P 1]T52	-0.10	TSHTSH	0	0.19	25555 reso 88200074	X 60053	1	
484	60[130]	0.37 24 SCI P 1	TSH	-0.11	TSHTSH	10.38	0.16	35555 reso 86800074	3 600PP	I	
485	86 130	0.37 122 14 2 2	: VC2	-0.87	TENTEC	E	ł	B4014 prim 88C00033		· 1	
486	90 130	0.45 147 17 2	VH2	-0.85	TEHTEC	ł	1	T0854 seco 88C00033		1	
487	14 132	0.58 18 SCI P 1	TSH	-5.42		.64	1.14	P4578 reso 88800072		I	
	26 132	0.61 12 SAT 2	TSH	-5.25	t		1.14	P4578]:=so[88K00072]	· ·	ł	
N. 2 - 2 - 2				-3.78	•		1.17	P4575 reso 88800072	-	1	
	40 132	0.40 21 SCI P 1		-0.10			1.14	P4578 reso 88H00071	-	1	
						•			······		

	•	inservice insp Appendix 3	ection o	i Steam Gener	atoriuo	es			Special Rep	
•				SGEE MAI, MCI.	MMI, MVI.	SAL SC	I. SVI.	0-100%TWD	Page 12 of	13
		UTILITY:	Southern	California Ediso					NOV. 8,2000 8:4	14
		PLANT:	San Onof:	re						
		UNIT:	2							
- 1		SG:	88					•		
		DATABASE :	SONGS_U2	1000_SG88_FINAL					PAGE. 11	
Server Start										
	ROW COL	VOLTS DEG PCT CH	n flaw lox	CATION	EXTENT	TTIL1	UTIL2	NAME TYPE CAL GROU	P LEG PROBE SIZE	2
491	47 133	0.34 143 12 2	2 VSM	-0.74	TERTEC	1	1	R8278 seco 88C00045	C C C C C C C C C C C C C C C C C C C	l .
492	73 133	0.42 96 16 P	2 VH3	+1.00	TERTEC	1	1	G4841 reso 88C00030	C 6000L	1
493	72 134	0.32 119 13 P	2 VH3	-1.08	TERIEC	1	1	F0037 prim 88C00031	CIECOUL	1
494	76 134	0.42 142 16 P	2 VH3 .	+0.65	TERTEC	1	1	F0037 prim 88C00031	CLEGOOL	1
495	23 135	0.23 14[SCI P :	1 TSH	-0.13	TSHISH	.37	1.21	P4578[reso]83H00071	H 60055	1
496	59 135	0.48 28 18 2 :	2 VC3	-0.83	TENTEC	1	1	VI371[prim 88C00046	C 60000	ļ
497	89 135	0.42 115 16 9 :	2 VH2	-0.72	TEHTEC	1	1	33170[prim]86C00030	C 6000L -	1
498		0.26 62 10 P :	2 VSM	+0.89	TENTEC	I	I .	B3170 prim 88C00030	C 6000L	F
499	26 136	1.36 31 SCI P :	1 TSH	-5.13	TSHTSH	2.46	1.42	P4578 zeso 88H00072	H 63055	I
500		1.22 22 SAI	2 TSH	-4.87	TSHTSH	.93	1.14	P4578 = eso 88H00072	H GOOPP	1
501		0.80 15 SAI :	2 TSH	-4.49	TSHTSH	1.03	1.09	} P4578 meso 88300072	1 3 600PP	I
502	I I I	0.44 14 SCI 9	l TSH	-4.48	TSATSA	10.0	0.15	M7262 ==== 88300072	A SCOOPS	1
503		0.48 13 SAI :	2 TSH	-4.12	TSHTSH	. 64	. 09	P4578 ===== \$8800072	E 160055	1
504	78 136	0.51 50 17 P) DBH	-2.10	TERTEC	L .	1	G4841 2850 88C00030	CLEOODL	1
505	94 138	0.28 114 11 P :	2 VSM	-9.76	TEHTEC	L	1	T6144 seco \$8C00028		1
506	110 [138]	0.45 139 17 P :	2 VC3	-0.84	TEHTEC	1	1	B4014 prim 88C00029	CISCOL	ł
507	120[138]	0.48 73 16 P :) DBH	-1.62	TERTEC	ł	1	R8278 seco 88000029	CIEGOUL	1
508	75 139	0.34 158 13 P	2 VH3	+0.87	TERTEC	ł	Ì	B4014 [prim 88C00029	CIEDOUL	1
509		0.61 108 21 P :	2 VSM	+0.39	DELHER	1	i i	34014 prim 88C00029	CIEGOOL	1
510	93 139	0.31 148 12 2 3	Z VHZ	-0.61	TERTEC	Ì	Ì	R8278 seco 88C00028	CIEDOUL	1
5 N.	85 141	0.43 141 16 P	2 0 9H	+1.18	DETHER	LAR	i	M7252]zeso 88C30028		i
	89 141	0.37 102 14 9	VH2	+0.73	TERTEC	i i	1	R9273 seco 8800028		i
513	11	0.28 148 11 2 3		+1.01	TERTEC		1	R8278 seco 88000025	• •	1
1	97 141	0.28 135 11 9 2	2 752	+0.85	TEHTEC	I	1	C4330 prim 88C00028		1
$\langle \cdot \rangle \ge 1$	78 142	0.43 127 17 P 2	VH3	+0.85	TERTEC		1	L9168 prim 88C00027	· · ·	1
514	79 143	0.20[134] 8[P]	DBC	-1.33	TERTEC	1	1	L9168 prim \$8C00027	• •	1
517	95 143	0.40 119 1619 2	VH2	-0.62	TENTEC	I	i i	D2003 pria 88000026		1
518	54 144	0.35 133 12 P 2	VH3	+0.70	TERTEC			P4578 reso 88C00019		ŀ
519	112 144	0.70 165 21 P 3	DBH '	+2.23	TERTEC	I		W3386 TESO 88C00026	• • •	i
520	7 145	2.44 34 SCI P 1	TSH -	-4.32	TSHISH	3.33].44	P4578 [==so 88H00059	-	i i i
521	68 146	0.53 119 19 2	VC3	-0.73	TEHTEC	1	1	B2027 prim 88C00042	•	1
522	74 246	0.63 136 22 9 2	VES		TERTEC			L9168 prim \$8C00027	-	•
523		0.86 140 27 2			TEATEC	1		L9158 prim 88C00027		i i
524	I I	0.61 51 22 9 2	-		TERTEC	ł	1	L9153 [prim 88C00027]	• •	Ī
525	101 147	0.40 150 15 2 2	VSM		TERTEC	1	I	G7112 seco 88C00024	•	Ì
526	74 148	0.23 126 10 2 2	•		TENTEC	•	1	[G7112 seco 38C00024	•	· .
527	78 148	0.47 144 18 2 2	1080		TERTEC	ţ	I	G7112 seco 88C00024	•	1
528	90 148	0.43 50 17 9 2	-		VHITTC	1	1	W9658[seco[88C00022]	-	1
529	1 1	0.46 57 16 9 2	1 VH2		TENTEC	1.	ł	G4841[reso]88C00122]		1
530	65 149	0.38 125 15 2	-		TERTEC	1	1	H7791 Imso 86C00042		Ì
531 [14 150	0.89 23 SCI P 1	TSH			0.45	0.19	M7262 == so 38200007		1
532	86 150	0.27 149 11 9 2	VH2		TEATEC		1	W9558 seco 88C00022		1
533	96 [150]	0.40 129 16 P 2			TENTEC	[33170[prim]88C00023]		1
534	81 151	0.25 137 11 2	-		TEHTEC	•		W9658 seco 8800022		1
\$35	85 151	0.37 109 15 P 2	•		TENTEC	1		W9653 seco 88C00022		-
536	99 151	0.38 149 15 P 2		•	TEHTEC	I	1	33170 prim 88C00023		1
1	93 153	0.53 39 19 P 2			TERTEC	I	1 1	83170 prim 88C00021		
المزيد		0.44 73 16 P 2	•		TERTEC	I	1	B3170 prim 88C00021		•
539		0.39 136 15 P 2	• •		TEHTEC	/	4 	W4785 seco 88C00020		
	· ·						• •	I wasaalaccalaacoaacoi	CIECOUL	۴.

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inscrivice inspection of steam Generator jupes opecial report Appendix 3 Page 13 of 13 SC88 MAI, MCI, MMI, MVI, SAI, SCI, SVI, 0-100%TWD UTILITY: Southern California Edison, NOV. 8,2000 8:44 PLANT: San Onofre UNIT: 2 SG : 88 DATABASE : SONGS_U2_1000_SG88_FINAL PAGE 12 ROW COL VOLTS DEG PCT CHN FLAW LOCATION UTILL UTIL2 NAME TYPE CAL GROUP LEG PROBE SIZE EXTENT 540 | 10|156| 0.63| 22|MCI|P 1|TSH -0.05 TSHTSH 13.28 0.31 | M7262 | Teso | 88H00013 | H 600PP ł 541 | 74 156 0.45 42 16 P 2 VH3 -0.99 | 33170[prim 88C00021] C 600UL TEBTEC | 1. 1 542 | 21 159 0.46 130 18 P 2 06H +0.88 | M7262 zeso 88000038 | C 600UL 1 TERTEC | 1 543 | 18 160 | 0.47 117 18 P 2 06H +0.24 TEATEC | | 38090 zeso 8800038 | C 6000L 1 1 544 | | 0.48 107 19 P 2 06H TERTEC | +0.95 1 38090 zeso 8800038 | C 6000L T 545 | 40 160 | 0.30 145 | 13 P 2 VSM -0.66 1 T4180 seco 88C00038 | C 6000L TENTEC | 1 | 13|151| 0.14| 98|MAI| 4|36H +14.00 07HO6H 0.33 10.88 1 21748 200 88200276 2 60029 546 547 | 17 161 0.34 157 12 P 2 06H +0.86 TEHTEC | 1 | R8278 seco 88C00037 | C 6000L 548 | 64 162 | 0.30 115 | 13 2 VH3 -0.66 | L3025 pria \$800038 | C 5000L TENTEC | 1 549 | | 0.29 48 13 P 2 VH3 | #1748 reso 8800038 | C 6000L +0.81 TERTSC 1 550 [S1|163| 0.46| 57| 18|P 2|VB3 +0.84 | L3025[prim 88C00038] C| 6000L TEHTEC 1 1 38278[seco]88C00037] C[600CL +0.95 551 | 50 164 | 0.39 89 14 P 2 VSM TSHIEC I | M7252 reso 8800035 | C 6000L -0.30 552 | 15|165| 0.55|145| 19|P 2|07H TERTEC ŧ 553 | 67 165 | 0.71 116 | 24 P 2 V93 -0.75 TERTEC | 1 L9163[pria 88C00035] C 6000L L 554 | 57 167 0.47 150 17 P 2 02C +0.81 TENTEC | | L9168 prim 88000035 | C 6000L 1 555 | 3|169| 0.50| 63| 18|P 2|05H -0.26 M7262 reso 88300119 8 6000L DBATEN | 1 1

QUERY REPORT SUMMARY:

QUER	Y PARAMETER	ENTRIES	TUBE
0 e	o 100 Percent	411	348
MAI	Indication Code	4	4
MCI	Indication Code	7	7
MMI	Indication Code	0	Q
MVI	Indication Code	٥	O
SAI	Indication Code	64.	54
sci	Indication -Code	68	65
SVI	Indication Code	1	1

TOTAL ENTRIES: 555 TOTAL TUBES: 456

Appendix 4

Inspection Summary

Steam Generator E-089

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		Appendix 4		Steall Genera	2101 1000	\$	• .			epe Pa	ige 2 of 14	
				SG89 MAI. MCI	, MMI, MVI,	SAL SC	I. SVI.	0-10 0% T	WD		•	
-		UTILITY:	Southern	California Edi						NOV.	7,2000 17:23	
		PLANT:	San Onof	ze								
		UNIT:	2									
		SG :	89									
		DATABASE :	SONGS_U2	_1000_SG89_FINA	L					PAGE 1		
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	ROW COL	VOLTS DEG PCT	CHN FLAW LO	CATION	EXTENT	OTIL1	UTIL2	NAME	TYPE CAL GROU	J? LEG	PROBE SIZE	
1	1  1	0.21 64 11	P · 2   DBH	+1.01	07HTEC	1	1	1 M7262	reso   89C00110	IC 1156	0SF	1
2	22 2	0.49[146] 19]	9 2   VSM	-0.94	TENTEC	1	I	•	prim[89C0000:	• •		i
3	38 4	0.35  93  15	P 2102C	-0.92	TEHTEC	1	F ·	•	zeso   89C0000			1
4	4 1 1	0.35 45 15	P 2 01C	+0.18	TERTEC	ŀ	T	•	[ zeso] 99C0000	• •		1
5	48 6	0.50  85  19]:	9 2 08C	-2.84	TEXTEC	1228		•	zeso   29C30003	• •		i
ő	32 20	0.34 89 14	2 2 033	+0.97	TENTEC	;	1	-	seco[39C3000]	• •		1
7	36 10	0.25 150 11	2 2 VSM -	+0.93	TENTEC	1	1	•	seco 89C0000;	• •		r r
8	64 10	0.54[114] 20]	P 2 03C	-1.04	TERTEC	1	1	•	seco   a9C0000	• •		1
9	73  13			+0.95	TERTEC	F	1	•	[prim  39C00085	• •		т 1
10	25  17			+9.67		10.00	10.34	•	=====   89H00206			1
11	44  18		· ·	-0.84	TERTEC	1	1	•	pria 9900000			i t
12	93 23	0.81 94 28		+0.87	TEATEC	1	1	•	[prim] 99C00036			1 7
13	16 24		•	+0.01		i).42		•	[reso   39200141			1
14	90 24			-0.34	TENTEC	1	1	-	seco   89C30685			1
15	1 1 1	0.37 79 14	•	-0.83	TENTEC	1	1		seco   89000085	•		1
16	59 25	0.37 69 161		-0.62	TEATEC	1	1	•	[geta] 39C30670	• •		1
17	72 26		•	-0.85	TEATSC	1	1		[prim  39C30086			4
18	90 26			-0.68	TERTEC	1		-	prim  99030085			1
19	92 26			+0.00	TENTEC	1						1
20	94 26		•	+0.98	TSHIEC	1 1		•	p=1= 39C30086  p=1= 39C30085	-		1
21	96 26			-0.70	TEHTEC	1						1
	30 28	0.13 108 SAI		+17.15		1	•	-	prin;39C00035			1
22						0.25	0.44	•	reso   39200206			1
23	B2  28	0.18 151  9 1	•	-0.43	TERLEC	1	•		[seco[33C0006			4
4	9 29	0.55  16 SCI I	-	-0.07		10.52	-	•	zesoj39300147			1
	99 29	0.32 80 121		+0.85	TEXTEC	1	•	•	seco   39C30085	-		1
26	2 30	0.50 87 13 1	•	+0.74	DBRIER	1	1	-	prim  39200133	· ·		1
27 .	88 30	0.43 60 171		-0.68	TEHISC	[	1	-	<del>2512</del>  83C30085	• •		1
28	94 30	0.29 126 13 1	•	-1.00	TERTEC	ł	-	••	2250 8900006	- •		1
29	97 31	0.36 95 14 1		-0.78		L -	]	-	prim   89C00085			1
30	72 32	0.29[133] 13[1	-	•0.95	TERTEC	l	1		<b>reso   89C00086</b>	• •		I
31	47  33			+1.93	TEATEC	I	•	•	[ zeso ] \$9C00074	• •		1
32	106 34			+2.29 TO+3.75		0.21	•	-	zeso   39200212	• •		1
33	110 34		• •	+1.04	TEALEC	1	•	•	seco   59C30087	• •		1
34	63 35			-0.54	TERTEC		<b>I</b> .	-	seco 89C90074			1
35	97 35	0.31 135  16 1	-	-0.67	TENTEC	I	1	91465	prim 8900088	[C 0]500	ю <b>г</b> ,	I .
36	101 35	0.33 71 16 2		-0.61	TERTEC	1	i I	91445	prim 89C300\$\$	C-0 600	101.	I
37	107 35	0.35  82  13 3	-	+1.39	TENIEC	1		33278	seco   89C90087	[C 0[500		1
38	89 37	0.13 59 7 2	•	+0.79 .	TEATEC	1	1	22003	əria  3900087	C 0 600		1
39	97 37	0.42[142] 19]2		+0.99	TEFLEC	1	I	21465	[prim] 39C00088	C 01500	ICL.	I
40	70 38	0.31 146 12 1		+1.20	TERIEC	I	I	32027	pria 99000075	C 01600	105 .	I
41	82 38	0.21 128 11 7	-	+0.92	TEREEC	1	!	74130	3eco 99000688	C 01200	ICL.	F
42	94 38	0.37 67 17 9	-	+0.60	TERTEC	<b>i</b>	1	M7252	reso 39C00083	IC 0 500	101	1
43		0.22 83 SAI		+0.61	96 <b>H</b> 06H	0.00	0.25	M7252	reso   89200213	H 2 600	25	ł
44	98  38	0.29 101 SAT	2   06H	+0.52	0 CHOCH	0.64	9.32	M7252	reso   89300213	X 2 600	22	ł
45		0.45 136  20 7		+0.77	TEATEC	1	1 -	M7252	==so   89C09088	10 0[600	CL	1
45	108  38	0.31 108  11 P	-	+0.92	DETRET	I		33278	seco   89C00087	IC 01600	102	1
47	9 39	0.32 89 13 9	2   03H	+0.93	TENTEC	1	1 1	W3386	reso   89C00075	IC 0 600	UT.	1
48	121 39	0.30 95 12 2	2 10H	-1.79	TERTEC	LAR	I	M7262	===== 89C00087	ic alead	, TO	I
49	12[ 40]	1.01  11 SAI	2   TSH	-2.53	TSHTSH	0.90	0.20	H1748	reso 89H00149	H 0 600	155	

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				Oreani Genera							
	1	Appendix 4								Page 3 of 14	
				SG89 MAI. MCI.	MMI, MVI	, SAI. S	CI. SVI.	0-100%7	, OM		
		UTILITY:	Southerr	1 California Edis					NOV.	7,2000 17:13	
		PLANT:	San Ono:	Te				•			
		UNIT:	2								
		SG:	89								
1		CATABASE:	SONGS_UT	_1000_SG89_FINAL					PAGE	2	
	ROW COL	VOLTS DEG PCT	CHN FLAW LO	CATION	EXTENT	UTILL	UTIL2	NAME	TYPE CAL GROUP LEG	PROBE SIZE	
		·					·····				•
50	34 40		•	-1.17	TERTEC	1	1	R8278	seco 89C00077[C 0]	6000L	1
51	114  40   122  40	0.51 87 18		+1.95	TENTEC	1	1	-	prim 8900087[C 0]		I
52 53	[103] 41]	0.27 144 13	•	-0.20 -1.06	TEXTEC	1	1		[prim[89C00087]C 0]		I.
54	1107 41	0.31 48 15		-1.10	TEHTEC	ł	1	•	seco 8900090 [C 0]	•	1
55	1123 41	0.14 115 SVT	•	+7.55	TSHOLH	1	ł La na		seco   89030090   C 0		ł
56	36 42	0.26 88 13		-0.67	TEHTEC	0.27	\$0.33 I	•	reso 89200212 2 2		1
57	40 42	0.21 119 10		-0.75	TENTEC	1	1		seco   89C30078   C · 0		1
58	76 42	0.32 129 19	•	-1.76	TENTEC.	1	1		seco 8900073 C 0		1
59	94 42	0.41 62 16		-0.74	TEHTEC	1	4	-	2=im 89C30096 C 0  2=im 89C30096 C 0		
60	108 42	0.40 127 16	•	-2.00	TEATEC	1	4	•	2222[89C30089]C 0]		1
61		0.39[123] 16]1	-	+2.00	TEHTEC	ь ь	1 1	•	• • •		1
62	122 42	0.39[129] 22];	•	-2.19	TERTEC	1 .	1	•	reso 89C30089 C 0  reso 39C30050{C 0}		1
63	77 43	0.23 143 12	•	+0.74	TENTEC	1	1	•	2858[89C30090]C 0[		1 .
64	B1[ 43]	0.59[129] 25]1	•	-0.82	TERTEC	1	1	•	seco[89C30090[C 0]6		1
65	8[44]	0.33[ 94 SAI]		-0.77		10.0	10.35	• •	200 2000136 2 0 0		1
66	50 44	0.26 149 91	•	-0.70	TEFTEC	:	10.95		seco   89C30077   C 0		1
57	56 44	0.25 50 121	•	+0.09	TERTEC	1	1		zeso[39C20078]C 0[4		1
68	74 44	0.56 134 20 1	•	-0.74	TENTEC	, 1	1	•	prin   99000089 [C 0] =	•	1
69	[ 88] 44]	0.35 153 17 1	•	-0.67	TERTEC	1	1	•	zeso 390000010 01		1
70	121 45	0.59 91 21 3		-0.50	TEATEC	1	1		pria 39030089[C 0]:		1
71	88 46	0.24 96 12 2	•	-0.59	TEETEC	1	1		pria 89000000 [C 0]		5
72	126 46	0.23 105 11 3	2 781	-1.06	TENTEC	1	1		2212 39C3090 C 0. 6		
3	97 47	0.25 91 12 2	2 782	+0.89	TERTEC	1	1		seco[89C30090]C 0[6		F
14	101 47	0.17 64 97	2 702	+0.82	TERTEC	1	1	•	pria 89C30090 C 0 6		1
75	103 47	0.32 53 13 2	2)VH2	-0.78	TEREEC				pria 3900089 C 0]6		t i
76	109 47	0.23 144 12 1	2 VSM	-0.93	TENTEC	t	1	• •	pria   89C30090   C 0   6		I I
77	1 1 1	0.22 98 11 7	2 703	-0.82	TENTEC	5	]	• •	prim 89C30090 C 014		: [
78	121 47	0.35 90 . 17 9	2 10H	+0.79	TEHTEC	i	1	• •	zesoj89C30399[C 0]4		1
79	60 48	0.85  17 SCI P	1 754	-0.06	TSHTSH		0.19	•	reso   39200151   E 0   6		i
80	124 48	0.41 122 19 9	2 VH1	-0.83	TENTEC		]	•	pria   89C20090   C 0   6		i
81	49 49	0.30 94 13 2	2   08H	+1.80	TEXTEC	LAR	i i				i
82	65 49	0.42 117 15 2	2   V93	+1.00	TEATEC	1	1		oria 8900084 C 0 5		Ì
83	73 49	0.30 76 12 9	2 02H	+0.89	TERTEC	1	I		prim[89C00039[C 0]6		1
B4	83 49	0.41  17 SCI 2	1 TSH	-0.14	TSHTSH	0.91	0.19				1
85	87 49	0.16 97 82	2   VH2	+0.73	TERTEC	1	1	-	prim[39C00090]C 0]6		I
86	107 49	0.23 97 12 P	2/703	-0.75	TEHTEC		I	22003	pria 390000010 016	0002	1
87	125  49	0.19[139] 10[2	2   VE1	-0.83	TERTEC	1	i	[ 52903]	pria 39C00090 C 0 5	aoul	ł
88	129  49	0.19 146  10 9	2 VH1	-0.85	TERTEC	ł -	1	D2003 i	prin   a9C00090   C 0   5	0007.	E
89		0.21 130 11 2	2   VH1	+0.63	TERTEC	1	1	52003	pri= 89000090 C 0 6	OCUL	1
90	94 50	0.25 119 12 2	2 050	-0.17	TEXTEC	l I	l	D2003	pria 8900092 C 0 5	00UL	L
91	126 50	0.23  86  11 P	2) Viil	-0.97	TEATEC .	I	j .	D2003	prim 89C30092 C 0 6	SOL	I
92	128 50	0.22 128 9 2	•	-0.93	TEXTEC	1	1	32027 ;	prim 89C00091 C 0 6	OGUL	l
93	75 51	0.16[108] 9]2		-1.63	TEHTEC	ł	Ł	22003	prim[8900092]C 0[6	0001	ł
.94	8 52	0.68  19 SCI P	-	-3.24	TSHTSH	0.98	0.19	⊂ <b>3</b> 360]:	reso 89%00051 # 0 6	0022	t
95	10 52	0.32 102 11 2		+0.07	TEHTEC	I	<b>i</b> 1	23858	reso 89C00032 C 0 6	OOUL	1
96	28 52	0.20120 SCI P	•		TSHISH	0.32	0.17	H7791	ceso[39H00051[H 0]6	0022	1
97	130 52	0.23 155 11 P		•	TEHTEC	I	1 1	D2003 1	prim 89000092[C 0]6	0007.	1
98	47 53	0.221 86  9 2	2 VSM	-0.65	STATEC	1	1 1	G4841	reso 89C00034 C 0 6	0001.	].

Appendix 4 Page 4 of 14 SG89 MAI, MCI. MMI, MVI, SAI, SCI. SVI. 0-100%TWD UTILITY: Southern California Edison. NOV. 7,2000 17:13 PLANT: . San Onofre UNIT: 2 SG: 89 DATABASE: SONGS_U2_1000_SG89_FINAL PAGE 3 ROW COL VOLTS DEG PCT CHN FLAW LOCATION EXTENT UTIL1 UTIL2 NAME TYPE CAL GROUP LEG PROBE SIZE .

99	49[-53]	0.43 129 13 P 2 08C	-1.31	TENTEC	LAR		M7262   reso   8900035   C 0   6000L	
100	125  53	0.37 131  14 2 2 VH1	-0.79	TENTEC	1	t	32027 prim 89000091 [C 0 6000L	
101	74 54	0.14 144 7 P 3 DBH	-2.03	TENTEC	1	1	S1748 reso[89C00091[C 0]60000	
102	84 54	0.37 18 SCT P 1 TSH	-0.04	TSHTSH	,  0.41	10.21	W3386[reso[89K00091]K 0]60022	
L03	88 54	0.25 130 10 2 VH2	-0.74	TENTEC	1	1	B2027 [prim 89C00091]C 0 60001	
104	111	0.25 133 10 2 VH2	+0.85	TEETEC	1	1		
05	220 54		-0.68	TENTEC	1	1	32027 prim 89C00091 C 0 60002	
06	1 1	0.38 104 15 2 VH1	+0.70	TERIEC	1	1	32027 prim 89C00091 C 0 600UL	
07	130 54	0.34 216 16 9 2 VH1	-0.74		1	!	2027 prim 89C00091 C 0 600UL	•
08	47 55	1.08 14 SAI 2 07H	-0.16	TERTEC	1		D2003 prim 89000092 C 0 60000L	
09	49 55	0.45] 88  20 2 2 08C		07H07H	0.0	0.15	M7262 zesa 89800049 R 5 600PP	
10	109 55	0.32 118 13 2 2 VH2	-1.11	OSHIEC	1		B3170 prim 89C00035 C 0 6000L	
			-0.94	TENTEC	I	1	B2027 prim 89C00091 C 0 6000L	
11	74 56	G.27] 81] 16]7 3[DBH	+1.18	TENTEC	ł	Ι.	21465 prim 89C00094  C 0 600CL	
12	126 56	0.38 115 14 P 2 VH1	-1.02	DERIEL	1	Ι.	32027 prim 89C00091 C 0 60002	
13	65 57	0.13 94 SAI 2 TSH	+2.12	TSHTSH	0.00	0.19	W3386 reso 89800045 R 0 500PP	
14	131 57		-5.66	TSHTSH	[1.08	0.15	G4841 zeso 89800124 18 0 50022	
.5		1.35 20 SAI 2 TSH	-5.16	TSHISH	2.21	0.26	G4841 zeso 89H00124 1 0 60022	
5	16 58	0.31 119 14 P 2 07H	-0.11	TEETEC	Ł	1	34260 reso 3900035 C 0 60000	
7	20  58	0.39 125 18 P 2 01H	+0.86	TEALEC	1	I	17791 reso 8900035 C 0 6000L	
8	50 58	0.42 111 16 P 2 02H	-1.21	TERTEC	1	I	M7262 zesa \$900034 [C 0 50001	
9	62 58	1.34 18 SAI 2 TSH	-6.37	TSTTSR	11.29	9.12	37791 zeso 89200046 2 0 60022	
0	102 58	0.22 109 9 2 2 VC3	-1.13	TENTEC	1	1	34260 zeso 89030093 (C 0 50002	
1	124 58	0.39 122 15 P 2 VH1	-0.75	TEATEC	1		32153 seco 89C00093 C 0 6000L	
•	2 60	0.17 92 SAT 2 02H	+0.46	029023	0.00	0.32	31748   reso   89H00134   3 2   500PP	
í.	6  60	0.31 48 13 P 2 02H	-1.23	TEHTEC	1 .	10-02	W9213 [seco] 89C00037 [C 0] 6007L	
٠ ،	26 60	0.47 16 SAI 2 TSH	-2.29	TSHTSH	0.99	10.10		
5	51 61	0.35 82 15 P 2 08C	-0.73	TEHTEC	10.00	10.10	H7791 [reso   89H00041   H 0   6002P	
;	139 61	0.20 98 10 P 2 09C	-1.08	TERTEC	1	1	W9213 seco 8903037 C 0 6000L	
7	74 62	0.23 37 13 P 3 DBC	-2.00		1	1	C4330[prim[89C00094]C 0]60001.	
3	106 62		-0.85	STATEC	1	· ·	T6144 [seco  89C00095 [C 0 600UL ]	
,	114 62	0.35 127 12 P 3 DBH			1	1	[ T3513 [prim   89C00138 [C 0   600UL	
5	1 11 63	0.47 13 SAI 2 TSH	-1.79	TERTEC	1	I.	28278 seco 8900138 C 0 60001	
			-0.74	_	0.0	0.22	[ 월1748 reso 89300035 표 0 600PP	
		0.17[115[SCI]P 1]TSH	+0.11	TSHTSH	0.0	0.22	H1748 reso 89H00035   用 0   600PP	
:	47 63	0.70 15 SAI 2 07H	-0.12		10.0	0.14	M7262 reso 89800036 3 5 6002P	
•	34 64	0.12 97 SAI 2 TSH	+1.31	TSHISH-	0.a	0.20	31748 reso 89H00035 2 0160029	
1	56 64	0.22 124 10 P 2 VH3	-0.66 ·	12272C	1	1	D2003 [prim 89000039 [C 0 6000L ]	
	134 64	0.27 124 12 P 2 VH3	-0.86	TEHTEC	1	1	15144 seco 8900096 C 0 60000 . 1	
		0.31 146  12 P 2 VC3	-0.82	TEATEC	1	1	34014 prim 8900096 C 0 60000	
	15 65	0.07 123 SAI 2 02H	+10.12	022032	0.00	0.17	H1748 reso 89800134   H 0 60022	
		0.20 87 SAI 2 02H	-11.44	022038	0.30	0.40	H1748 reso 89300134 H 2 60072	
	49 65	0.23 122 11 P 2 VSM	-0.62	TENTEC	I	1	D2003 prim 89C00039 C 0 5000L	
	26 66	0.34 14 SAI 2 TSH	-3.63	TSHTSH	0.19	0.13	24578 zeso 89800021 H 0 60029	
	48 66	0.58 155 23 2 2 VSM	-0.66	TEHTEC	1 .	1	D3858[zeso[89C00039]C 0[6000L	
:	57 57	0.21 92 SAI 2 TSH	+3.38		0.11	10.15	24578 zeso 89800032 H 0 600PP	
		0.17 110 SAI 2 TSH	+3.51		0.08	0.13	· · ·	
	63 67		-0.14		0.27		P4578   reso   89500031   H 0   60029	
	141 67	0.34 101 13 P 2 09C	-1.07		10.21	0.19	24578 reso 89800032 H 0 600PP	
	44 68	0.19 82 MAI 2 TSH	+0.55 TO+1.08	TEHTEC		1	W3386 reso 8900141 C 0 6000L	
		0.32 54 13 P 2 VH3			0.0	19.53	M7262 reso 89800029 H 0 600PP	
	, val		+0.85	TEHTEC	1	1	B4014 prim 89C00098 C 0 6000L	

		Appendix 4					·		Page 5 of 14	
•			SG8 9	MAI, MCI.	MMI, MVI.	SAI, S	SCI. SVI.	0-100%TMD		
		UTILITY:	Southern Califo	ornia Edis	on,				NOV. 7,2000 17:13	
		PLANT:	San Onofre							
		UNIT:	2							
	•	SG :	89							
		DATABASE :	SONGS_U2_1000_S	G89 FINAL					PAGE 4	
· · · · · · · · · · · · · · · · · · ·				-						
	ROW COL	VOLTS DEG PCT CHR	FLAW LOCATION		EXTENT	UTILI	UTIL2	NAME TYPE CAL GROU	IP LEG PROBE SIZE	
.18	82 68	0.59 135  21 P 2	:		TENTEC		1.	84014 ]prim   89C00098	⊂ 0[600UL	1
149		0.31 155 12 7 2	•		TERTEC	1	1	34014 [prim] 89C00098	C 0 6000L	I
150	1132 68	0.26 134  12 P 2	·.		TERTEC	1	1	T5144   seco   89C00096	C 0 6000L	I
151	1236 68	0.42 122 17 2 2	•		TEHTEC	1	!	84014 prim 89C00096	C 0 6000L	I
152	1137 69	0.26 80 10 2 2	VH1 +0.65		TERTEC	1	ł	84014 [prim  89C00098	C 0 6000L	1
- 153	58 70	0.14 93 SAI 2	1TSH +2.53	•	TSHISH	0.0	0.25	M7262 zeso 85800030	12 0 600PP	1
154	1 64 70	0.14 111 SAI 2	1 TSH +3.84		TSHTSH	0.22	0.29	H7791   reso   \$9H00029	E 0 600PP	1
155	128 70	0.26 75 11 P 2	VH3 +0.80		TERTEC	l	1	T6144   seco   89C00098	C 0 60000	i
156	138 70	0.54 99 SVI 2	DBH +0.30	TO+1.00	DBHDBH	0.42	10.35	G4841 zeso 49800217		• • •
157		0.42 74 15 P 3	DBH +0.71		TENTEC	F	1	T3513 prim 89C00138		1
158	31 71	0.32 65 15 2 3	DBH -1.73		TENTEC	: F	1	M7262 zeso 8900041		1
159		0.25 146 10 93	DBC -1.76		TENTEC	F	1	M7262 zeso 8900041	•	1
150	41 71	0.44 123 19 2 2	VSM -0.82		TEXTEC	F	1	[ 13513]prim 89C00041		1
161		0.61 129 24 P 2	VSM -0.66		TERTEC	I	1	T3513   prim   \$9C00041		1 E
162	I I I	0.86 123 30 2 2	VSM -0.11		TEHTEC	, ,	( 	T3513 [prim 89C30041		e e -
153	1133 71	0.33 87 13 P 2	-		TENTEC	i i	1	34014 prim 89000098		E T
164	1 1 1	0.29 56 11 2 2	•		TEHTEC	, I	1			1
165	1137 71	0.28 81 15 P 3			TERTEC	) [	1	34014 prim \$9000098		1
166	143 71	0.39 139 16 7 3	•		TERTEC	f I	l T	34014 [prim] \$9C00098		1
167		0.47 96 16 2 2	•		TERTEC	i I		35325 seco 89000141		1
168		0.27 46 10 2 2	-		TSATEC	E 1	1	35925 seco 39C00141		1
169	112 72	0.31 80 12 2					4 . •	35926 seco 89C00141		} •
170	120 72	0.31 150 13 P 2	-		TERTEC		1	34014  prim 8900098		l ·
1,0	128 72				TENTEC			T5144[seco[89C00098]		l
	39 73	0.34 98 14 P 2		•	TERTEC	l	1	34014 [prim 89C00098]		l.
· · · · ·		0.45 134 22 P 3 0.79 19 SAI 2			TERTEC		1	M7262[zeso[8900041]	•	i
173	71  73					1.58	0.30	W3386[zeso 89200213	H 2 600PP	i
174		0.58 23 SAI 2	•			0.00	0.15	M7262[zeso 89200213]	A 2 500PP	i -
-175	129 73	0.18 107 11 9 3	•		TEHTEC		ł	T6144   Seco   89C00098		ļ
176	143 73	0.34 144 15 P 3	· .		TEATEC		l I	34014 [prim 89000141]	C O EOOUT	I
177		0.26 116 12 2 3			TEATEC		1	] 34014 [prim] 89C00141]	C O SOOTT	Í
178	245 73	1.60 111 36 2			TENTEC		1	34014[prim 89C00141]	C 0[SOUT	
179		0.62 114 23 P 3			TENTEC		I	B4014 prim 89C00141	C O GOOT	
180	50 74	0.25 29 12 3			TENTEC		1	35926 seco 89C00040	C 0 SOOT	ļ
181		0.39 87 17 2 3	•		TEHTEC		I	B5926 seco 8900040	C 0] 60002	J
182	120 74	0.44 129 17 F 2			TERTEC		1	RSSSS 2850 89C00098	C 0   6000L	
183	130 74	0.25 76 719 2			TENTEC		1	34014 prim 89C00097	C 0   5000L	-
184	144  74	0.66 96 22 2 2	VCI +1.01		TENTEC		1	34014 prim 89C00141	C 0]6000L [	•
185	81 75	0.34 111 11 P 2	VC3 +0.78		TEHTEC		I	V1371[prim 89C00099]		
186	145 75	0.47 81 19 2 3	DBH +2.06		TEHTEC		I I	34014 prim 89000141]		
197	44 76	1.03  117   32 P 3	DBC -1.50	1	TEHTEC		I	33170 prim 8900040		
188	50 76	0.27 131 12 2 3	DBC -1.61		TEHTEC		1	33170 prim 89C00040		
189	52 76	0.24 94 10 2 3	DBC -1.51	ļ	TENTEC			D3858 zeso 89C00041		
190	138 76	0.31  95  10 P 2			TEHTEC			V1371[prim 89C00099]		
191	53 77	0.31 74 14 P 3	DBC -1.98		TEHTEC		1	93170[prim[89C00040]	•	
		0.31 227 13 9 2			TERTEC ]		• ·			
		0.43 117 17 P 2			TEHTEC		t : 1	M6664 prim 89C00100		
194		0.20 152 9 2			TEKTEC		•	D5695 seco 89C00100		
	76 78	0.50 106 15 2			TERTEC			D5695 seco 89C00100		
195		0.29 131  9 P 2			TERTEC			L9168 prim 39000099		
				(	- mil		I	[ L9163 prim 89C00099		
-										

Appendix 4

ROW COL VOLTS DEG PCT CHN FLAW LOCATION

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NOV. 7,2000 17:13

PAGE 5

EXTENT UTILL UTILL NAME TYPE CAL GROUP LEG PROBE SIZE

.

	SG89 MAI, MCI, MMI, MVI, SAI, SCI, SVI, 0-100%TWD
UTILITY:	Southern California Edison,
PLANT :	San Onofre
UNIT:	2
SG:	89
DATABASE :	SONGS_U2_1000_SG89_FINAL

						UTILZ	NAME TYPE CAL GROUP LEG PROBE SIZE	
.97	[130] 78]	0.26 129 11 P 2 10H	-1.04	TEHTEC		1	N6664 prim 89000100 C 0 6000L	• 1
98	[146] 78]	0.50 115  20 2 3 DBH	-0.12	TEHTEC	l	1	B4014 [prim   89C00141]C 0 600UL	i
19	47 79	1.12 119  38 P 3 DBC	+1.40	TEHTEC	1	I	33270 seco 89030041 C 0 600UL	i
0	63 79	0.71  53] 26[P 3]DBC	-1.38	TERISC .	1	1	G7112 seco 89000040 C 0 6000L	j
1	65 79	0.27 149 12 2 3 DBC	-1.39	TENTEC	1	Ì	13270   seco   8900041   C 0   6000L	i
12	72 79	0.41 140  13 2 3 DBC	-1.85	TENTEC	ł	1	M6664 prim 89000100 C 0 5000L	i
33	75 79	0.38 131 17 P 3 DBC	-2.05	TENTEC	ł	ł	M6554 [prim   5900100 ]C 0   500UL	i
34	81 79	0.59 70 17 P 2 VH3	-0.89	TERTEC	1	I	L9168 [prim] 89C00099 [C 0] 600UL	•
05	119 79	0.61 140 18 P 2 VH3	+0.89	TERTEC	1	i	[ L9158  prim   89000099  C 0   60001.	i
06	52 80	0.40 83 17 P 3 DBC	-1.70	TERTEC	F	1	34260 Teso 8900040 C 0 6000L	1
07	66  <b>80</b>	0.30 104  13 P 3 DBC	+1.60	TEHTEC	ł		33170   prim   89000040   C 0   6000L	ŗ
08.	72 80	0.28 150 13 P 2 VC3	+0.92	TERTEC	1	1	D2003 [prim 89000102 [C 0 5000L	i
99	55 81	0.53 84 21 P 3 DBC	-1.81	TERTEC	ł	1	33170 prim 39C00040 C 0 5000L	1
10	121  81	0.17 35 8 P 2 VH3	-0.75	TENTEC	ł	1	W9213 seco 89000102 C 0 5000L	1
11	133 81	0.41 131  18 P 2 VH1	+0.92	TEHTEC	Ì	1	D2003 prim 89C00102 C 0 60000	Ē
12	143 82	0.32 55 12 2 VCL	-0.96	TERTEC	1	1	B4014 prim 89C30141 C 0 600UL	i
13	145  81	0.73 111 23 P 2 VH1	+0.92	TENTEC	I		34014 prim 89000141 C 0 6000L	i
14	147 81	0.59 93 22 P 3 DBC	+1.86	TENTEC	1	1	W3386 zeso 89000141 C 0 6000L	1
15	48 82	1.23 131 39 P 3 DBR	-1.75	TENTEC	1	1	G4541 2=50 89C00041 C 0 6000L	i
15		0.85 71 33 P 3 DBH	+2.00	TEHTEC		, 1	G4541 zeso 8900041 C 0 5000L	i
17		0.96 103 35 9 3 DBC	-1.85	TENTEC		1	G4842   reso   89C00041   C 0   600UL	i
1,8		0.66 127 29 P 3 DBC	-1.75	TEXTEC	1	1	G4841[=eso[39C00041]C 0[6000L	ì
19	54 82	0.57 80 26 P 3 DBC	+1.23	TENTEC	1	•	D3858 zeso 80000001 C 0 6000L	;
10	56 82	0.67 103 23 P 2 VH3	-0.84	TEATEC	1	1	33170[prin 89C00040]C 0 600UL	r r
22		0.27 119 11 P 2 VH3	+0.99	TENTEC	4 1	е }	33170 prim 8900040 C 0 6000L	1
22	54 82	0.38 103 18 P 3 DBC	+1.29	TENTEC	1	1 7	1 D3858 zeso [89C00041 C 0]600UL	i I
23	75 82	0.95 18 SAT 2 TSH	-6.23		1.75	1  _17	24578[zeso]89200084]# 0 6002P	1
	126 82	0.24 77 10 P 2 VH2	+0.93	TERTEC	1	1 - <del>4</del> /	D2003 [prim [89C00140 [C 0]600UL	
25	53 83	0.26 125 11 P 3 DBH	+1.72	TERTEC	1	l r		1
26		0.45 119 21 P 3 DBC	-1.33	TEHTEC	} t ·	I.		+
27	55 83	0.67 82 25 P 3 DBC	-1.72	TEHTEC	5 . t	1		1
28	57  83	0.48 74 22 P 3 DBC	-1.53	TENTEC		1	B3170 prim 89C00040 C 0 6000L	1
29	59 83	1.14 102 34 P 3 DBC	-1.54		ł	1		1
30	63 83	0.51 137 27 P 3 DBC		TEHTEC		 '	G7112 Seco 89C00040 C 0 6000L	1
30		0.28 55 18 9 3 DBH	-1.76 -1.59	TENTEC		1	D2003 [prim 89C30043 ]C 0 600UL	1
	1 1 1	0.47 95 -26 P 3 DBC		TEHTSC	ł	1	B8589 seco 89C00043 C 0 6000L	1
32 33	1 1 1	0.39 137  18 P 2 VC3	-1.57	TEHTEC	1	l	28539 seco 3900043 C 0 6000L	l ,
	[121] 83] [133] 83]	0.27 54 11 P 2 VH2	-0.84 -0.73	TERTEC	l	i	D2003 [prim 89C00102   C 0 6000L	1
34				TENTEC	l i		] D2003 [prim [ 99C00140 [ C 0 ] 6000L	1
35	147 83	0.34 71 13 2 2 09H	-1.03	TEHTEC	1	}	B4014 [prim 89C00141 C 0 600UL	i i
36		0.30 123 11 7 2 10H	-0.19	[TERTEC	4	l	34014 [prim 89C00141 [C 0 6000L	1
17	1 1 1	1.12 204 32 7 3 DBH	+1.75	TENTEC	1	1	34014 [prim   39C00141 ]C 0   600UL	1
8		0.52 52 18 7 2 VH1	+0.88	i Tentec	1	  -	34014[prim]89C0C141]C 0[600LL	1
19	56 84	0.23 96 SCI 7 1 TSH	+0.04		0.0	0.40	34260 [reso   89800024   H 0   60022	1
0	1 1 1	0.22 101 11 7 3 DBH	+1.89	TEHTEC	l	l	D2003  prim   89C30043  C 0   600UL	1
1		0.27 154  13 P 3 DBC	-1.85	TENTEC		l	38539   seco   8900043  C 0   600UL	1
12	58  84	0.35 120  15 2 3 DBH	+1.78	TEHTEC		I	[ 13025  prim   89C00042  C 0   600UL	1
13		0.78[114] 27]P 3[DBC	-1.90	TEHTSC		1	G4841 2=30 89C00042 C 0 600UL	1
44		1.20 128 34 P 3 DBC	+1.80	TENTEC	1	I	G4841 reso 8900042 C 0 5000L	I
45	62 84	0.60 101 24 P 3 DBH	-1.64	TENTEC	l	1	L3025 prim 89C00042 C 0 600UL	-1

NO

House and a spectrum of orders denerator subco openal Report Appendix 4 . Page 7 of 14 SG89 MAI, MCI, MMI, MVI, SAI, SCI, SVI. 0-100 MWD UTILITY: Southern California Edison, NOV. 7,2000 17:13 PLANT: San Onofre UNIT: 2 -SG : 89 . DATABASE: SONGS_U2_1000_SG89_FINAL PAGE 6 ROW COL VOLTS DEG PCT CHN FLAW LOCATION EXTENT UTILL UTILZ NAME TYPE CAL GROUP LEG PROBE SIZE 246 | 64| 84| 0.26| 72| 14|P 3|DBH +1.61 TENTEC | 1 | D2003 prim 89000043 | C 0 6000L 1 747 | 68| 84| 0.21| 35| 11|P 2|VSM -0.78

					•	i propibilitatescondesic piennor	
247	68 84	· · · ·	-0, 78	TEHTEC	I	B8589 seco 89C00043 C 0 5000L	Ì
248	72 84	0.23 132 11 P 2 VH3	-0.88	TEHTEC	Ι	D2003 prim 89000102 C 0 60000	· ·
249	1 1 1	0.19 49 10 2 2 703	-0.85	TEHTEC	1	1 D2003 [prim 39C00102]C 0 6000L	1
250	1 1 1	0.36 136  20 2 3 DBC	-2.00	TENTEC	i	D2003   D2103   D2003   D2003	1
251	106 84	0.32 88 13 2 2 793	+0.50	TENTEC	1	22003 [prim 89C00140 [C 0] 6000L	1
252	[118] 84]	0.35 95 14 P 2 VC2	+0.57	TEXTEC	1		E.
253	120 84	0.25 58 SCI P 1 TSH	+0.02	TSHTSH (0.00			l.
254	1 571 451	0.48 88 20 9 3 DBH	-1.78	TENTEC ;	0.40	M7262   Teso   89H00083   H 0   600PP	. 1
255		1.17 96 34 2 3 DBH	+1.76			L3025 pria 8900042 C 0 6000L	Ι.
256	75 85			TENTEC	l	L3025 pria 8900042 C 0 600UL	1
257	81 85		+1.30	TENTEC	1	E4963 reso 89000102 C 0 6000L	I I
			+0.87	TEHTEC	ļ	D2003 pris 89C00102 C 0 6000L	I
258	89 85	0.32 105 15 P 2 VH2	-0.79	TEHTEC	ł	W9213 seco 89C00102 C 0 50001	I
259	145  85	1.14 [11] 32 P 3 DBC	+1.70	TEHTEC	1	34014   prim 89C90141   C 0   500UL	1
260	56[ 86]		+2.11	TERIEC	1	C4330   prim   89C00184   C 0   6000L	ł
261	132 86	0.30 128 12 P 2 VH1	-0.85	TENTEC	1	L3025 pria 89C00065 C 0 500UL	ł
262	59 87	0.96 90 33 P 3 DBH	+1.70	STHIEC	ł	W1386 reso 89C00184 C 0 600UL	E
263	63 87	0.52 110  24 P 3 DBH	-1.54	STHIEC	I	C4330   gram   89C00184   C 0   600UL	ţ.
264	1 75 87	0.29 146  12 P 3 DBC	~1.98	TERTEC	1	34155 prim 8900066 [C 0 6000L	1
265	1143 87	0.53] 85  20 P 3 DBC	+1.60	TERTEC	1	35926 seco 89030242 C 0 5000L	I
266	1 1 1	0.31 136 12 P 2 10C	÷0.76	TENTEC	· · -	54014 pris 89030141 C 0 5000L	, I
267	1147 87	0.42 139 15 P 2 09H	-1.07	TENTEC	1	34014 prim 89C30141 C 0 500UL	r T
268	1 1 1	0.50 145 20 P 2 10H	+9.66	DETHET	1		
	1 1 1	1.38 89 35 P 3 DBC	+1.84	TEHTEC	1		1
2	54 88	0.87 99 32 P 3 DBH	+1.54	TERTEC	·]	34014 prim 89C90141 C 0 60002	1
271	1 1 4	0.48 116 27 P 3 DBH			1	C4330 pris 89000184 [C 0 6000L	1
272	1 1 1		+2.00	TEHTEC	1	1 16144 seco 8900184 C 0 600UL	ł
273		0.35 37 14 P 2 VSM	-0.79	TENTEC	1	[ C4330 prim 89C00184  C 0 600UL	1
	i i i	0.55 146 25 P 3 DBC	-1.89	TENTEC	ł	W3386 zeso[89C00184 C 0 6000L	1
274	56 88	0.94 117 29 P 3 DBK	+1.42	TENTEC	1	[ 33170 pria 49C00193 C 0 6000L	1
275	58 88	0.71 110 29 P 3 DBH	+2.19	TEHTEC	1	[ W3386 zeso 89C00184 [C 0 500UL	1
276	60 88	0.49127 19 9 3 DBH	+1.80	TENTEC	1	24578 reso 89000183 C 0 500UL	. 1
277	70 88	0.94 111 30 P 3 DBC	+1.44.	TENTEC	1	33170[prim[89C00183]C 0[600UL	I
278	134 88	0.35  96  15 P 2 VH1	+0.30	TENTEC	E	L3153 [prim 89C00067 [C 0   500UL	1
279	146 88	0.64 64 23 P 3 DBC	+1.72	TEHTEC	1	34014 prim 89000141 C 0 6000L	ł
260	57 89	1.04 91 35 P 3 DBC	+1.39	TENTEC :	1	W3386 200 89C00184 (C 0 6000L	i
281	65 89	0.49 154  23 P 3 DBH	+1.83	TERTEC	1	W3386 2850 89C00184 C 0 500UL	i.
262	83 89	0.43 23 SCI P 1 TSH	-0.11	TSHTSH 0.45	10.21	34963 ====================================	1
283	107  89	0.21 99 SCI 2 1 TSH	+0.07	TSHTSH 0.00	10.40	M7252[==so[89H00082]# 0[600PP	, i
284	145 89	0.39 99 14 9 2 VC2	-0.87	TENTEC	( {		1
285	56 90	0.71 91 29 P 3 DBH	-1.29	TEXTEC [	1	34014 prim 89000141 C 0 600UL	1
286	58 90	0.58 107 22 P 3 DBH	-1.86	TEHTEC	1	3386 [==so 89C00134 ]C 0 600UL	1
287		0.58 71 28 P 3 DBC	-1.98		1	33170 prim 89000183 C 0 6000L	1
	72 90	0.26 83 16 7 3 DBC	-2.01	TEHTEC	1	C4330 [prim] 89C00184 [C 0 600UL	1
	• • •	2.47 80 46 2 3 DBH		TEHTEC	1	M7262 2880 89C00065 C 0 600UL	I
290	, <del>, , ,</del> , , , , , , , , , , , , , , ,		+1.66	TERTEC	1	C4330 prim 89000184 C 0 600UL	I
	1 1 1	0.37 126 13 P 3 DBC	-2.13	DETRET	1	C4330 prim 89C00184 C 0 600UL	I
291	71  91	0.23 148 15 2 3 DBC	-2.11	TEHTSC	£	M7252[zeso]39C00065 C 0 600UL	I
	145 91	0.82 45 27 P 3 DBC	+1.64	TENTEC	1	34014 prim 89000141 C 0 5000L	I
	52 92	0.43 85 16 P 2 02H	+0.86	TERTEC	•1	24578 Teso 8900184 C 0 5000L	I
294		0.55 70 25 P 3 DBH	-1.72	TENTEC	1	C4330  prim   89000184  C 0   600UL	1

NO

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	· /	Appendix 4		Steam Generat		>				cial Report	
	,	Appendix 4		SG89 MAI. MCI,	MMT MUT	53- 56			P	age 8 of 14	
•		UTILITY:	Southern	a California Edisc		sna, sc	i. svi,	0-1007TWD	NOV.	7 2000 10 10	
		PLANT:	San Ong							7,2000 17:13	
		UNIT:	2								
	•	SG :	89								
		DATABASE:		1000_SG89_FINAL							
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	ROW COL	VOLTS DEG PCT	CHN FLAW LO	CATION	EXTENT	UTIL1	UTIL2	NAME TYPE CAL GROU	P LEG	PROBE SIZE	
295	1 1	0.55 79 25	P 3 DBH	+1.91	TEHTEC	1	1	C4330 prim 89C90134		00071.	
296	54 92	0.87 101 28	P 3 DBH	-1.65	TENTEC	1		33170 prim 89C00193	•••		4 1
297	1	0.74 138 26	P 3 DBC	+2.03	TEHTEC	1	1	M7262 zeso 89C00183			1
298	64 92	0.14 102 SAI	2 TSH	+1.77		0.12	0.25	H7791 reso 89800159			1
299	[142] 92]	0.35 93 13	P 2 VR1	-0.92	TENTEC	1	1	34014 prim 89C00141			1
300	[146] 92]	0.57 92 22	5 3 D3C	-1.53	TINTEC	I	;	34014 [prim 65C00141	•		1
301	55 93	1.58 120 40	P 3 D9H	-1.75	TENTEC	I	1	W3386 reso 89C00184			
302	57 93	8.22] 22 SAI	4 SBH	-0.27		N/A	0.25	H1748[prim]89200235	• •		1
303	1 + 1	0.68 17 SAI		-5.73		0.72	0.19	H7791 reso 89200153	•		1
304	1 1 1	0.461 14 SAI	2 TSH	-1.26			0.17	#7791/zeso 89200159	· . ·	• ·	· . I
305	[63 93	0.15 09 SAT	2 TSH	+1.32			0.25	[H7791]= # 89H00159			
306	54 94	0.561104 251	9 3 [DBH	-1.60				C4330[prim]89C00184	•		•
307	56 94	0.46 53 26 1	P 3 DBH	-1.75	TENTEC	ł	ł	T6144 seco 89C00134			1
308	60 94	0.42 148 21 1	DBC S	-2.02	TENTEC	1	F	C4330 prim 89C30194	-		
309	62 94	0.42 110 17 1	2 3 030	+2.00	TENTEC	1	I	T6144 seco 89C00183			1
310	66 94	0.25 77 11	2 IVSM	-0.76	TENTEC	!	I	33170[prim 89C00183]	•		, [
311		0.48 99 19 1	> 3 DBC	+1.75	TEHTEC		I	T6144 seco 09C00183	-		1
312	72 94	0.32 96 14 3	2 2 J VH3	-0.92	TEHTEC		I	32153 seco 89C00065			1
313	[]]	0.57 99 221	2 VH3	+0.88	TERTEC	1	ł	32153 seco 89C00063			1
314	1 1 1	0.64 83 23 1	2 VSM	-0.65	TEATEC	1	1	32153 seco 89C00065			1
315		0.18 104 8 1	2 754	+0.94	TERTEC	I		32153 seco 89C00065			i
316	1 1 1	0.63 119 24 3	z vcs	-0.81	TERTEC		I	32153 secs 3500065	-		1
317		1.08 209 32 3	2 2 2	÷0.90	TERINC		I	32153 seco 39C00065			
	90 94	0.29 140 12 2	2 VSM	-0.96	TERTEC	l		T6144 seco 89C00064			F
الحسب ا	104 94	0.45 123 15 F	2 VSM	-0.77	TERTEC	I		38090 meso 8900065	-		1
	[146] 94	0.44 85 18 9	3 DBH	+1.90	TERTEC	I		34014 pria 89000141			{
321	1 1 1	0.75 65 26 P	3 030	-1.31	TENTEC		1	34014 pris 39C00141			1
322	55 95	1.03 112 25 P	JIDBC	+1.90	TEHTEC			C4330[prim]89C00209]	-		1
323	57 95	1.09 72 30 P	3 DBH	-1.52	TERTEC .		, 	C4330 prim 89C00181			1
324	1 1 1	0.69 81 22 2	3 DBC	+1.89	TERTEC			C4330 prim 89C00181			, I
325	109 95	0.27 86 12 9	2 VSM	+0.51	TENTEC			32153 seco 8900065			1
326	117 95	0.46 128 24 2	3 DBC	+0.60	TERTEC			33170 prim 89C00065			1
327	64 96	0.48 14 SAI	2 TSH	-0.92	TSHISH	0.43	0.23	W3385 2850 89200150			[
326	74 96	0.42 63 16 P	2 02H	-1.22	TERIEC			M0554 zeso 8900062			l
329	51 97	0.89[124] 22[9	3 DBC	-2.00	TEATEC			W4786 seco 89C30209			1
330	71 97	0.70 61 25 9	2 VSM	-0.02	TEHTEC	l i		C4330 prim 39C00063			1
331	75 97	0.29 83 13 P	2 1 4 C3	-0.77	TEHTEC			C4330 prim 3900063	-	•	i
332	95 97	0.29 62 13 P	2 VH3	-0.79	TEHTEC			C4330 prim \$900063			ł
333	64 98	0.15 122 SAI	2 TSH	+0.63	TSHISH	0.00		M7262 2850 89H00160			ſ
334	78 98	0.96 13 SAI	2 TSH	-6.09	TSHISH			W3385 zeso 89200079			I
335	45 99	0.66 51 18 P	3 DBH	-1.90	TENTEC	1		G4841 ==== 89C30209			I
336	E E - E	0.86 71 22 9	3 DBC	-1.90	TEHTEC	ļ		G4841 2950 89C00209			I
337	491 99	0.48 59 14 P	3 DBH	-1.66	TEHTSC			C4330 prim 89C00209			I
338 [0.51 57 15 2	3 DBC	-2.25	TENTSC	ļ		G4341]reso[89C00209]			I
339	51 99	0.29 50 10 P	2 VH3		TENTEC			C4330 prim 39C00181	-		I
340		0.59 122 19 P	2 VSM		TENTEC			C4330]prim[89C00181]			
342 j	1 1 1	0.46 42 16 P	2 1 VC3		TENTEC	,		C4330 prim 89C00181	-		-
342		0.89 116 26 P	3 DBC		TENTEC			C4330 prim 89C00181			
343	79 99	0.27 117 12 P	2 VSM		TENTEC		•	35926 seco 89C00063			1
				•			1	/			-

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	. <i>F</i>	Appendix 4		Steam Sene	ומנטי ועטפט	•				ge 9 of 14	
_				SG89 MAI, M	CI. MMI. MVI,	SAL SC	I. SVT	0-1002300	• •		
·		UTILITY:	Souther	n California E	dison.			0-10011RD	NOV.	7,2000 17:13	
		PLANT:	San Ono:	fre							
		UNIT:	2								
		SG:	89								
. 2		DATABASE:	SONGS_U	2_1000_SG89_FI	NAL				PAGE 8		
\sim	•		-						1766 6		
•	ROW COL	VOLTS DEG PCT CH	N FLAW LA	OCATION	EXTENT	UTIL1	OTIL2	NAME TYPE CAL GROU	P LŻG	PROBE SIZE	
344	111 99	0.41 70 16 P	2 090	+0.46	TENTEC	1	 	M7262 zeso 89C00062			
345	42 100	2.32 85 40 2 :	3 DBC	+1.93	TENTEC	I	1	C4330 prim 89C00209	• •		· ·
346	38 102	0.86 120 26 P	3 DBH	-1.82	- TERIEC	1	Ì	M0554 reso 89C00181			1
347	50 102	0.35 133 12 P :	2 08H	-1.20	TEATEC	l.	1	C4330 prim 89C00181			1
348	54 102	0.76 16 SAI	2 TSH	-5.96	TSHTSH	0.45	0.12	M0554 zeso 89H00164		• •	1
349	78 102	5.35 29 SAT	2 TEH	+14.73		16.75	11.24	M7262 reso 89800214	•		1
350	80 102	0.19[141] 8 P :	2 VH3	-0.59	TENTEC	1	1	35926 seco 8900061		•	1
351	1 1 1	0.23 65 10 2 2	ZIVSM	-0.73	TENTEC	1	1	35926 seco 89C00061	-		1
352		0.28 46 12 2	•	+0.84	TERTEC	I	1	25926 seco 89C00061			1
353	144 102	0.30 96 13 P	•	-1.69	TERTEC	4 [1 1		•		F .
354	41 103	0.30 116 11 P 2	•	+0.92	TEATEC '	' 1	4 2	B4014 prim 89C00141	-		1
355	73 103	0.39 95 15 P 2	•	-1.15	TERIEC	E 1	t •	V1371 prim 89C00182			1
356	107 103	0.32 37 14 2 2	•	-1.09	TENTEC	l •	1	L8038 prim 89000108	•		i
357	1115 103	0.23 37 10 2	•	-0.83	TEATEC	!	t	35926 seco 89C00061	•		1
358	119 103	0.27 63 12 2		-0.69		i r	l ·	24963 reso 89C30061	•		1
359	129 203	0.51 119 20 2 2	-	+0.94	TENTEC	1	4	35926 seco 89C90061			1
360	141 103	0.30 65 12 P 2	•	-0.88	TSATEC	1	1	32265[prim]89C00061]			l
361	1243 203	0.75 138 25 2 3	•		TERTEC	l I	1	34014 [prim 89C00141]			l
362	145 103			+1.94	TEATEC			34014 [prim] 39C00141]	• •	-	ł
363		0.75 122 26 P 3 0.54 91 18 P 2		+2.40	TEATEC			34014 prim 89C30141			1
	46 104			-1.05	_	LAR		[G4841 reso 89C30181			I
364		0.55 89 18 9 2		-0.75 -	TERTEC		I	[M0534 #890 [89C30131]	C 0[600		۱ <u>.</u>
365	[70[104]		•	+0.09	TEETEC		I	M7262 reso 39C30131	C 0 630	E.	I
366	1138 104	0.31 51 13 2	-	-0.58	TEHTEC		l	35926[seco]89C30061{	C 0 500		1
7		0.24 45 11 2 2	•	+0.75	TENTEC		i 1	35926 seco 89C30061	C 0 600	<u>.</u>	Į į
368	37 105	0.31 74 11 P 2		+0.75	TENTEC			35326 seco 89C30181	c a[saa	ದ್ <u>ರ</u>	1 1
369	41 105	0.59 14 SAI 2	-	-3.24	TSHISH	0.84	0.24	38090 [reso [89200153]	I 0 600	22 .	1
370	55 105	0.58 101 19 7 2	•	+1.00	TERTEC	i	I	V1371 prim 89C00182	C 0 630	ŬT.	
371	69 105	0.45 107 16 2 2	•	-1,17	TEATEC	•	•	M0554 Teso 8900181	C 0]600	· .	I
372	73 105	0.44 148 18 2 2	•	-0.88	TENTEC	1		32255 prim 89000061	c o 6001		i -
373		0.42 70 18 2 2	•	-0.83	TSHTEC	1	•	B2265 [prim 89C00061]	c o eag	TL	ł .
374		0.64 140 23 P 2	VC3	-0.66	TENTEC	1		35925 seco 89C00061	c o]ieooi	т.	I
375	75 105	0.40 125 16 9 2		-0.61	- TERTEC	1		T0854 seco 59C0060	= = = = = = = = =	≂ I	I
376		0.46 121 17 9 2	VSM	-0.11	TERITEC	(T0854 seco 89C00060	2 0 6001	72	I
377	81 105	0.44 137 18 2 2	VH3	+0.93	TEATEC	1		32265 prim 89000061	2 0 6301	ب ا	1
378		0.20 73 9 2 2	VSM	+0.93	TEATEC	1		32265 prim 89C30061	2 0 6001	元	i
379	34/106/	1.42 19 SAI 2	TSE .	-4.72	TSHTSH	2.19	0.30	M0554 zeso 89300164		-	1
380] 38 106	0.30 15 SAI 2	TSH	-0.61	TSHTSH		0.21	M0554 zeso 89900164		· · · · · · · · · · · · · · · · · · ·	1
381	56 106	0.22 93 SAI 2	TSH	+0.82	TSHTSH	a.ao	0.25	M7252 [reso] 89H00164 []			I
382	80 106	0.28 40 13 2 2	VH3	+0.87	TSHIEC		1	X3273 seco 89C00061 0		•	1
383	126 106	0.27 30 12 2	VH2	+0.97	TERTEC			32265 prim 8900061 0		_	
384	132 106	0.20 36 8 2 2	10H	-1.02	TENTEC		,	T0854 seco 99C30050 4			1
385	143 107	0.19 22 7 2 2	VCL	+0.93	TENTEC	, 1	, 1	34014 prin 89C00144 (•	1
386	30 108	0.36 48 13 2 2	106C	-0.95	TEHTEC	1 	1	M0155 seco 39000182 0		•	
387	36 108	0.67 10 SAL 2		-1.16		1.19 j	0.29	M0554 zeso 89800164 ;			ļ
388	56 108	0.39 43 14 2		+0.38	TEHTEC	۱ ۲۰۰۰- ۱					1
389	132 108	0.39 100 16 9 2		-0.91	TERTEC	1 1	ł	M0155 seco 89C00182[0			ł
390	37 109	0.16 93 SAL 2	•	+1.30		I 0.28	0.26	32265 prim 8900061 0			
391	121 109	0.56 82 23 2 2	-	-1.48		U.10 LAR	I I	M0554 reso 89300164 P			
-392	129 109	0.29 139 14 9 2		-0.94	TEHTEC		1	M7262 reso 89000059 0	•		
			•			1	1	34163 prim 99000059 0	. uleadt	ш <u>1</u>	
					·····		<u></u>				

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ppendix 4		Page 10 of 14
UTILITY:	SG89 MAI, MCI, MMI, MVI, SAI, SCI, SVI, 0-100%TWD Southern California Edison.	
PLANT :	San Onofre	NCV. 7,2000 17:13
UNIT:	2	
SG :	• 89	
DATABASE:	SONGS_U2_1000_SG89_FINAL	PAGE 9

	ROW COL	VOLTS DEG PCT CEN	FLAW LOCATION	EXTENT	U7111	UTIL2	NAME	TYPE CAL GROUP	LZG	PROBE SIZE	
393	141 109	0.51 88 18 P 2	VH3 +0.00	TENTEC	1		1 24014	[prim]89C00144[C	01600		<u> </u>
394	143 109	0.60 100 21 2 3	DBC -1.75	TENTEC	4	1		prim 89C00144 C	•		1
395	36 110	0.63 15 SAI 2	TSH -3.45	TSHTSH	10.0	0.20		reso 89H00154 H	•		1
396	1 1 1	1.21 18 SAI 2	TSH -1.34	TSHTSH	11.62	0.23		reso 89H00164 H			1
397	1 1 1	0.66 8 SAI 2	TSH -0.65	TSHISH	10.0			zeso 89H00164 H	-		(•
398	38/110	0.27 108 SAI 2	TSN +1.01	TSHTSH	0.21			reso[89H00163]#	-		1
399	40[110]	0.12 103 SAI 2!	TSH -2.13	TSHTSH	10.05	0.17		zeso 89H00164 H	•		1
400	42 110	0.64 68 20 2 2	VSM -0.17	TEHTEC	1	i i		prim 89C00179 C	•		1
401	116 110	0.27 59 13 2 2	VH1 +0.84	TEHTEC	1	1		seco 8900059 [C	•		1
402		0.22 42 10 2 2	VH2 +0.99	TEHTEC	1	I		seco 8900059 C			3
403	130 110	0.30 143 14 2 2	VH1 -0.95	TEHTEC	I	Ι.		seco[8900059]C	•		i
404	1	0.28 103 13 2 2	VH2 -0.80	TENTEC	1	1.		prim 89C00059 [C			i
405	29 111	0.21 90 SCI ? 1	TSH +0.02	TSHTSH	10.0	10.30	W3386	reso 89800153] H	0[600]	25	1
406	75 111	0.43 124 19 2 2	VH3 +0.04	TERTEC	ł	t I	L3025	prim 89C00059 C	0 6000	љ	1
407		0.63 124 25 P 2		TENTEC	ł	1 1	W3386	reso 89C00059 C	0 6000	л.`	1
408	91 111	0.23] 76] 11 2 2 1		TERISC	l	1 1	B8589	seco 89C00059 C	0 6000	л.	1
409	44 112	0.54 137 19 2 2	•	TERTEC	1	1	T6144	saco 89C00180;C	0 6000	π.	1
410	70 112	0.61 141 19 2 4		TENTEC	ł	I I	M7262	reso 89C00179 C	016000	л.	
411	5 113	0.15 110 SAT 24		028029	10	0.32	G4341	reso 89300138 2	2 600	קי	1
412	21 113	0.51 72 SCI P 1		TSHTSH	0.00	0.43	M7262	zeso 89H00164 H	0 6003	,p	1
-	37 113	0.97 15 SAT 21	•	TSHTSH	11.13	0.20	M0554	reso[89800164]#	0 6007	'P	1
414	49 113	0.11 107 SAI 21	rsh +1.71	TSHTSH	0.15	0.23	M0554 [reso 89200164 H	016003	ġ.	1
415	59[113]	2.80 20 SAI 21]TSatsh	3.52	0.27]	M0554	zeso 99H00154 H	0[6003	ē	1
.5		1.25 17 SAI 21		TSATSH	0.70	0.30	M0554	reso 89500164 H	0 6003	P	1
1 7	77 113	0.21 92 10 92 10	•	TEHTEC	1		13025 [j	prim[89C00059]C	0 600U	L	1
418		0.14 28 7 9 2 9		TENTEC	1 1	1	L3025	Dim 89000059 [C	0 6000	L	1
419	125 113	0.27 111 10 P 2 0		TERTEC	1	-	B4260	216200028 C	0 6000	Ľ	l
420	48[114]	0.48 21 SAT 21		TSHTSH	0.92	0.14	M7262	reso 89500163 H	0 600P	P	l -
421	68 114	0.16 121 SAT 20		OLHOIH	0	.29	24578	zeso 89H00187 H	2 6009	2	1
422	72 114	0.24 54 11 P 2 V		TERTEC]	i i	B2027	prim 89000057 [C	018000	L	1
423	75[114]	0.33 43 15 P 2 V		TEHTEC	[ŀ	35926	seco 89C00057 C	01000	Lo ¹	1
424	92[114]	0.29 38 14 P 2 V		TERTEC '		1	35926	seco 8900057 C	0 5000	L	I
425	130 114	0.32 62 15 P 2 V		TERTEC		1	L3025 1	prim 89000059 C	0 6000	L	I
426	1 1 1	0.31 55 14 P 2 V		TEATEC	•	1	L3025 1	prim 89C00059 C	0 6000	L	1
427 428	132[114]	0.31 39 11 P 2 V	_	TENTEC	•	1	J0927]:	seco 89C00053 C	0 6000	L	ł
429	140[114]	0.27[141] 10[9 2]V		TENTEC		• •	J0927]1	seco 89C00058 C	0 500U	i .	1
430		0.24 135 10 P 2 V 0.17 86 9 P 2 V		TEHTEC		I	21465]	prim [69C00058 [C	c 50003	Ľ.	1 .
		0.26 60 13 P 2 V		TEHTEC]	1		seco 89C30057 C			1
	109 115	0.13 32 9 P 2 V		TEHTEC				seco 89C00057 C	•		l
433		0.20 35 10 2 1		TENTEC	1		-	seco 99C00057 C	•		ľ
		0.25 119 12 P 2 V		TENTEC	1			seco 89C00057 C			
435		0.23 49 11 P 2 V			1	•		seco 89000057 C	•		
436		0.22 53 11 2 2 1		TERIEC	I			eco 89C08057[C			
437	•	0.18 130 9 2 2 1		TENTEC	ł			seco[89C00057 C (-		ł
		0.57 90 20 9 20		TERTEC	1			eco 89C30057 C	-		
439		1.20 21 SAI 2 T		TERTEC				eso[89C00180]C (Ļ
440		1.02 21 SAI 2 T		1				eso]89H00156 H (•	-	•
441		0.24 25 12 P 2 V		TENTEC			-		•	-	
				I source	i	1	85726 [9	eco 89C00057 C 0	160001	•	

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٠		Appendix 4									ореска кероп			
•				SG89 MAT		M8/7	637	· · · · ·	0-1001TWD		² age 11 of 14			
		UTILITY:	Souther	nn California	Edieon	MAT'	341.	Ser, SAI,	0-100%TWD		_			
		PLANT :	San One							NOV.	7.2000 17:13			
		UNIT:	2 .											
		SG:	89											
		DATABASE :												
·		UNINDAGE:	ວບກບວຼຸ	72_1000_SG89_F	INAL	•				PAGE	10			
	ROW COL	VOLTS DEG PCT	HN FLAW I	LOCATION	EX	TENT	UTIL	1 UTIL2	NAME TYPE CAL GRO	OP LEG	PROBE SIZE			
442		0.18 81 9	2] VH3	+0.79	TEH	TEC		1	35926 seco 8900005	7 0 010	OUTL			
43	1 1 1	0.20 37 20	21703	-0.86	TEH	IEC		}	35926 seco 89C0005	7[0 0]0	OCTL			
44	126 116	0.21 65 10	2 [VH2	-0.67	TEH	TEC		1	35926 seco 890005	• •				
145	1 1 1	0.24 124 12	2 VH2	+0.84	TEH	TEC		i .	35926 seco 890005					
146	[130]116]	0.38 58 17 1	2 VH1	+0.78	17283	tec i			B5926 seco 890005					
47	1 1 1	0.23 58 11	2 1 VH2	+0.84	TEH	EC F		1	25526 seco 8900005	•				
448	1 1 1	0.21 110 10 1	2 1 112	-0.86	TEHT	•		i		• •				
49	1138 116	0.24 48 11	2 781	-0.68	TEHT	•		1	35926 seco 89C0005	• •				
\$50	1 1 1	0.19[112] 9]		+0.75	TEHT	•			35926 seco 890005					
151	31 117	0.37 133 12 1	•	+0.40		•		1	35926 seco 8900005	• •				
	123 117		2]VH1	-0.62	TEHT	•		1	T6144 seco 89C0017	• •				
53	 		2 VH2		TEST	•		l	35926 seco 8900005	• •				
	1 1 1		•	-0.78	[TEST	•		1	35926 seco 850005	7 C 0 6	0001			
154		0.19 54 9 1	•	+0.84	TEHT	•		1	35925 seco 890005	7 C 0[6	00000			
155		0.15 81 8 8		-0.71	TEAT	EC		I	35926 seco 890005	7[0.0]5	OOUL			
	68 118	0.52 17 SAI	••••	-5.18	125312	SH 0	0.59	0.21	M0554 zeso 8980015	H O S	0022			
57	119 119	0.66 42 23 8	2 09H	-1.00	TEAT	EC		1	G7112 seco 39C3005	C 016	0001			
58		0.47 44 18 9	2]10H	-1.01	TERT	2C I	LAR	1	M7262 zeso 890005	IC 016	0000			
59	133 119	0.37 88 15 9	2 VH1	+0.79	TEHT	EC		- F	D3858 zeso 890005					
60	20 120	1.55 24 SCI P	1 TSH	-6.87	TSHT	sa jo	5.63	3.22	M7252 zeso 89500156	• •				
61	62 120	0.57 42 19 2	2 02H	-1.17	TEHT	EC			21465[prim 89C00177					
62	47 121	0.29 147 11 9	2 7524	-0.84	TEHT	SC I		i	P1465 prim 89C00177					
63	79 121	0.33 84 13 2	2 029	+1.00	TEHT	•								
64		0.59 115 21 P	2 1783	-1.12	TEHT	•		1	[J0927[seco 89C00054	• •	• •			
	91 121	3.18 28 SAT	•	+5.09				1	D2003 [prim 39C00054					
	119 121	0.52 113 19 P		-2.08	TERI		1.42	0.31	E4963 Teso 89300214	• •	· · · · ·			
	123 121	0.28 116 11 P	•		TEHT		AR	ł	M7262 zeso 89C00054		•			
	• • •		-	-0.68	TSHT	•			D2003 prim 89000054	[C 0] 60	DOCT 1			
		0.37 81 14 P	-	-1.03	TEHT			ł	W3386[reso 89C00177	C 0 50	DOLL			
	78 122	0.26 132 11 P	•	+0.82	TEHT	ec ,		1	D2003 [prim]89C00054	C 0 60	1000			
70	82 122	0.49 18 SCI P		-0.09	TSHT	SH .	15	1.13	P4578 ==== 89800073	13 0 s	1 SED			
•		0.32 84 13 P	•	-0.79	TEHT	5C		1	D2003 prim 89C00054	⊂ 0 50				
72		0.34 63 14 P	•	-1.13	TEHT	8C		I	D2003 prim 89000054					
73	15[123]	0.45 49 16 P	2 03H	-0.85	TERT	EC		1	P1465 prim 89000177		•			
74	19 123	0.44 82 16 P	2 018	+0.88	TEHT	EC [1	P1465 prim 89000177		-			
75	127 123	0.31 137 13 P	2 090	-1.24	TEHT			1	M7262 reso 8900054					
76	8 124	3.49 36 SCI P	1 TSa	-5.14	TSHT		.38	0.80	M0554 [Tesa 89800159	•••	•			
77	28 124	0.31 96 SAI	2 028	+8.05	02803		.79	10.52			-			
78		0.20[139] 9[2	-	-0.64	TEHTS	•		14.94	M7262 zeso 89800190	• •	•			
79 }		0.30 23 SCI P	-	-6.44					32153 seco 89C00109	• •	•			
		0.42 23 SCI P	•	-4.95	TSHTS		.71	10.25	M0554 zeso 89500170		•			
11 1			-		TSHTS	•	.29	[0.19	M0554 zeso 89200170					
		0.32 45 12 P	•	-0.75	TEHTE	•		1	91465 prim 89C00177	C 0 80	002. 1			
2		0.37120 17 2		-0.73	TEATE	•		1	G7112 seco 89C00053	C 0 60	007L -			
3		0.40[145] 18 P		-0.77	TERTE	ic		1	G7112 seco 89C00053	C 0 60	007L			
4		0.341241 2612	•	+0.85	123472	ж I		1	G7112 seco 8900053	C 0 60	001			
IS .]		0.89[114] 30 9	2 703	-0.82	TEXTE			I	G7112 seco 8900053					
16	1	0.98 96 31 2	2 VC3	-0.77	TEHTE	i n		1	G7112 seco 8900053					
87		0.58 92 26 P	2 VC3	+0.00	TEHTE	ic i		1	G7112 seco 89C00053					
88	46 126	0.28 19[SCI P	1 TSH	-0.10	TSHTS		.00	10.14	M7262 reso 89800072	•				
39		0.38 119 17 9	-	-0.74	TEHTE	•								
0 1		0.44 9 SCI P		+6.11	TSHIS	•		1	W9658 seco 8900027					

Inservice Inspection of Steam Generator Tubes эресіаі кероп Appendix 4 • Page 12 of 14 SG89 MAI, MCI, MMI, MVI, SAI, SCI, SVI, 0-100%THD UTILITY: Southern California Edison. NOV. 7.2000 17:13 PLANT: San Onofre UNIT: 2 • SG : 89

DATABASE: SONGS_U2_1000_SG89_FINAL

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	ROW COL	VOLTS DEG PCT CHN FLAN	UCATION	EXTENT	UTIL:	UTIL2	NAME	TYPE CAL GROUP L	EG PS	ROBE SIZZ	
491	5 127	1.42 34 SCI P 1 TSH	-5.86	TSHTSH	12 65		1			·····	
492	66 128	0.20 79 8 P 2 VSM	-0.66	TEHTEC	1.65 ,	0.21		reso 89H00073 H	•		1
493	68 228	0.29 49 14 2 2 VH3	-0.73	TEHTEC	1	1	-	seco 89C30050 C (-		ł
494	112 128	0.23 128 11 P 2 VH2	+0.19	TEHTEC	1	1		prim 89000051 (C)			I
495	1118 128	0.25 52 10 P 2 05H	+0.67	TEHTEC	•	1		reso]89C00025[C (•		1
496	11 129	0.89 24 MCI P 1 TSH	-3.94		1	1		prim[89C00024[C (•		ł
497	78 130	0.31 96 13 7 2 VSM	-1.11		11.91	1.19	-	reso 89H00070 H	-		I
498	74 132	0.26 111 11 2 703	-0.70	TENTEC	1	1		mim 89000024 C (I
499	7 133	0.81 30 SCI P 1 TSH	-7.46		1	1		eso 1900024 [C 0			1
500	13 133	0.42 126 18 P 3 DBH	+2.23	TEHTEC	1.62	1.15		eso 89200070 2 0			I
501	103 133	0.21 104 SAT 2 02H	+0.39		0.00			zim[89C00050]C 0	•		I
502	58 134	0.31 31 15 P 2 VSM	+1.04	TEHTSC	10.00	0.38		eso 89800127 H 2	-		I
503	77 135	0.39 132 15 P 3 DBC	+2.15	TENTEC	1	1		mim 89C000491C 0	•		I
504	81 135	0.33 139 14 P 2 VH3	+0.,70	TEHTEC	1	! .		eso 89000022[C 0	-		1
505	117 135	0.27 117 12 P 2 VH2	+0.71	TEHTEC	1	1 1 ·		min 89C00022 C 0			1
506	10 136	2.62 32 MCI P 1 TSH	-4.70		3.24	 0.72		mim[89C00022[C 0			1
507	32 136	0.40 61 15 7 2 VSM	-0.96	TENTEC	; J . 44 	19.72		eso 59H00063 H 0	•		1
508	78 136	3.15 31 SAI 2 TSH	-7.48		5.05	0.72		eco[89C00048]C 0			1
509		1.05 20 SAT 2 TSH	-6.86			10.72 0.22		eso 89200060 [H 0	-		1
510	\mathbf{i}	0.26 150 11 P 2 VC3	-0.96	TEXTEC	14.03	19.22		±so[49H00060[Ξ 0			
511	106 136	0.28 118 12 P 2 VH2	-0.71	TENTEC	1	1		rim[89000022]C 0			1
S12	114 136	0.35 151 15 P 2 VC3	+0.82	TENTEC		:		rim \$9C00022 C 0			1
513	77 137	0.63 114 21 P 2 VSM	-0.95	TENTEC	5			mim[89C00022 C 0			1
1	79 237	0.29 133 14 P 2 VSM	-0.87	TEHTEC				zim 89000020 C 0			1
ś.	113 137	0.25 59 11 P 2 VH2	-0.68	TENTEC	5	1 1		tim 89000021 C 0	•		1
516	66 138	0.31 104 13 P 2 08C	-0.94	TENTEC	•	1 1 3 1		zim 89000022 C 0		•	1 .
\$17	19[139]	1.11 28 SCI 2 1 TSH	-5.04		1.61	1 [0.25		eso 89C00048 C 0	•	•	
518	77 139	0.32 100 12 P 2 VH3	-0.88	TEHTEC	A	[9-23 1		escis9200003 ja 0		i i	1 1
519		0.67 144 22 P 2 VC3	+1.18	TENTEC	•	1 I		=im 89C00020 ⊂ 0			1
520	32 140	0.24 65 12 P 2 VSM	-0.56	TENTEC	I	1 I 1 1			-		1
521	.40 140	0.23 33 12 P 2 VSM	-0.69	TENTEC		: 1 			-		I T
522	60 140	0.41 40 19 9 2 VSM	+0.84	TEHTEC							1
523	88 140	0.37 116 14 9 2 VH2	-0.79	TENTEC	1	i 1					1
524 ·		0.42[104] 15[P 2]VH2	+0.92	TENTEC		1 1 1					1
525	9 141	0.14 114 MAE 2 02H	-1.72		0.00	 0.47		150 89C00020 C 0 150 89H00122 H 0			4 1
526	49 141	0.53 33 22 P 2 08C	+1.80		LAR	(**** 		150 89C00047 C 0			1
527	76 142	0.21124 10 P 2 08C	-0.58	TENTEC		, 1 1		man[89C00021]C 0]		•	2 1
528	59 143	0.25 134 13 7 2 VH3	-0.54	TEHTEC	1	, 1 1		co 89C00047 [C 0]			1
529	71 143	0.24 108 12 P 2 VH3	-0.73	TERTEC		· 1		co[89C00021[C 0]			1
530	1 1 1	0.24 109 11 P 2 04C	-0.17	TEHTEC	1			so[89C00021[C 0]			1
531	66 144	0.34 58 16 2 VH3	-0.73	TENTEC	· ·			10 21/29C00047/C			1
532	E	0.46 81 20 P 2 VSM	-0.80	TERTEC	· '		-	miasco0047[C 0]			•
533	70 144	0.35 96 13 P 2 VC3	-0.53	TERTEC	r I			im[89C00046]C 0]			1
534	112 144	0.61 124 18 P 3 DBC	+2.15	TERTEC			· ·	so[89C00020[C 0]		•	1
535	45 145	0.22 68 12 P 2 VSM	-0.86	TENTEC	1			co 39C00047[C 0]			
	49 145	D.52 99 22 P 2 08H	-1.19	TERTEC	1			30 89C00047 C 0			I
\$36					,	• •		material and the at			•
536 537		0.26 60 12 P 2 VC3	-0.69	TEHTEC	ł	1	CANAL	mineconnesic of	600177.		F
	57[145]	0.26 60 12 P 2 VC3 0.40 110 15 P 2 VC3	-0.69 +0.85	TERTEC	1			im 89C00045[C 0]			E I

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		nservice Inspe	ction of Ste	am Generato	or Tube:	s			Special Report	
		Appendix 4	~						Page 13 of 14	
•		UTILITY:	Southern Cal	89 MAI, MCI, N .ifornia Edisor	MMI, MVI, -	SAI, S	CI, SVI,	0-100%TWD		
		PLANT:	San Onofre	ALOTHIE EDISON					NOV. 7,2000 17:13	
		UNIT:	2							
		SG:	89					•		•
х. <u>э</u>		DATABASE:	SONGS_U2_100	0_SG89_FINAL					PAGE 12	
·										
	ROW COL	VOLTS DEG PCT CH	N FLAN LOCATI	014	EXTENT	UTILI	UTIL2	NAME TYPE CAL GRO	OUP LEG PROBE SIZE	
540	8[146]	0.59 15 SAI	2 TSH -6 .	46	TSHTSH	10.00	0.43	G4841 reso 89H0000	613 01600PP	1
541	56 146	0.44 106 16 P	2 VH3 -0.	75	TENTEC	Ť	ł	[B4165 prim 89C0004		; . ;
542	58 146	0.33 32 15 P	21VH3 -0.	45	TEHTEC	1	I	C4330 prim 89C0004	5 C 0 6000L	1
543	74 246	0.37 70 19 P		86 I	TEHTEC	I	1	L9168 prim 89C0001	ALC 0 60001	1
544	94 246	0.25 131 14 P	•	87	TEHTEC	1	I	L9168 prim 8900001	9 C 0 6000L	1
545	35 147	0.22[41] 11]2 :		•	TEHTEC	I	I	C4330[prim 89C0004	SIC O GOODL	1
546	45 147	0.24 150 9 7			TENTEC	I	I	85926 seco 89C0004	4 C 0 6000L	ł
547	57 147	0.31 105 12 P	•	•	TERLEC	1	1	[35926 seco 89C3004	4[C 0 600TL	1
548	59 147	0.29 73 14 7			TERTEC	4	I	X3270 seco 89C0004	SIC OIGOOD	1
549 550	71 147	0.51 115 24 P : 0.41 124 20 P :	•		TEHTEC	1	1	L9168 prim 89C0001		ł
550	79 147	0.24 121 13 P	•		TERTEC	1	1	L9168 prim 89C0001	•••	1
552	103 147	0.16 67 SAT	•	•	TEHTEC 04H04H	10		T4180 seco 89C0001		1
	74 148	0.46 85 15 P			TERTEC .	10	.23	24578 zeso 8980012	• •	1
	82[148]	0.67 131 21 P			TENTEC	1	1	B4165 [prim]8900001 B4165 [prim]8900001		1
555	84 148	0.32 60 17 P	•		TEBTEC	1	1	L9168 [prim 89C0001:		1
556	88 148]	0.26 114 14 2 2	VC3 -0.		TEHTEC	{		G4841 xeso 89C0001		1
557	31 149	0.31 131 12 9 2	VSM +0.	ia	TERTEC	[•	1	B4165[prim[89C00044		1
558	35 149	0.361107 14 P 2	-0.1	із <u>і</u>	TEHTEC	1	I	34165 prim 39000044		1
559	79 149	0.26 69 15 2	VSM +1.)1 I	TEHTEC		I	L9168 prim 8900001		1
S60 .	52 150	0.23[72] 11 P 2	(VC3 - a.:)e .	TEHTEC	1	1	C4330 prim 890004		· ·
561	78 150	0.45 \$5 15 P 2	[VH3 -0.0	i4 (:	TERTEC	1	I	B4165 prim 8900001		i
= 4 Z	91]151]	0.31 54 17 2 2	VH2 -0.6	i6 :	TEHTEC	1	I	L9168 prim 89000019		I
	56 152	0.27 54 17 2 3	DBH +1.0	17]:	TENTEC	1	1	C4330 prim 89C00045	C O GOODL	1
-04	66 252	0.32 131 12 P 2		ro [:	TEHTEC	E	i i	B4165 prim 89000044		1
	80 152	0.56 137 25 2	•	i9 :	TEHTEC	Ľ.	1	V1371 prim 89000015		I
566		0.40 134 20 P 2			TEHTEC	1	I	V1371 [prim]89C00015		1
567		0.66 103 28 2		•	TENTEC	l		V1371 prim 89000015	IC Oleconr	1
568		0.63 97 27 2	•		TEHTEC		1	V1371 [prim]89C00019	C 0 SOOTL	1
569 570	[69[153] 72 153	0.37 212 14 2			TENTEC		E	B4165 prim 89C00042		I -
570	73 153	0.30 100 11 P 2 0.28 105 15 P 2		•	TENTEC		i l	B4165 prim 89C00018		1
	[1][23]	0.28 140 15 P 2	•		TENTEC		۱ ۱	M7262 zeso 8900019	· .	L
573	751155	0.25 152 14 P 2		•	rehtec Iehtec		; ; ;	22153 seco 89C00019		l ,
574	36[156]	0.29 61 14 P 2			TENTEC		. 1 	B2153 seco 89C00019	•	1
	46[156]	0.27 119 11 2 2	-		TEHTEC		i i	88589 seco 89C00043 84165 prim 89C00042	• •	1
	54 156	0.29 106 14 2 2		•	TEHTEC	•	1 1	38589 seco[89C00043		1
577	58 156	0.32 76 15 2			TEHTEC		' ((38090 zeso 89C00043		1
578	66 156	0.33 106 16 17 2	VH3 -0.5		TENTEC		''''''''''''''''''''''''''''''''''''''	38589 seco 89C30043		
579	72 156	0.21 112 12 2 2	VC3 -0.9		EHTEC	1	. 1	32153 seco 89C00019		
580	74 256	0.45[107] 15 2 2	VH3 -0.9	0 11	EHTEC		i i	34165 prim 89000018		Î.
581		0.45 79 15 2 2	VSM -0.9	o :	EHTEC	I	I i	B4165 prim 8900018		ł
582		0.61 70 19 P 2		• :	EHTEC	l	-	34165 prim 89000018		ľ
583	71 157	0.25 93 14 2 2		8 jı	сентес	1	1	32153 seco 89000019		1
584		0.29 96 15 2		8 13	EHTEC	I		B2153 seco 89C00019		ľ
	56 158	0.42 107 20 9 2		•	EHIEC	1	1	T0854 seco 89C00029	C 0 6000L	I. S
	41 159	0.29 87 12 2	-		EHTEC	1		D3858 reso 8900028	C 0 600UL	1
	79 159	0.40 63 20 2			EHTEC	I		V1371 prim 89000019		1
588	1 1	0.33 76 17 2	VC3 -0.5	2 1	entec i	1		V1371 prim 89C00019	⊂ 0 6000L	1

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OL VOLIS DEG PCI CHN I	DATABASE:	SC:	UNIT:	PLANT :	GILITY:	+ +	Appendix 4	
		1						(1)
VOLIS DEC PCI CHN FLAN LOCATION	SCHACE DZ T000 ZC85 LIXOYT	8 9	4	San Onofre	Southern California Edison,	SG89 MAI, MCI, MMI, MVI, SAI, SCI, SVI, 0-1008TWD		
EXTENT					•	NI. MVI,		
- DITIL						SNI, SC		ų
91 12					•	I. SVI.		
NAME	•					114001-0		
3677					I	ð		
- <u>6</u>								
TYPE CAL GROUP LEG	41				**			
E S G	PAGE 13				ą	1		
PROBE SIZE	نيا				NOV. 7.2000 17-11	raya itoi it		

Ć		DATABASE:		ວລະເລີດ2ີ1000 ຊີວຍລົມກອບ	TKNT			PAGE	Ľ
	ROM COL	VOLIS DEC	PCT CEN FI	VOLIS DEG PCT CHN FLAN LOCATION	EXTENT	UTIL1	071122	NAME TYPE CAL GROUP LEG	PROBE SIZE
589	74 160	0.86[114]	25 P 2 VR3	-0.79	TENTEC	_	_	HA165 Invia Agennovale ol	SCATT I
590	-	0.51 136	19 P 2 VC3	U +0.17	ITERIEC				
591	46 162	0.29 109	12 P 2 VSM		TERTEC				
592	1 1111671	0.171 491 1819	18 9 2 01						1000
334		1	The start) DELHEL			34260 [reso 89C00017 [C 0]	j 72005
265	45 167	d'14 86 95' 0	17 2 2 VSM	M -0.91	TENISC			10270 seco 89000017 C 0	50007.
S 94	42 168	0.56 150 20 9	20 9 2 1054	M +0.96	TENTEC			B4165 prim 89000026 C 0	500CTL .
265	[42 [170]	0.61 101 21 2 2 VSM	21 2 2 VS	M -0.30	TEHTEC			F0037[prim 89C00026]C 0]	
365	39 171	0.26 63 10 P 2 03H	10 P 2 03	H +0.13		_	-	34260 reso 29000026 C 0	
597	19 173	0.24 136 10 P 2 VSM	TO SA Z A	M +1.01	ITERTEC		<u> </u>	X3270 seco 89C00026 [C 0]	10001
865	7 175	0.29[80] 11[P 2[02C	11 5 2 02	C +0.82	TENTEC		•~	} 21465 [prim 8900026 [C 0] 6000L	
	X 2210	QUERY REPORT SUMMARY:	MARY :	•					
				•			•		
	QUERY PARMETER	METER.	ENTRIES	TUBES					
	0 to 100 Percent	Percent	502	96			•		
	MAI Indic	Indication Code	N						
	MCI Indic	Indication Code	2	N					
	MMI Indic	Indication Code	0						
	MVI Indie	Indication Code	0	•		•			
			•						

													865	597	365 565	594	265 265		590
			•		TOTAL ENTRIE		SAI Ind			0 to 10 MALI Ind	QUERY PARAMETER	Que	-		42 170	_	: 12 167 } 45 167	. ·	-
ł		· ·	·		ENTRIES : TUBES :	Indication C	Indication C	Indication C	Indication C	to 100 Percent Indication Code	UNCTER.	query report summary:			0 0.61 101		86 95°0 4 64 {45°0 4		
					598 474		Code 65 Code 25		Code 2	ode · 2	ENTRIES	SUMMARY :	4 TT	13	10 p	20	17 P	12 P	19 P
						. N	2 2	• •	, N C	. 36E			2 a2C	2 VSM	2 VSM 2 03H	2 VSM	2 VSM	2 [VSM	2 40
÷		·	•							•		•	+0.82		-0.30	+0.96	+1.03 -0.91	+1.08	-0.77
:		:		•							•		TENISC	Jankar	TEHTEC] TENTSC	TENTEC	. TERTEC	TERIEC
								•		•									
			v								· ·				• ••••			-	-
	· · ·												21465 20 21465 20	34260[2	F0037 p	34165 p	34260[r	D3858 [z	B\$589 s
	· .				•	• •							\$1465 [prim \$900006]C	34260 reso 89C00026 C	F0037[prtm 89C00026 C	B4165 prim 89000026 C	34260 reso 89C00017 C	23858 zeso 8900028 C	B6589 seco 89C00018 C
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9 ATTACHMENT-1

LIST OF COMPLETED ISI NDE EXAMINATIONS AND SYSTEM PRESSURE TESTS



ISI ID NO.	Area Description	Cat	ltem	Method	Exam. Date	Report No	Results
02-003-002	STAY BASE-TO-PRIMARY HEAD WELD	B-B	B2.31	UT	10/26/00	200-11IUT-017	ACCEPT
02-003-003	PEEL SEGMENT WELD @ 108 DEGREES	B-B	B2.32	UT	10/26/00	200-11/UT-017	ACCEPT
02-016-019	SNUBBER	F-A	F1.10C	VT-3	10/25/00	200-11IVT-014	ACCEPT
02-016-020-F	Y-STOP	F-A	F1.10A	VT-3	10/25/00	200-11IVT-014	ACCEPT
02-017-073	VARIABLE SPRING	F-A	F1.10C	∨т-з	11/1/00	200-11IVT-026	ACCEPT
02-018-076-F	Y-STOP	F-A	F1.10A	VT-3	11/1/00	200-11IVT-030	ACCEPT
02-018-076-1	Y-STOP W/INTEGRALLY WELDED LUGS	В-К	B10.20	PT	11/1/00	200-11IPT-013	ACCEPT
02-019-112-F	AXIAL STOP	F-A	F1.10A	VT-3	10/28/00	200-11IPT-022	ACCEPT
02-021-068-F	Y-STOP	F-A	F1.10A	VT-3	10/25/00	200-11IVT-015	ACCEPT
02-021-081-F	Y-STOP	F-A	F1.10A	VT-3	10/25/00	200-11IVT-015	ACCEPT
02-021-081-I	Y-STOP W/INTEGRALLY WELDED ATTACHMENT	В-К	B10.20	РТ	10/27/00	200-11IPT-008	ACCEPT
02-028-028	SWAY STRUT ATTACHED TO VALVE (SNUBBER REPLACED DCP 2-6683-0P)	F-A	F1.40A	VT-3	11/1/00	200-11!VT-028	ACCEPT
02-036-007	VERTICAL SUPPORT - COLUMN ASSEMBLY	F-A	F1.40A	VT-3	10/24/00	200-11IVT-011	ACCEPT
02-036-008	MOTOR HYDRAULIC SNUBBER (HORIZONTAL)	F-A	F1.40C	VT-3	10/24/00	200-11IVT-011	ACCEPT
02-036-009	LOWER HORIZONTAL SUPPORT COLUMN ASSEMBLY	F-A	F1.40B	VT-3	10/24/00	200-11IVT-011	ACCEPT
02-036-010	LOWER HORIZONTAL SUPPORT COLUMN ASSEMBLY	F-A	F1.40B	VT-3	10/24/00	200-11IVT-011	ACCEPT
02-036-021	REACTOR COOLANT PUMP STUD	BG1	B6.180	UT	10/26/00	200-11IUT-015	ACCEPT
02-036-022	REACTOR COOLANT PUMP STUD	BG1	B6.180	UT	10/26/00	200-11IUT-015	ACCEPT
02-036-023	REACTOR COOLANT PUMP STUD	BG1	B6.180	UT	10/26/00	200-11IUT-015	ACCEPT
02-036-024	REACTOR COOLANT PUMP STUD	BG1	B6.180	UT	10/26/00	200-11IUT-015	ACCEPT
02-036-025	REACTOR COOLANT PUMP STUD	BG1	B6.180	UT	10/26/00	200-11IUT-015	ACCEPT
)2-036-037	REACTOR COOLANT PUMP NUT	BG1	B6.200	VT-1	10/24/00	200-11IVT-012	ACCEPT
)2-036-038	REACTOR COOLANT PUMP NUT	BG1	B6.200	VT-1	10/24/00	200-11IVT-012	ACCEPT
02-036-039	REACTOR COOLANT PUMP NUT	BG1	B6.200	VT-1	10/24/00	200-11IVT-012	ACCEPT



ISI ID NO.	Area Description	Cat	Item	Method	Exam. Date	Report No	Results
02-036-040	REACTOR COOLANT PUMP NUT	BG1	B6.200	VT-1	10/24/00	200-11IVT-012	ACCEPT
02-036-041	REACTOR COOLANT PUMP NUT	BG1	B6.200	VT-1	10/24/00	200-11IVT-012	ACCEPT
02-036-090	HEAT EXCHANGER-TO-DRIVER MOUNT STUD (DWG. NO. SO23-922-157)	BG2	B7.60	VT-1	10/24/00	200-11IVT-012	ACCEPT
02-036-091	HEAT EXCHANGER-TO-DRIVER MOUNT STUD (DWG. NO. SO23-922-157)	BG2	B7.60	VT-1	10/24/00	200-11IVT-012	ACCEPT
02-036-092	HEAT EXCHANGER-TO-DRIVER MOUNT STUD (DWG. NO. SO23-922-157)	BG2	B7.60	VT-1	10/24/00	200-11IVT-012	ACCEPT
02-036-093	HEAT EXCHANGER-TO-DRIVER MOUNT STUD (DWG. NO. SO23-922-157)	BG2	B7.60	VT-1	10/24/00	200-11IVT-012	ACCEPT
02-036-094	HEAT EXCHANGER-TO-DRIVER MOUNT STUD (DWG. NO. SO23-922-157)	BG2	B7.60	VT-1	10/24/00	200-11IVT-012	ACCEPT
02-036-095	HEAT EXCHANGER-TO-DRIVER MOUNT STUD (DWG. NO. SO23-922-157)	BG2	B7.60	VT-1	10/24/00	200-11IVT-012	ACCEPT
02-036-096	HEAT EXCHANGER-TO-DRIVER MOUNT NUT (DWG. NO. SO23-922-157)	BG2	B7.60	VT-1	10/24/00	200-11IVT-012	ACCEPT
02-036-097	HEAT EXCHANGER-TO-DRIVER MOUNT NUT (DWG. NO. SO23-922-157)	BG2	B7.60	VT-1	10/24/00	200-11IVT-012	ACCEPT
02-036-098	HEAT EXCHANGER-TO-DRIVER MOUNT NUT (DWG. NO. SO23-922-157)	BG2	B7.60	VT-1	10/24/00	200-11IVT-012	ACCEPT
02-036-099	HEAT EXCHANGER-TO-DRIVER MOUNT NUT (DWG. NO. SO23-922-157)	BG2	B7.60	VT-1	10/24/00	200-11IVT-012	ACCEPT
02-036-118	SEAL HOUSING-TO-FLANGE CAPSCREW (DWG. NO. S023-922-231-6)	BG2	B7.60	VT-1	10/24/00	200-11IVT-012	ACCEPT
02-036-119	SEAL HOUSING-TO-FLANGE CAPSCREW (DWG. NO. S023-922-231-6)	BG2	B7.60	VT-1	10/24/00	200-11IVT-012	ACCEPT
02-036-120	SEAL HOUSING-TO-FLANGE CAPSCREW (DWG. NO. S023-922-231-6)	BG2	B7.60	VT-1	10/24/00	200-11IVT-012	ACCEPT
02-036-121	SEAL HOUSING-TO-FLANGE CAPSCREW (DWG. NO. S023-922-231-6)	BG2	B7.60	VT-1	10/24/00	200-11IVT-012	ACCEPT
02-036-122	SEAL HOUSING-TO-FLANGE CAPSCREW (DWG. NO. S023-922-231-6)	BG2	B7.60	VT-1	10/24/00	200-11IVT-012	ACCEPT
02-036-123	SEAL HOUSING-TO-FLANGE CAPSCREW (DWG. NO. S023-922-231-6)	BG2	B7.60	VT-1	10/24/00	200-11IVT-012	ACCEPT
)2-039-058-F	GUIDE & Y-STOP	F-A	F1.10B	∨т-з	10/28/00	200-11IVT-021	ACCEPT
2-039-059-F	GUIDE & Y-STOP	F-A	F1.10B	VT-3	11/1/00	200-11IVT-029	ACCEPT
2-039-059-1	GUIDE & Y-STOP W/INTEGRALLY WELDED	В-К	B10.20	РТ	11/1/00	200-11IPT-012	ACCEPT
2-044-043-F	SNUBBER	F-A	F1.20C	∨т-з	10/27/00	200-11IVT-017	ACCEPT
2-044-043-1	SNUBBERS W/WELDED SUPPORT	C-C	C3.20	мт	10/27/00	200-11IMT-008	ACCEPT
2-045-032	20" SCH 100 PENETRATION-TO-PIPE	CF2	C.5.51	мт	10/24/00	200-11IMT-006	ACCEPT



ISI ID NO.	Area Description	Cat	ltem	Method	Exam. Date	Report No	Results
02-045-032	20" SCH 100 PENETRATION-TO-PIPE	CF2	C5.51	UT	10/24/00	200-11IUT-013	ACCEPT
02-045-034	20" SCH 100 PIPE-TO-VALVE	CF2	C5.51	UT	10/24/00	200-11UT-013	ACCEPT
02-045-037-F	GUIDE & Y-STOP	F-A	F1.20B	VT-3	10/25/00	200-11IVT-013	ACCEPT
02-046-044	6" SCH 120 PENETRATION #75-TO-PIPE	CF2	C5.51	мт	10/19/00	200-11IMT-003	ACCEPT
02-046-044	6" SCH 120 PENETRATION #75-TO-PIPE	CF2	C5.51	UT	10/23/00	200-11IUT-010	ACCEPT
02-046-045	6" SCH 120 PIPE-TO-ELBOW	CF2	C5.51	UT	10/23/00	200-11IUT-010	ACCEPT
02-046-046	6" SCH 120 ELBOW-TO-PIPE	CF2	C5.51	UΤ	10/23/00	200-11IUT-010	ACCEPT
02-046-063-F	SWAY STRUT	F-A	F1.20A	VT-3	10/27/00	200-11IVT-018	ACCEPT
02-046-063-1	SWAY STRUT W/INTEG WELDED ATTACH (SNUBBER REPL DCP 2/3-6783.00BP)	C-C	C3.20	мт	10/27/00	200-11IMT-010	ACCEPT
02-047-027	6" SCH 120 PENETRATION-TO-PIPE	CF2	C5.51	MT	10/19/00	200-11IMT-004	ACCEPT
02-047-027	6" SCH 120 PENETRATION-TO-PIPE	CF2	C5.51	UT	10/23/00	200-11IUT-011	ACCEPT
02-047-028	6" SCH 120 PIPE-TO-ELBOW	CF2	C5.51	UT	10/23/00	200-11IUT-011	ACCEPT
02-047-029	6" SCH 120 ELBOW-TO-PIPE	CF2	C5.51	UT	10/23/00	200-11IUT-011	ACCEPT
02-047-030	6" SCH 120 ELBOW-TO-PIPE	CF2	C5.51	МТ	10/19/00	200-11IMT-004	ACCEPT
02-047-030	6" SCH 120 PIPE-TO-TEE	CF2	C5.51	UT	10/23/00	200-11IUT-011	ACCEPT
02-047-035	6" SCH 120 TEE-TO-PIPE	CF2	C5.51	МТ	10/19/00	200-11IMT-004	ACCEPT
)2-047-035	6" SCH 120 TEE-TO-PIPE	CF2	C5.51	UT	10/23/00	200-11IUT-011	ACCEPT
)2-047-036	6" SCH 120 PIPE-TO-ELBOW	CF2	C5.51	UT	10/23/00	200-11IUT-011	ACCEPT
02-048-037	6" SCH 80 PENETRATION-TO-PIPE	CF2	C5.51	UT	10/14/00	200-11IUT-003	ACCEPT
02-048-038	6" SCH 80 PIPE-TO-ELBOW	CF2	C5.51	UT	10/14/00	200-11IUT-003	ACCEPT
2-048-039	6" SCH 80 ELBOW-TO-ELBOW	CF2	C5.51	UT	10/14/00	200-11IUT-003	ACCEPT
2-048-040	6" SCH 80 ELBOW-TO-PIPE	CF2	C5.51	UΤ	10/14/00	200-11IUT-003	ACCEPT
2-048-079-F	3-WAY STOP	F-A	F1.20B	∨т-з	10/19/00	200-11IVT-005	ACCEPT
2-048-079-1	3-WAY STOP W/WELDED LUGS	C-C	C3.20	мт	10/19/00	200-11IMT-005	ACCEPT



ISI ID NO.	Area Description	Cat	ltem	Method	Exam. Date	Report No	Results
02-049-018	6" SCH 80 PENETRATION-TO-PIPE	CF2	C5.51	UT	10/14/00	200-11IUT-004	ACCEPT
02-049-018A	6" SCH 80 PIPE-TO-ELBOW	CF2	C5.51	UT	10/14/00	200-11IUT-004	ACCEPT
02-049-019	6" SCH 80 ELBOW-TO-ELBOW	CF2	C5.51	UT	10/14/00	200-11IUT-004	ACCEPT
02-049-019A	6" SCH 80 ELBOW-TO-PIPE	CF2	C5.51	UT	10/14/00	200-11IUT-004	ACCEPT
02-049-023	VARIABLE SPRING	F-A	F1.20C	VT-3	10/28/00	200-11IUT-020	ACCEPT
02-049-029-F	Y-STOP	F-A	F1.20A	VT-3	10/27/00	200-11IVT-019	ACCEPT
02-049-029-1	Y-STIOP W/INTEGRALLY WELDED LUGS	C-C	C3.20	MT	10/27/00	200-11IMT-009	ACCEPT
02-052-046	HEADER EXTRUSION-TO-6" PIPE	CF2	C5.51	UT	10/20/00	200-11-IUT-005	ACCEPT
02-052-047	HEADER EXTRUSION-TO-6" PIPE	CF2	C5.51	UT	10/20/00	200-11-IUT-005	ACCEPT
02-052-048	HEADER EXTRUSION-TO-6" PIPE	CF2	C5.51	UT	10/20/00	200-11-IUT-005	ACCEPT
02-052-049	26" HEADER-TO-CAP	CF2	C5.51	UT	10/20/00	200-11IUT-007	ACCEPT
02-052-050	HEADER EXTRUSION-TO-6" SCH. 80 PIPE	CF2	C5.51	МТ	10/18/00	200-11IMT-002	ACCEPT
02-052-050	HEADER EXTRUSION-TO-6" SCH. 80 PIPE	CF2	C5.51	UT	10/18/00	200-11IUT-001	ACCEPT
02-052-052	6" SCH. 80 PIPE-TO-ELBOW	CF2	C5.51	UT	10/18/00	200-11IUT-001	ACCEPT
02-052-053	6" SCH. 80 ELBOW-TO-PIPE	CF2	C5.51	UT	10/18/00	200-11IUT-001	ACCEPT
02-052-054	6" SCH. 80 PIPE-TO-REDUCING TEE	CF2	C5.51	UT	10/18/00	200-11IUT-001	ACCEPT
02-052-055	6" SCH. 80 REDUCING TEE-TO-PIPE	CF2	C5.51	UT	10/18/00	200-11IUT-001	ACCEPT
02-052-056	6" SCH. 80 PIPE-TO-ELBOW	CF2	C5.51	UΤ	10/18/00	200-11IUT-001	ACCEPT
02-052-057	6" SCH. 80 ELBOW-TO-PIPE	CF2	C5.51	UT	10/18/00	200-11IUT-001	ACCEPT
02-052-058	6" SCH. 80 PIPE-TO-WELDED CAP	CF2	C5.51	UT	10/18/00	200-11IUT-001	ACCEPT
)2-052-112-F	Y-STOP	F-A	F1.20A		10/19/00	200-11IVT-006	ACCEPT
2-053-004	REDUCING TEE-TO-34" ELBOW	CF2	C5.51	υτ	10/20/00	200-11IUT-009	ACCEPT
2-053-005A-SG	34" ELBOW BODY WELD - OUTSIDE RADIUS	CF2	C5.52	UT	10/20/00	200-11IUT-009	ACCEPT
2-053-005A-SV	34" ELBOW BODY WELD - OUTSIDE RADIUS	CF2	C5.52	UT	10/20/00	200-11IUT-009	ACCEPT
2-053-005B-SG	34" ELBOW BODY WELD - INSIDE RADIUS	CF2	C5.52	UT	10/20/00	200-11IUT-009	ACCEPT



ISI ID NO:	Area Description	Cat	ltem	Method	Exam. Date	Report No	Results
02-053-005B-SV	/ 34" ELBOW BODY WELD - INSIDE RADIUS	CF2	C5.52	UT	10/20/00	200-11IUT-009	ACCEPT
02-053-006	34" ELBOW-TO-HEADER	CF2	C5.51	UT	10/20/00	200-11IUT-009	ACCEPT
02-053-007	8" PIPE-TO-HEADER EXTRUSION	CF2	C5.51	МТ	10/9/00	200-11IMT-011	ACCEPT
02-053-007	8" PIPE-TO-HEADER EXTRUSION	CF2	C5.51	UT	10/23/00	200-11IUT-012	ACCEPT
02-053-008	8" SCH 80 PIPE-TO-ELBOW	CF2	C5.51	UT	10/23/00	200-11IUT-012	ACCEPT
02-053-009	8" SCH 80 ELBOW-TO-VALVE	CF2	C5.51	UT	10/23/00	200-11IUT-012	ACCEPT
02-053-011	VALVE-TO-8" SCH 80 PIPE	CF2	C5.51	UT	10/23/00	200-11IUT-012	ACCEPT
02-053-012	8" SCH 80 PIPE-TO-ELBOW	CF2	C5.51	UT	10/23/00	200-11IUT-012	ACCEPT
02-053-013	8" SCH 80 ELBOW-TO-PIPE	CF2	C5.51	UT	10/23/00	200-11IUT-012	ACCEPT
02-053-013A	8" SCH. 80 PIPE-TO-PIPE	CF2	C5.51	UT	10/23/00	200-11IUT-012	ACCEPT
02-053-029	HEADER EXTRUSION-TO-6" PIPE	CF2	C5.51	UT	10/20/00	200-11IUT-006	ACCEPT
02-053-030	HEADER EXTRUSION-TO-6" PIPE	CF2	C5.51	UT	10/20/00	200-11IUT-006	ACCEPT
02-053-031	34" HEADER-TO-HEADER	CF2	C5.51	UT	10/20/00	200-11IUT-009	ACCEPT
02-053-031A-SG	LONGITUDINAL WELD - HEADER SEAM	CF2	C5.52	UT	10/20/00	200-11IUT-009	ACCEPT
02-053-031A-SV	LONGITUDINAL WELD - HEADER SEAM	CF2	C5.52	UΤ	10/20/00	200-11IUT-009	ACCEPT
02-053-032	HEADER EXTRUSION-TO-6" PIPE	CF2	C5.51	UT	10/20/00	200-11IUT-006	ACCEPT
02-053-033	HEADER EXTRUSION-TO-6" PIPE	CF2	C5.51	UT	10/20/00	200-11IUT-006	ACCEPT
02-053-034	HEADER EXTRUSION-TO-6" PIPE	CF2	C5.51	UT	10/20/00	200-11IUT-006	ACCEPT
02-053-035	HEADER EXTRUSION-TO-6" PIPE	CF2	C5.51	UT	10/20/00	200-11IUT-006	ACCEPT
02-053-036	34" HEADER-TO-CAP	CF2	C5.51	UΤ	10/20/00	200-11IUT-009	ACCEPT
02-053-036A-SG	LONGITUDINAL WELD - HEADER SEAM	CF2	C5.52	UT	10/20/00	200-11IUT-009	ACCEPT
02-053-036A-SV	LONGITUDINAL WELD - HEADER SEAM	CF2	C5.52	UT	10/20/00	200-11IUT-009	ACCEPT
2-053-037	HEADER EXTRUSION-TO-6" SCH. 80 PIPE	CF2	C5.51	МТ	10/18/00	200-11IMT-001	ACCEPT
2-053-037	HEADER EXTRUSION-TO-6" SCH. 80 PIPE	CF2	C5.51	UT	10/14/00	200-11IUT-002	ACCEPT
2-053-038	6" SCH 80 PIPE-TO-ELBOW	CF2	C5.51	UT	10/14/00	200-11IUT-002	ACCEPT



ISI ID NO.	Area Description	Cat	ltem	Method	Exam. Date	Report No	Results
02-053-039	6" SCH 80 ELBOW-TO-PIPE	CF2	C5.51	UT	10/14/00	200-11IUT-002	ACCEPT
02-053-040	6" SCH 80 PIPE-TO-REDUCING TEE	CF2	C5.51	UT	10/14/00	200-11IUT-002	ACCEPT
02-053-041	REDUCING TEE-TO-6" SCH 80 PIPE	CF2	C5.51	UT	10/14/00	200-11IUT-002	ACCEPT
02-053-042	6" SCH 80 PIPE-TO-ELBOW	CF2	C5.51	UT	10/14/00	200-11IUT-002	ACCEPT
02-053-043	6" SCH 80 ELBOW-TO-PIPE	CF2	C5.51	UT	10/14/00	200-11IUT-002	ACCEPT
02-053-044	6" SCH 80 PIPE-TO-CAP	CF2	C5.51	UT	10/14/00	200-11IUT-002	ACCEPT
02-053-044	6" SCH 80 PIPE-TO-CAP	CF2	C5.51	МТ	10/18/00	200-11IMT-001	ACCEPT
02-053-053	REDUCING TEE-TO-ELBOW	CF2	C5.51	UT	10/20/00	200-11IUT-008	ACCEPT
02-053-055	26" ELBOW-TO-HEADER	CF2	C5.51	UT	10/20/00	200-11IUT-008	ACCEPT
02-053-055	26" ELBOW-TO-HEADER	CF2	C5.51	МТ	10/18/00	200-11IMT-001	ACCEPT
02-053-056	HEADER EXTRUSION-TO-6" PIPE	CF2	C5.51	MT	10/18/00	200-11IMT-001	ACCEPT
02-053-056	HEADER EXTRUSION-TO-6" PIPE	CF2	C5.51	UT	10/20/00	200-11IUT-006	ACCEPT
02-053-057	HEADER EXTRUSION-TO-6" PIPE	CF2	C5.51	UT	10/20/00	200-11IUT-006	ACCEPT
02-053-058	HEADER EXTRUSION-TO-6" PIPE	CF2	C5.51	UT	10/20/00	200-11IUT-006	ACCEPT
02-053-059	26" HEADER-TO-CAP	CF2	C5.51	UT	10/20/00	200-11IUT-008	ACCEPT
02-053-061	HEADER EXTRUSION-TO-6" SCH 80 PIPE CAP	CF2	C5.51	UT	10/14/00	200-11IUT-002	ACCEPT
02-062-030-01	LPSI PUMP #1 SUPPORT COMPONENTS	F-A	F1.40B	VT-3	10/31/00	200-11IUT-002	ACCEPT
02-062-030-02	LPSI PUMP #1 SUPPORT COMPONENTS	F-A	F1.40B	∨т-з	10/31/00	200-11IUT-025	ACCEPT
02-062-030-03	LPSI PUMP #1 SUPPORT COMPONENTS	F-A	F1.40B	VT-3	10/31/00	200-11IUT-025	ACCEPT
02-062-031-01	LPSI PUMP #1 SUPPORT LUGS	c-c	C3.30	PT	10/31/00	200-11IPT-010	ACCEPT
02-068-1000	GUIDE	F-A	F1.20A	VT-3	10/16/00	200-11IVT-003	ACCEPT
02-068-1020	Y-STOP	F-A	F1.20A	∨т-з	10/16/00	200-11IVT-003	ACCEPT
02-068-1060	GUIDE	F-A	F1.20A	VT-3	10/16/00	200-11IVT-002	ACCEPT
)2-068-1070-F	GUIDE & Y-STOP	F-A	F1.20B	VT-3	10/16/00	200-11IVT-002	ACCEPT
)2-068-920-F	GUIDE & Y-STOP	F-A	F1.20B	VT-3	10/16/00	200-11IVT-002	ACCEPT



ISI ID NO.	Area Description	Cat	ltem	Method	Exam. Date	Report No	Results
02-068-940	GUIDE	F-A	F1.20B	VT-3	10/16/00	200-11IVT-002	ACCEPT
02-068-950-F	GUIDE & Y-STOP	F-A	F1.20B	∨т-з	10/16/00	200-11IVT-002	ACCEPT
02-068-950 - 1	GUIDE & Y-STOP W/4 INTEGRALLY WELDED LUGS	c-c	C3.20	РТ	10/20/00	200-11IPT-005	ACCEPT
02-068-960	GUIDE	F-A	F1.20A	VT-3	10/16/00	200-11IVT-003	ACCEPT
02-068-970-F	GUIDE & Y-STOP	F-A	F1.20B	VT-3	10/16/00	200-11IVT-003	ACCEPT
02-068-970-1	GUIDE & Y-STOP W/4 INTEGRALLY WELDED	C-C	C3.20	PT	10/20/00	200-11IPT-005	ACCEPT.
02-068-980	GUIDE	F-A	F1.20A	VT-3	10/16/00	200-11IVT-003	ACCEPT
02-068-990-F	ANCHOR STRAP	F-A	F1.20B	VT-3	10/16/00	200-11IVT-003	ACCEPT
02-068-990-1	INTEGRAL WELD FOR ANCHOR STRAP	C-C	C3.20	PT	10/21/00	200-11IPT-002	ACCEPT
02-069-3240	Y-STOP	F-A	F1.20A	VT-3	10/16/00	200-11IVT-001	ACCEPT
02-069-3270	Y-STOP	F-A	F1.20A	VT-3	10/16/00	200-11IVT-001	ACCEPT
02-069-3420-F	SWAY STRUT	F-A	F1.20A	∨т-з	10/16/00	200-11IVT-001	ACCEPT
02-069-3430	Y-STOP	F-A	F1.20A	VT-3	10/16/00	200-11IVT-001	ACCEPT
02-069-3440	Y-STOP	F-A	F1.20A	VT-3	10/21/00	200-11IVT-009	ACCEPT
02-069-3640-F	SWAY STRUTS	F-A	F1.20A	VT-3	10/21/00	200-11IVT-009	ACCEPT
02-069-3640-1	SWAY STRUTS W/WELDED DUMMY STUB (SNUBBERS REPL DCP 2-6683.1SM)	C-C	C3.20	РТ	10/21/00	200-11IPT-001	ACCEPT
02-069-3650	SPRING HANGER	F-A	F1.20C	∨т-з	10/21/00	. 200-11VT-009	ACCEPT
02-069-3730	SPRING HANGER	F-A	F1.20C	VT-3	10/16/00	200-11IVT-001	ACCEPT
2-069-3800	GUIDE	F-A	F1.20A	VT-3	10/21/00	200-11IVT-009	ACCEPT
2-069-3880	SPRING HANGER	F-A	F1.20C	VT-3	10/21/00	200-11IVT-009	ACCEPT
2-069-4240	SPRING HANGER	F-A	F1.20C	VT-3	10/21/00	200-11IVT-009	ACCEPT
2-070-2370-F	WELDED ANCHOR STRAP	F-A	F1.20B	VT-3	10/30/00	200-11IVT-024	ACCEPT
2-070-2370-1	INTEGRALLY WELDED ANCHOR STRAP	с-с	C3.20	РТ	10/30/00	200-11IPT-009	ACCEPT
2-070-2430	SPRING HANGERS W/CLAMP	F-A	F1.20C	VT-3	10/30/00	200-11IVT-024	ACCEPT
2-070-2460-F	STRUT	F-A	F1.20A	VT-3	10/30/00	200/11IVT-024	ACCEPT



ISI ID NO.	Area Description	Cat	item	Method	Exam. Date	Report No	Results
02-070-2670	SPRING HANGER	F-A	F1.20C	VT-3	10/30/00	200-11IVT-024	ACCEPT
02-070-2710-F	SNUBBER W/INTEGRALLY WELDED DUMMY STUB	c-c	C3.20	VT-3	10/31/00) 200-11IVT-031	ACCEPT
02-070-2710-I	SNUBBER	F-A	F1.20C	VT-3	10/31/00	200-11IPT-011	ACCEPT
02-070-2860-F	SPRING HANGER	F-A	F1.20C	VT-3	10/21/00	200-11IVT-010	ACCEPT
02-070-2860-1	SPRING W/INTEGRALLY WELDED DUMMY STUB	c-c	C3.20	PT	10/21/00	200-11IPT-003	ACCEPT
02-071-1510-F	GUIDE & Y-STOP	F-A	F1.20B	VT-3	10/25/00	200-11IVT-016	ACCEPT
02-071-1510-1	GUIDE & Y-STOP W/INTEGRALLY WELDED	C-C	C3.20	PT	10/25/00	200-11IPT-007	ACCEPT
02-071-1530-F	ANCHOR STRAP	F-A	F1.20B	VT-3	10/25/00	200-11IVT-016	ACCEPT
02-071-1530-1	ANCHOR STRAP (INTEGRALLY WELDED)	C-C	C3.20	PT	10/25/00	200-11IPT-007	ACCEPT
02-071-1700-F	ANCHOR STRAP	F-A	F1.20B	VT-3	10/17/00	200-11IVT-004	ACCEPT
02-071-1700-1	ANCHOR STRAP (INTEGRALLY WELDED)	C-C	C3.20	PT	10/21/00	200-11IPT-004	ACCEPT
02-075-036	FLANGE-TO-PRIMARY WATERBOX	C-A	C1.10	UT	10/24/00	200-11IUT-014	ACCEPT
02-075-037	TUBESHEET-TO-PRIMARY WATERBOX	C-A	C1.30	UT	10/24/00	200-11IUT-014	ACCEPT
02-075-042	REINFORCING RING-TO-NOZZLE WELD	С-В	C2.31	PT	10/24/00	200-111PT-006	ACCEPT
02-075-043	REINFORCING RING-TO-SHELL WELD	C-B	C2.31	МТ	10/24/00	200-11IMT-007	ACCEPT
02-080-006	HEAD CIRCUMFERENTIAL WELD	C-A	C1.20	UT	10/26/00	200-11IUT-016	ACCEPT
02-080-007	HEAD CIRCUMFERENTIAL WELD	C-A	C1.20	UT	10/26/20	200-11IUT-016	ACCEPT
02-080-008	TUBESHEET-TO-SHELL WELD	C-A	C1.30	UT	10/26/20	200-11IUT-016	ACCEPT
02-080-009	TUBESHEET-TO-SHELL WELD	C-A	C1.30	UT	10/26/20	200-11IUT-016	ACCEPT
02-080-022-F	SUPPORT, CRADLE BANDS - UPPER	F-A	F1.40B	VT-3	10/26/00	200-11VT-027	ACCEPT
02-080-023-F	SUPPORT, CRADLE BANDS - LOWER	F-A	F1.40B	VT-3	10/26/00	200-11VT-027	ACCEPT
02-510-001	CONTAINMENT VESSEL	E-A	E1.11	GEN VIS	10/10/00	200-11IVT-007	ACCEPT
02-542-01	FLOOR TO LINER PLATE SEAL	E-D	E5.30		10/10/00	200-11IVT-008	ACCEPT
)2-530-A04	SHELL LINER PLATE	E-C	E4.12	UT	10/28/00	200-11IUT-018	ACCEPT
02-530-A13	SHELL LINER PLATE	E-C	E4.12	UT	10/28/00	200-11IUT-018	ACCEPT



ISI ID NO.	Area Description	Cat	ltem	Method	Exam. Date	Report No	Results
02-530-D03	SHELL LINER PLATE	E-C	E4.12	UT	10/28/00	200-11IUT-018	ACCEPT

UNIT-2 CYCLE-11, SYSTEM PRESSURE TESTS

<u>System</u>	Procedure	Completion Date
1) Reactor Coolant	SO23-XVII-3.1.1	11/13/2000
2) Chemical & Volume Control	SO23-XVII-3.2.1	11/13/2000
3) Main Steam	SO23-XVII-3.2.2	08/07/2000
4) Main & Aux. Feed Water	SO23-XVII-3.2.3	11/02/2000
5) Safety Injection	SO23-XVII-3.2.4	10/16/2000
6) Containment Spray	SO23-XVII-3.2.5	10/30/2000

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Unit

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TYPES B AND C LEAKAGE RATES 11 November 2000

Admin Limil SCCM Measured Min Path Measured Min Path Max Path Valve/Seat Leakage AF Date Pen # Date Leakage AL Leakage AF Leakage AL Leakage AL HV0510 1000 1/4/99 (U2C10) 4 2/3/99 (U2C10) 11 HV0511 1000 10/13/00 (U2C11) 3 10/13/00 (U2C11) 3 3 3 11 0 TV9267 2000 10/13/00 (U2C11) 479 10/13/00 (U2C11) 479 HV9205 2100 1/7/99 (U2C10) 17 2/5/99 (U2C10) 523 17 479 523 NOTE HV0508 1000 10/17/00 (U2C11) 20 10/17/00 (U2C11) 20 HV0517 1000 10/17/00 (U2C11) 20 10/17/00 (U2C11) 20 HV0509 1000 1/4/99 (U2C10) 3 2/16/99 (U2C10) 2 3 2 40 6 HV9334 20 10/11/00 (U2C11) 1000 10/8/00 (U2C11) 20 S2(3)1204MU099 1000 10/8/00 (U2C11) 20 10/8/00 (U2C11) 20 20 20 20 HV9217 1000 10/10/00 (U2C11) 20 10/10/00 (U2C11) 20 HV9218 10/10/00 (U2C11) 1000 20 10/10/00 (U2C11) 20 20 20 20 8 S2(3)1208MU122 1000 10/17/00 (U2C11) 20 10/17/00 (U2C11) 20 HV9200 10/17/00 (U2C11) 1000 55 10/17/00 (U2C11) 55 20 20 55 10B S2(3)1500MU038 100 10/10/00 (U2C11) 1 10/10/00 (U2C11) 1 S2(3)1500MU039 100 10/10/00 (U2C11) 1 10/10/00 (U2C11) 1 1 1 1 11 S2(3)1415MU236 3000 10/8/00 (U2C11) 4626 10/11/00 (U2C11) 645 HV7911 1000 10/8/00 (U2C11) 23 10/8/00 (U2C11) 23 23 23 645 12 HV0512 2000 10/16/00 (U2C11) 20 10/30/00 (U2C11) 20 HV0513 2000 10/7/00 (U2C11) 20 10/16/00 (U2C11) 20 20 20 20

NOTE: For Pen 4, the sum of the leakage for HV0508 and HV0517 is the inside leakage while the leakage for HV0509 is the outside leakage.

ATTACHMENT 2

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TYPES B AND C LEAKAGE RATES (CONTINUED) 11 November 2000

Unit 2

		Admin Limil		Measured		Measured	Min Path	Min Path	Max Path
Pen #	Valve/Seal	SCCM	Date	Leakage AF	Date	Leakage AL	Leakage AF	Leakage AL	Leakage AL
13	HV5803	2000	10/9/00 (U2C11)	20	10/8/00 (U2C11)	20			
	HV5804	2000	10/8/00 (U2C11)	20	10/8/00 (U2C11)	20	20	20	20
14	SA2301MU061(U2)	2000	10/14/00 (U2C11)	8	10/14/00 (U2C11)				
	SA2301MU095 (U3)	2000	N/A	N/A	N/A	N/A			
	HV5686	2000	10/14/00 (U2C11)	891	10/14/00 (U2C11)	891	8	8	891
15	S2(3)1220MX015 FLANGE DOUBLE								
	GASKET	1000	10/9/00 (U2C11)	20	10/28/00 (U2C11)	20	10	10	20
	S2(3)1220MX015A DOUBLE BELLOWS	2000	10/24/00 (U2C11)	87	10/24/00 (U2C11)	87	44	44	87
16C	HV7805	1000	10/16/00 (U2C11)	20	10/16/00 (U2C11)	20			
	HV7810	1000	10/16/00 (U2C11)	1 1	10/16/00 (U2C11)	1	1	1	20
18	HV9823 HV9821 TEST A HV9948								
	HV9949	10000	9/21/00 (Mode 1)	17099	10/31/00 (U2C11)	0			
	HV9949 TEST B		10/30/00 (U2C11)	450	10/30/00 (U2C11)	450	8550	0	0
19	HV9824 HV9825 TEST A HV9950							`	
	HV9951	10000	8/2/00 (Mode 1)	1499	11/1/00 (U2C11)	0			
	HV9950 TEST B		10/31/00 (U2C11)	110	10/31/00 (U2C11)	110	750	0	0

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Unit

TYPES B AND C LEAKAGE RATES (CONTINUED) 11 November 2000

Admin Limit Measured Measured Min Path Min Path Max Path Valve/Seal Pen # SCCM Date Leakage AF Date Leakage AL Leakage AF Leakage AL Leakage AL 20 S2(3)1901MU573 1000 10/10/00 (U2C11) 20 10/10/00 (U2C11) 20 S2(3)1901MU321 1000 10/10/00 (U2C11) 20 10/10/00 (U2C11) 20 20 20 20 21 S2(3)2423MU017 2000 10/10/00 (U2C11) 130287 10/27/00 (U2C11) 20 S2(3)2423MU055 2000 10/10/00 (U2C11) 861 10/10/00 (U2C11) 861 861 20 861 22 S2(3)2417MU016 1500 10/9/00 (U2C11) 20 10/9/00 (U2C11) 20 HV5388 1500 10/9/00 (U2C11) 1375 10/9/00 (U2C11) 1375 20 20 1375 23A S2(3)2418MU002 2000 10/11/00 (U2C11) 605 10/15/00 (U2C11) 55 HV5437 1000 10/11/00 (U2C11) 20 10/11/00 (U2C11) 20 20 20 55 S2(3)1220MX023B 23B FLANGES 100 9/25/00 (Mode 1) 20 9/25/00 (Mode 1) 20 10 10 20 23C S2(3)1220MX023C FLANGES 100 9/25/00 (Mode 1) 20 9/25/00 (Mode 1) 20 10 10 20 25 S2(3)1219MU100 1000 10/10/00 (U2C11) 20 10/10/00 (U2C11) 20 S2(3)1219MU101 1000 10/10/00 (U2C11) 20 10/10/00 (U2C11) 20 20 20 20 26 HV7512 2000 10/8/00 (U2C11) 20 10/11/00 (U2C11) 10 HV7513 2000 10/8/00 (U2C11) 20 10/8/00 (U2C11) 20 20 10 20 27C HV7806 1000 10/16/00 (U2C11) 2 10/16/00 (U2C11) 2 HV7811 1000 10/16/00 (U2C11) 2 10/16/00 (U2C11) 2 2 2 2 30A HV7802 1000 10/15/00 (U2C11) 80 10/15/00 (U2C11) 80 HV7803 1000 10/15/00 (U2C11) 21 10/15/00 (U2C11) 21 21 21 80 30B HV7801 1000 10/15/00 (U2C11) 20 10/15/00 (U2C11) 20 HV7800 & HV7816 2000 10/15/00 (U2C11) 20 10/15/00 (U2C11) 20 20 20 20

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TYPES B AND C LEAKAGE BATES (CONTINUED) 11 November 2000

Unit 2

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								01	<u>د</u>
Pen #	Valve/Seal	Admin Limit	Date	Measured Leakage AF	Date	Measured	Min Path Leakage AF	Min Path Leakage AL	Max Path
30C NOTE	HV0516		8/23/00(Mode 1)		8/23/00(Mode 1)	216		Leanaye AL	Leakaye AL
	HV0514		8/23/00(Mode 1)		8/23/00(Mode 1)	150			
	HV0515		8/23/00(Mode 1)			1			
31	HV9946		10/18/00 (U2C11)		8/23/00(Mode 1) 10/25/00 (U2C11)	30	30	30	366
	HCV9945		10/18/00 (U2C11)		10/18/00 (U2C11)	125	20		105
34	S2(3)1220MX034 ILRT CONNECTION FLANGES		9/26/00 (Mode 1)			20		20	
42	HV6223		10/9/00 (U2C11)		11/11/00 (U2C11)	20		10	20
	HV6211		1/5/99 (U2C10)		2/5/99 (U2C10)	0	1	0	0
43	HV6236		10/9/00 (U2C11)		10/17/00 (U2C11)	8			×
	HV6216	3000	10/9/00 (U2C11)		10/9/00 (U2C11)	58	1 o	8	58
45	HV9900 & HV9920	3000	10/14/00 (U2C11)		10/21/00 (U2C11)	305		153	305
46	HV9971 & HV9921	3000	1/13/99 (U2C10)		1/28/99 (U2C10)	182		91	182
47	HV7258	2000	10/9/00 (U2C11)		10/13/00 (U2C11)	132			
	HV7259	2000	10/9/00 (U2C11)	170	10/9/00 (U2C11)	170	75	132	170
67	S2(3)1204MU157	2000	1/7/99 (U2C10)	63	1/7/99 (U2C10)	63			
	HV9434	2000	1/7/99 (U2C10)	28	1/7/99 (U2C10)	28	28	28	63
68	S2(3)1201MU129	1000	1/14/99 (U2C10)	73	1/14/99 (U2C10)	73			
	S2(3)1208MU130	1000	1/14/99 (U2C10)	0	1/25/99 (U2C10)	0	0	0	73
70	S2(3)2423MU1563	2000	10/10/00 (U2C11)	20	10/10/00 (U2C11)	20			
	S2(3)2423MU1564	2000	10/10/00 (U2C11)	20	10/10/00 (U2C11)	20	20	20	20
71	S2(3)1204MU158	2000	2/4/99 (U2C10)		2/4/99 (U2C10)	71			
	HV9420	2000	10/18/00 (U2C11)	98	10/20/00 (U2C11)	97	71	71	97
74	HV9917	1000	1/18/99 (U2C10)	60	2/10/99 (U2C10)	17			
	HCV9918	1000	10/10/00 (U2C11)	76	10/10/00 (U2C11)	76	60	17	76

NOTE: For Pen 30C, the sum of the leakage for HV0514 and HV0516 is the inside leakage while the leakage for HV0515 is the outside leakage.

ATTACHMENT 2

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Unit

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TYPES B AND C LEAKAGE RATES (CONTINUED) 11 November 2000

Admin Limit Measured Measured Min Path Min Path Max Path Pen # Valve/Seal SCCM Date Leakage AL Leakage AF Date Leakage AF Leakage AL Leakage AL 77 1945 10/31/00 (U2C11) S2(3)2418MU108 2000 10/13/00 (U2C11 1337 HV5434 1000 10/13/00 (U2C11) 465 10/13/00 (U2C11) 465 465 465 1337 L309 ELEC PEN PANEL 2000 9/27/00 (Mode 1) 0 9/27/00 (Mode 1) ۵ 0 0 0 L310 ELEC PEN PANEL 1000 9/27/00 (Mode 1) 80 9/27/00 (Mode 1) 80 80 80 80 L311 ELEC PEN PANEL 1000 9/27/00 (Mode 1) 8 9/27/00 (Mode 1) 8 8 8 8 L312 ELEC PEN PANE 2000 9/27/00 (Mode 1) 0 9/27/00 (Mode 1) 0 0 0 0 C501 EQUIPMENT HATCH DOUBLE GASKET 500 10/8/00 (U2C11) 20 11/11/00 (U2C11) 20 10 10 20 C406 PERSONNEL LOCK DOORS AND SEALS 10000 10/5/00 (Mode 1) 247 10/30/00 (U2C11) 3321 124 1661 3321 C203 EMERGENCY ESCAPE LOCK DOORS/SEALS 10000 10/5/00 (Mode 1) 3801 10/5/00 (Mode 1) 3801 1901 1901 3801

TOTAL RECORDED LEAKAGE (SCCM)

Acceptance Criteria < 130.287 sccm (0.6 La)

PERFORMED BY:

Mucha APPROVED BY: Supervisor or Designee

Note 1: AF Min Path Leakage Rate is outage related. Failure to meet limit of less than or equal to 0.6 La may be reportable.

Note 2: AL Max Path Leakage Rate is outage related. Must be less than 0.6 La prior to Mode 4 entry.

Note 3: AL Min Path Leakage Rate is applicable when containment intergrity is required. Must be less than 0.6 La. Failure to meet this limit may result in plant shutdown.

COMMENTS This is to document the total containment LLRT leakage for U2C11 Mode 4 entry, which is forecast for 11/12/00.

Unit in Mode 5, AL Max Path Leakage applicable for impending Mode 4 entry.

AL Max Path at 14988 sccm = 6.9% of La, acceptable for Mode 4 entry.

U2C10 = Cycle 10 Refueling Outage: U2C11 = Cycle 11 Refueling Outage

ARs 001000398, 000300342, and 001000572 documented results exceeding admin limits for Pens 11, 18 and 21.

ATTACHMENT 2

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Nac: Actual Unide 4 entry on 11/12/00

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@ 1813.

Date

% of La

14368

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NUCLEAR ORGANIZATION UNITS 2 AND 3

ENGINEERING PROCEDURE REVISION 15 ATTACHMENT 3

UNIT

SO23-V-3.13 PAGE 26 OF 26

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WATER COLLECTION TEST RESULTS Date: 11 November 2000

	SPECIAL TYPE C LEAK RATE TEST FOR THOSE	Admin		AF	1	AL
Pen Number	VALVES WATER-COVERED FOR 30 DAYS POST-	Limit		Liquid		Liquid
52	ACCIDENT 10 CFR 50, APPENDIX J III	SCCM	Date	Leakage	Date	Leakage
52	S2(3)1206MU004	3000	10/24/00(U2C11)	0	10/24/00(U2C11)	0
	HV9367	3000	10/24/00(U2C11)	25	10/24/00(U2C11)	7
53	S2(3)1206MU006		10/17/00(U2C11)		10/23/00(U2C11)	4
	HV9368	3000	10/17/00(U2C11)	7	10/23/00(U2C11)	6
56	HV6366	3000	12/29/98(Mode 1)		2/12/99(U2C10)	0
57	HV6372		12/22/98(Mode 1)		1/14/99(U2C10)	0
58	HV6368					
59	HV6370		12/22/98(Mode 1)		2/16/99(U2C10)	379
60	HV6369		12/29/98(Mode 1)		2/12/99(U2C10)	2
61	HV6371		12/22/98(Mode 1)		2/16/99(U2C10)	68
62			12/29/98(Mode 1)		2/3/99(U2C10)	0
63	HV6367	3000	12/29/98(Mode 1)	4	2/9/99(U2C10)	4
	HV6373	3000	12/22/98(Mode 1)	0	1/14/99(U2C10)	0

PERFORMED BY:

00 GMA Norloo iature ß Supervisor or Designer

APPROVED BY:

COMMENTS <u>Results updated to reflect tests performed in Cycle 11 refueling outage.</u> U2C10 = Cycle 10 refueling outage. U2C11 = Cycle 11 refueling outage.

ATTACHMENT 3

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<u>10 ATTACHMENT-2</u>

FORM NIS-2 OWNER'S REPORTS FOR

REPAIRS OR REPLACEMENTS

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS

As Required by the Provisions of the ASME Code Section XI

1. Owner:	Southern California Edison Company 2244 Walnut Grove Avenue	Unit: 2 MO: 00011025000
	Rosemead, California 91770	Rspec: GEN-106 R2
2. Plant:	San Onofre Nuclear Generating Station	PID: 40111A N5: S2-1201-3
2. 1 M	San Clemente, California 92674-012	NJ. 52-1201-5
3. Work Pe	rformed by: Southern California Edison Company	Type Code Symbol Stamp: N/A
4. Identifica	ation of System: Reactor Coolant	Authorization No:N/AExpiration Date:N/A
5. (a) Appli	icable Construction Code: ASME Section III. Class 1, 19	71 Ed., W. 71 Add. (Pump), 1980 Ed., S. 82 Add. (Seal
	Cartridge), Code Cases: None	

5. (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Editon. No Addenda</u>

6. Identification of Components Repaired or Replaced and Replacement Component

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
36" Reactor Coolant Pump	Byron Jackson	701-N-0559	N/A	S21201MP002	1978		Yes
Mechanical Seal Cartridge	Bingham- Willamette	1714880-5	1165	SO23-CART-#15	1986	Replaced	Yes
Mechanical Seal Cartridge	Bingham- Willamette	1714880-2	1171	RSO-3476-86, SO23- CART-#21	1986	Replacement	Yes

7. Description of Work:

The RCP seal cartridge was replaced with a spare which had been rebuilt in accordance with the SONGS rebuild program. The removed seal cartridge was placed into the SONGS rebuild program to be rebuilt under MO 00110770.

8. Tests Conducted: System Leakage Pressure Test

Pressure: NOP

Temp: NOT

VT-2 performed per Procedure SO23-XVII-3.1.

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x11 in. (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

FORM NIS-2 (back)

9. Remarks: None.

(Applicable Manufacturer's Data Reports are available on-site)					
CERTIFICATE OF COMPLIANCE					
We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI.					
Type Code Symbol Stamp: N/A					
Certificate of Authorizaton No: N/A Expiration Date: N/A					
Signed: <u>Supervising ASME Codes Engineer</u> Date: <u>11/23/00</u> Owner or Owner's Designee, Title					
CERTIFICATE OF INSPECTION					
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston. Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>OI/26/00</u> to <u>II/26/00</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.					
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.					
Inspector's Signature/ Commissions /862 California National Board, State, Province, and Endorsements					
Date <u>MOU, 29, 2000</u>					

	FORM NIS-2 OWNER'S REPORT FOR As Required by the Provisions of the AS	REPAIRS OR REPLA	ACEMENTS	
1. Owner:	Southern California Edison Company 2244 Walnut Grove Avenue Rosemead, California 91770	Unit: 2 CWO: 00011242000 FCN: F20914M		
2. Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-012	Rspec: 006-00 PID: N/A N5: S2-1301-1		
3. Work Pe	rformed by: Southern California Edison Company	Type Code Symbol Star	np: N/A	
4. Identification of System: Main Steam Authorization No: N/A Expiration Date: N/A				
5. (a) Appli	cable Construction Code: <u>ASME Section III, NF, Class</u> <u>None</u>	2, 1974 Edition, Summer 19	74 Addenda: Code Case:	

5. (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Editon</u>, No Addenda

6. Identification of Components Repaired or Replaced and Replacement Component

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
10-6" Mechanical Snubber	Pacific Scientific	6435	N/A	S2-ST-015-H-019	1979	Permanently Deleted	No

7. Description of Work:

The mechanical snubber was no longer required per the latest pipe stress calculation M-1301-015-2A (PSG-45) and was permanently removed in accordance with FCN F20914M and Repair Specification 006-00. The removed snubber was placed into the snubber rebuild program.

8. Tests Conducted: N/A

Pressure: N/A

Temp: <u>N/A</u>

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x11 in, (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

FORM NIS-2 (back)

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9. Remarks: None.

(Аррісар	(Applicable Manufacturer's Data Reports are available on-site)					
CERTIFICATE OF COMPLIANCE						
We certify that the statements made in the report are correct and this deletion conforms to the rules of the ASME Code, Section XI.						
Type Code Symbol Stamp: N/A						
Certificate of Authorizaton No: N/A	Expiration Date: N/A					
Signed:	Supervising ASME Codes Engineer Date: 10/17/00					
C	CERTIFICATE OF INSPECTION					
the State or Province of <u>California</u> , and emp <u>Johnston, Rhode Island</u> have inspected the	ctive measures described in this Owner's Report in accordance with the					
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.						
Inspector's Signature	Commissions 1862 California National Board, State, Province, and Endorsements					
Date 017.17, 2000						

MO: 00011242000

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS

As Required by the Provisions of the ASME Code Section XI

1. Owner:	Southern California Edison Company	Unit: 2	
	2244 Walnut Grove Avenue	MO: 00020734000	
	Rosemead, California 91770	FCN: F20891M	
		Rspec: 013-00	
2. Plant:	San Onofre Nuclear Generating Station	PID: 40130 (C4)	
	San Clemente, California 92674-012	N5: S2-1201-6	
3. Work Pe	erformed by: Southern California Edison Company	Type Code Symbol Sta	amp: N/A
		Authorization No:	N/A
4. Identific	ation of System: Reactor Coolant	Expiration Date:	N/A
5. (a) Appl	icable Construction Code ASME Section III, NF, Class	2, 1974 Edition, S'74 Adde	nda; Code Case: None

5. (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Editon, No Addenda

6. Identification of Components Repaired or Replaced and Replacement Component

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
1/4-4" Mechanical Snubber	Pacific Scientific	39331	N/A	S2-RC-140-H-00M	1991	Permanently Deleted	Yes

7. Description of Work:

The mechanical snubber was no longer required per the latest pipe stress calculation P-450-1.061/ICCN C-8 and was permanently removed in accordance with FCN F20891M. The attachment hardware was left in place and the removed snubber was placed into the snubber rebuild program.

8. Tests Conducted: N/A

Pressure: N/A

Temp: N/A

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x 11 in., (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

FORM NIS	-2 (back)
9. Remarks: None.	an a
a da anti-	· · · · · · · · · · · · · · · · · · ·
(Appleable Manufacturer's Data R	eports are available on-site)
CERTIFICATE OF	COMPLIANCE
We certify that the statements made in the report are correct	and this deletion conforms to the rules
of the ASME Code, Section XI.	repair or replacement
Type Code Symbol Stamp: N/A	
Certificate of Authorizaton No: N/A	Expiration Date: N/A
Signed: <u>UMA IL</u> Supervis Owner or Owner's Designee, Title	ing ASME Codes Engineer Date: 116/00
I, the undersigned holding a valid commission issued by the the State or Province of <u>California</u> , and employed by <u>Factor</u> <u>Johnston, Rhode Island</u> have inspected the components de <u>6/13/00</u> to <u>11/6/00</u> , and st has performed examinations and taken corrective measures requirements of the ASME Code, Section XI. By signing this certificate, neither the Inspector nor his emp	scribed in this Owner's Report during the period tate that to the best of my knowledge and belief, the Owner described in this Owner's Report in accordance with the loyer makes any warranty, expressed or implied, concerning Owner's Report. Furthermore, neither the Inspector nor his my or property damage or a loss of any kind arising from or
Inspector's Signatury	National Board, State, Province, and Endorsements
Date Mar, 10, 2000	

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FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS

As Required by the Provisions of the ASME Code Section XI

1.	Owner:	Southern California Edison Company 2244 Walnut Grove Avenue		N 00021582000 (S : 007-00	(OG-00-001)	
		Rosemead, California 91770	PID:			
2.	Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-012	N5:	N/A	· .	
3.	Work Perf	formed by: Southern California Edison Company		Code Symbol Stam rization No:	np: N/A N/A	
		tion of System: N/A - Spare	•	ation Date:	N/A	
5.	(a) Applic	able Construction Code ASME Section III, Class 2 (NC)	<u>. 1974 E</u>	dition, Summer 19	974 Addenda; Code Cas	se: None

5. (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Editon. No Addenda</u>

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
2" x 2" Drag Valve	Control Components	36995-1-3	N/A	RSO-2595-85 (original receiving inspection)	1985		Yes
Spindle/Plug Assembly	Control Components	136008-1	N/A	RSO-1407-00, SB637- NO7718	2000	Replacement	Yes

7. Description of Work:

A spare valve from SONGS warehouse was shipped back to the OEM for installation of a new design spindle/plug. The vendor's work was controlled by (hard copy) ASME Section XI Traveler #SOG-00-001, Rev. 0. The receipt inspection of the refurbished valve is documented on RSO-1407-00. Attachments: NPV-1 for valve, N-2 for replacement spindle/plug.

8. Tests Conducted: <u>N/A</u>

Pressure: N/A

Temp: N/A

* Pressure Test and VT-2 inspection will be performed after installation of valve in plant.

Note: Supplemental sheets in the form of first, skewhes, or drawings may be used provided (1) size is 8 1/2 in. x11 in. (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

FORM NIS-2 (back)

9. Remarks: None.

(Applicable Manufacturer's Data Reports are available on-site)
CERTIFICATE OF COMPLIANCE
We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI. repair or replacement
Type Code Symbol Stamp: N/A
Certificate of Authorizaton No: N/A Expiration Date: N/A
Signed: Cohert (1. Searco Supervising ASME Codes Engineer Date: 9/12/2000 Owner or Owner's Designee, Title
CERTIFICATE OF INSPECTION I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>Johnston of California</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.
Commissions 1862 California Inspector's Signature National Board, State, Province, and Endorsements
Date 13, 2000_

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS

As Required by the Provisions of the ASME Code Section XI

1. Owner:	Southern California Edison Company	Unit: 2	
	2244 Walnut Grove Avenue	MO: 00022123000	
	Rosemead, California 91770	FCN: F21036M	
		Rspec: 014-00	
2. Plant:	San Onofre Nuclear Generating Station	PID: 40111 (D1)	
	San Clemente, California 92674-012	N5: S2-1201-3-1	
3. Work Pe	rformed by: Southern California Edison Company	Type Code Symbol Star	np: N/A
		Authorization No:	N/A
4. Identific	ation of System: Reactor Coolant	Expiration Date:	N/A
5. (a) Appli	icable Construction Code ASME Section III, NF. Class	1, 1974 Edition, S'74 Adden	da: Code Case: None

5. (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Editon. No Addenda

6. Identification of Components Repaired or Replaced and Replacement Component

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
1/2-2.5" Mechanical Snubber	Pacific Scientific	20570	N/A	S2-RC-031-H-001	1991	Permanently Deleted	Yes

7. Description of Work:

The mechanical snubber was no longer required per the latest pipe stress calculation P-450-1.061/ICCN C-9 and was permanently removed in accordance with FCN F21036M. The snubber, load pins, pipe support tee and one rear bracket were removed. One rear bracket was left in place and the removed snubber was placed into the snubber rebuild program.

8. Tests Conducted: N/A

Pressure: N/A

Temp: <u>N/A</u>

Note: Supplemental shoots in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x 11 in., (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

FORM NIS-2 (back)

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9. Remarks: None.

MO: 00022123000 _

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(Applicable Manufacturer's Data Reports are available on-sne)
CERTIFICATE OF COMPLIANCE
We certify that the statements made in the report are correct and this deletion conforms to the rules
of the ASME Code, Section XI.
Type Code Symbol Stamp: N/A
Certificate of Authorizaton No: N/A - Expiration Date: N/A
Signed: <u>Dimenter</u> Supervising ASME Codes Engineer Date: <u>11/6/00</u>
Signed: Supervising ASME Codes Engineer Date.
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors are the State or Province of <u>California</u> , and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>Iohoremathic Company</u> to <u>III/Component</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.
Inspector's Signature Commissions 1862 California National Board, State, Province, and Endorsements
Date 1101, 6, 2000

_		As Required by the Provisions of the ASME Co	ode Section XI	
1.	Owner:	Southern California Edison Company 2244 Walnut Grove Avenue	Unit: - 2 MO: 00022516000	
		Rosemead, California 91770	FCN: F15530M	
2.	Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-012	Rspec: 177-98 R1 PID: 40114D (F7) N5: S2-1204-10	
3.	Work Per	formed by: Southern California Edison Company	Type Code Symbol Stam	ip: N/A
4.	Identificat	tion of System: Safety Injection and Shutdown Cooling	Authorization No: Expiration Date:	N/A N/A
5.	(a) Applic	able Construction Code ASME Section III, Class 1, 1971	Edition, S'73 Addenda; C	ode Case: None

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS

5. (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Editon, No Addenda

6. Identification of Components Repaired or Replaced and Replacement Component

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
2" 1513# Globe Valve	Kerotest	OB6-17	N/A	S21204MU068	1978		Yes
Disc	BW/IP International	(324506) S/N 1	N/A	RSO-0489-97, SA479 316	1997	Replacement	Yes
Bonnet .	BW/IP International	(324508) Ht. #43606	N/A	RSO-0489-97, SA479 316	N/A	Replacement	No

7. Description of Work:

The valve currently installed in plant position S21204MU068 was modified by replacing the existing diaphragm seal with a one-piece stem/disc assembly and replacing the bonnet in accordance with Repair Specification 177-98 Rev. 1. Reference: FCN F15530M.

8. Tests Conducted: System Functional Pressure Test P. See: AR 960600529-05

Pressure: N/A

Temp: N/A

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x11 in. (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

9. Remarks: None.

(Applicable Manufacturer's Data Reports are available on-site)					
CERTIFICATE OF COMPLIANCE					
We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI.					
Type Code Symbol Stamp: N/A					
Certificate of Authorizaton No: N/A Expiration Date: N/A					
Signed:- <u>Al Mula</u> <u>Supervising ASME Codes Engineer</u> Date: <u>-12/18/00</u> Owner or Owner's Designee, Title					
CERTIFICATE OF INSPECTION					
L the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u></u>					
the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.					
Date <u>Jules. 19, 2000</u>					

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FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS

As Required by the Provisions of the ASME Code Section XI

1. Owner:	Southern California Edison Company	Unit: N	
1. 0001000	2244 Walnut Grove Avenue	MO: 00040182000	
	Rosemead, California 91770	Rspec: ASME SECTIC	N XI DATA-0460
		PID: N/A	
2. Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-012	N5: N/A	
		Type Code Symbol Star	mp: N/A
3. Work Performed by: Southern California Edison Company		Authorization No:	N/A
4. Identification of System: N/A - Spare		Expiration Date:	N/A
5 (a) Ann	licable Construction Code: ASME Section III, Class 2, 1	974 Edition. Summer 1974.	Addenda; Code Case: None

5. (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Editon, No Addenda</u>

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
1 1/2" x 2" Nozzle Type Relief Valve	Crosby Valve & Gage	N59380-00-0012		025-83508-N59380- 00-0012	1985		•Yes
Disc		N91241-44-0067, Ht.# 18100187		RSO-2505-92, part# N91241, Stellite 6B	N/A	Replacement	No

7. Description of Work:

Replaced the valve disc on the spare valve (S/N N59380-00-0012) that was removed from plant position 3PSV9226 under MO 00021309, with an in-kind replacement disc. The spare valve was then bench tested and returned to warehouse stock.

8. Tests Conducted: N/A

Pressure: N/A

Temp: <u>N/A</u>

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x11 in. (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is mumbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

9. Remarks: None.

FORM NIS-2 (back)

(Applicable Manufacturer's Data Reports are available on-site)					
CERTIFICATE OF COMPLIANCE					
We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI.					
Type Code Symbol Stamp: N/A					
Certificate of Authorizaton No: N/A Expiration Date: N/A					
Signed: Supervising ASME Codes Engineer Date: 7/24/00 Owner or Owner's Designee, Title					
CERTIFICATE OF INSPECTION					
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>OS/19/00</u> to <u>O7/29/00</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.					
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.					

inspector's Signature National Board, State, Province, and Endorsements Commissions 4 <u>211, 2000</u>

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	FORM NIS-2 OWNER'S REPORT FOR As Required by the Provisions of the AS		CEMENTS
1. Owner:	Southern California Edison Company 2244 Walnut Grove Avenue	Unit: 2 MO: 00061061000	
	Rosemead, California 91770	FCN: F22586M	
2. Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-012	Rspec: 026-00 PID: 40112D (C7) N5: S2-1201-4	
3. Work Pe	erformed by: Southern California Edison Company	Type Code Symbol Star	-
4. Identific	cation of System: Reactor Coolant	Authorization No: Expiration Date:	N/A N/A
5. (a) Appl	licable Construction Code <u>ASME Section III, Class, NF</u> Case: None	Class 2, 1974 Edition, Sum	mer 1974 Addenda; Code

5. (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Editon, No Addenda

6. Identification of Components Repaired or Replaced and Replacement Component

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
1/4-4" Mechanical Snubber	Pacific Scientific	6401	N/A	S2-RC-017-H-00A	1978	Permanently Deleted	Yes

7. Description of Work:

The mechanical snubber with attachment hardware was no longer required per the latest pipe stress calculation 1511/ICCN C-1 and was permanently removed in accordance with FCN F22586M. The rear brackets also were removed and the removed snubber was placed into the snubber rebuild program.

8. Tests Conducted: N/A

Pressure: N/A

Temp: N/A

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9. Remarks: None.

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(Applicable Manufacturer's Data Reports are available on-site)							
CERTIFICATE OF COMPLIANCE							
We certify that the statements made in the report are correct and this deletion conforms to the rules of the ASME Code, Section XI.							
Type Code Symbol Stamp: N/A							
Certificate of Authorizaton No: N/A Expiration Date: N/A							
Signed: <u>Supervising ASME Codes Engineer</u> Date: <u>10/30/00</u>							
Owner of Owner's Designed, Thie							
CERTIFICATE OF INSPECTION I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> , and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island have inspected the components described in this Owner's Report during the period <u>9/28/00</u> to <u>10/30/00</u> and state that to use cest of my knowledge and usilef, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI. By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection. Understyle California Inspector's Signature Commissions </u>							
Date 017. 30, 2000							

1. Owner:	Southern California Edison Company 2244 Walnut Grove Avenue Rosemead, California 91770	Unit: 2 MO: 00061208000 FCN: F22587M Rspec: 027-00	
2. Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-012	PID: 40112D (C7) N5: S2-1201-4	
	formed by: Southern California Edison Company ation of System: Reactor Coolant	Type Code Symbol Star Authorization No: Expiration Date:	np: N/A N/A N/A
	cable Construction Code ASME Section III, NF, Class	-	da; Code Case: None

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required by the Provisions of the ASME Code Section XI

5. (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Editon, No Addenda

6. Identification of Components Repaired or Replaced and Replacement Component

Name of Component	Name of Manufacturer	Menufacturer Serial No.	National Board No.	Other Identification	Year Built	Replaced or Replacement	ASME Code Stamped Yes/No
/4-4" Mechanical nubber	Pacific Scientific	7272	N/A	S2-RC-017-H-00B	1979	Permanently Deleted	No

7. Description of Work:

The mechanical snubber was no longer required per the latest pipe stress calculation 1511/ICCN C-1 and was permanently removed in accordance with FCN F22587M. The snubber, load pins, pipe support clamp, tee, and angle, and both rear brackets were removed. The removed snubber was placed into the snubber rebuild program.

8. Tests Conducted: N/A

Pressure: N/A

Temp: N/A

9. Remarks: None.

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has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.	(Applicable Manufactura's Disa Reports are available on-dise)
We certify that the statements made in the report are correct and this deletion conforms to the rules of the ASME Code, Section XI. Type Code Symbol Stamp: N/A Certificate of Authorizaton No: N/A Expiration Date: N/A Signed:	CERTIFICATE OF COMPLIANCE
of the ASME Code, Section XI. Type Code Symbol Stamp: N/A Certificate of Authorizaton No: N/A Signed: Supervising ASME Codes Engineer Date: 11/6/00 Owner or Owner's Designee, Title CERTIFICATE OF INSPECTION L the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of California and employed by Factory Mutual Insurance Company of Johnston, Rhode Island have inspected the components described in this Owner's Report during the period Monte State of Transmission and taken corrective measures described in this Owner's Report during the period Signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI. By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with the inspection. Mathematical Commissions	
of the ASME Code, Section XI. Type Code Symbol Stamp: N/A Certificate of Authorizaton No: N/A Signed: Supervising ASME Codes Engineer Date: 11/6/00 Owner or Owner's Designee, Title CERTIFICATE OF INSPECTION L the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of California and employed by Factory Mutual Insurance Company of Johnston, Rhode Island have inspected the components described in this Owner's Report during the period Monte State of Transmission and taken corrective measures described in this Owner's Report during the period Signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI. By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with the inspection. Mathematical Commissions	We certify that the statements made in the report are correct and this deletion conforms to the rules
Type Code Symbol Stamp: N/A Certificate of Authorizaton No: N/A Signod:	
Certificate of Authorizaton No: N/A Expiration Date: N/A Signed:	
Signed:	Type Code Symbol Stamp: N/A
Signed:	Certificate of Authorizaton No: N/A Expiration Date: N/A
Signed	
Owner or Owner's Designee, Title CERTIFICATE OF INSPECTION I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> and employed by <u>Factory Mutual Insurance Company</u> of Johnston, Rhode Island have inspected the components described in this Owner's Report during the period in the period in the component of <u>Original Content</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI. By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection. Without Matter Commissions 14.2 California	
L the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> and employed by <u>Factorv Mutual Insurance Company</u> of Johnston, Rhode Island have inspected the components described in this Owner's Report during the period <u>GIABLOO</u> to <u>11/6/00</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI. By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.	Owner or Owner's Designee, Title
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> and employed by <u>Factorv Mutual Insurance Company</u> of Johnston, Rhode Island have inspected the components described in this Owner's Report during the period <u>GIABLOO</u>	
California Commissions 162 California	the State or Province of <u>California</u> and employed by <u>Factory Mutual Instrance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>ALALOO</u> to <u>11/16/02</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI. By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or
Date MAIL La. 2000	Inspector's Signature Commissions 1662 California National Board, State, Province, and Endorsements

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required by the Provisions of the ASME Code Section XI

1. Owner:	Southern California Edison Company	Unit: A	
	2244 Walnut Grove Avenue	MO: 00071187000	
	Rosemead, California 91770	Rspec: GEN-139 R1	
		PID: N/A	
2. Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-012	N5: N/A	
3 Work De	formed by: Southern California Edison Company	Type Code Symbol Stamp: N/A	
J. WOIKIG	normed by Southern Camorina Edison Company	Authorization No: N/A	
4. Identifica	tion of System: Safety Injection and Shutdown Cooling	Expiration Date: N/A	

5. (a) Applicable Construction Code: ASME Section III, Class 2, 1974 Edition, Summer 1974 Addenda; Code Case: None

5. (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Editon, No Addenda

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
1" x 36" All Thread Stud	Nova Machine Products	Ht.#95369	N/A	RSO-0041-97, SA193 B7	N/A		No

7. Description of Work:

Fabricated (4) bonnet studs to be used as replacement LTop bonnet studs on rebuild MOs 99051280 and 99051790. The studs were cut into (4) 6" lengths from all-thread material, with the required markings being transferred to the cut pieces in accordance with GEN-139 Rev.1.

Temp: N/A

9. Remarks: CR-3005-96 reconciles the replacement studs which were certified to ASME III-2, 1989 Edition, No Addenda.

(Applicable Manufacturer's Data Reports are available on-site)								
CERTIFICATE OF COMPLIANCE								
We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI. repair or replacement								
Type Code Symbol Stamp: N/A								
Certificate of Authorizaton No: N/A Expiration Date: N/A								
Signed: <u>Supervising ASME Codes Engineer</u> Date: <u>9/26/60</u> Owner or Owner's Designee, Title								
CERTIFICATE OF INSPECTION								
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> , and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>OT/27/00</u> to <u>OUD</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI. By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection. <u>Inspector's Signature</u> Commissions <u>I&A2</u> <u>California</u> <u>Inspector's Signature</u>								
Date Sept. 26, 2000								

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FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required by the Provisions of the ASME Code Section XI

1.		ifornia Edison Company Grove Avenue, Rosemead, CA 91770	Sheet 1 of 1 Unit: CWO: FCN:	2 00090209000 F23530G	
2.		Suclear Generating Station c, CA 92674-0128	Repair Spec: P&ID: N-5:	028-00 Rev. 0 40111B (E6) S2-1201-2	
3.		athern California Edison D. Box 128 n Clemente, CA 92674-0128	Type Code Sy Authorization Expiration Da	No:	N/A N/A N/A
4.	Identification of System:	Reactor Coolant (1201)	•		

(a) Applicable Construction Code: ASME Section III, Class 1, 1971 Edition, S'71 Addenda, Code Case: 1361-2

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Edition, No Addenda

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped Yes/No
Pressurizer Heater	Watlow / C.E.	38	N/A	S21201ME613	1980	Replaced	Yes
Pressurizer Heater	Framatome Technologies	037	N/A	RSO-1359-00, Part # 1251084-100	1998	Replacement	Yes

Description of World

5.

7.

A replacement pressurizor beater was installed in plant location S21201ME513 (at pressurizer sleeve G3) in accordance with Repair Specification 023-00 and weld record WR2-00-412. Post weld NDE examination (2PT-040-00) was performed with satisfactory results.

8. Tests Conducted: System Leakage [X] System Functional [] System Inservice [] Hydrostatic [] Pneumatic [] Other [] Pressure: NOP Temp: NOT

(VT-2 performed per Procedure S023-XVII-3.1.1)

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 ½ in. x 11 in., (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's Designee and the AIA.

9. Remarks: None.

(Applicable Manufacturer's Data Reports are available on-site)								
CERTIFICATE OF COMPLIANCE								
We certify that the statements made in the report are correct and this replacement conforms to the rules								
of the ASME Code, Section XI. repair or replacement								
Type Code Symbol Stamp: N/A								
Certificate of Authorizaton No: N/A Expiration Date: N/A								
Signed:								
Owner of Owner's Designee, Title								
CERTIFICATE OF INSPECTION								
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>10/10/00</u> to <u>11/22/00</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI. By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning								
the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.								
Inspector's Signature Commissions 1862 California National Board, State, Province, and Endorsements								
Date M. 22, 2000								

. . . -

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required by the Provisions of the ASME Code Section XI

1.	Owner:		ia Edison Company e Avenue, Rosemead, CA 91770	Sheet 1 of 1 Unit: CWO: FCN:	2 00090615000 F23559G		
2.	Plant:	San Onofre Nucle San Clemente, CA	ar Generating Station 92674-0128	Repair Spec: P&ID: N-5:	029-00 Rev. 0 40111B (E6) S2-1201-2		
3.	Work Per	formed by: Souther P.O. Bo San Cle		Type Code Sy Authorization	No:	N/A N/A	
4.	Identificat	tion of System:	Reactor Coolant (1201)	Expiration Dat	c:	N/A	

(a) Applicable Construction Code: ASME Section III, Class 1, 1971 Edition, S'71 Addenda, Code Case: 1361-2

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Edition, No Addenda

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped Yes/No
Pressurizer Heater	Watlow / C.E.	21	N/A	S21201ME607	1980	Replaced	Yes
Pressurizer Heater	Framatome Technologies	27	N/A	RSO 1810-98-01, Part # 1251084-100	1998	Replacement	Yes

7. Description of Work:

5.

A replacement pressurizer bester was installed in plant location S21201ME607 (at heater sleeve G4) in accordance with Repair Specification 029-00 and weld record WR2-00-415. Post weld NDE examination (2PT-036-00) was performed with satisfactory results.

 Tests Conducted: System Leakage [X] System Functional [] System Inservice [] Hydrostatic [] Pneumatic [] Other [] Pressure: NOP Temp: NOT

(VT-2 performed per Procedure S023-XVII-3.1.1)

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 ½ in. x 11 in., (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's Designee and the AIA.

9. Remarks: None.

(Applicable Manufacturer's Data Reports are available on-site)						
CERTIFICATE OF COMPLIANCE						
We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI.						
Type Code Symbol Stamp: N/A						
Certificate of Authorizaton No: N/A Expiration Date: N/A						
Signed:						
CERTIFICATE OF INSPECTION						
L the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors at the State or Province of <u>California</u> and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>10/10/00</u> to <u>11/24/00</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.						
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.						
Inspector's Signature/ Commissions <u>1862</u> California National Board, State, Province, and Endorsements						
Date Mal. 29, 2000						

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FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required by the Provisions of the ASME Code Section XI

1.	Owner: Southern California Edison Company 2244 Walnut Grove Avenue, Rosemead, CA 91770	Sheet 1 of 1 Unit: 2 CWO: 00090616000 FCN: F23560G	
2.	Plant: San Onofre Nuclear Generating Station San Clemente, CA 92674-0128	Repair Spec: 030-00 Rev. 0 P&ID: 40111B (E6) N-5: S2-1201-2	
3.	Work Performed by: Southern California Edison P.O. Box 128 San Clemente, CA 92674-0128	Type Code Symbol Stamp: Authorization No:	N/A N/A
4.	Identification of System: Reactor Coolant (1201)	Expiration Date:	N/A

Applicable Construction Code: ASME Section III, Class 1, 1971 Edition, S'71 Addenda, Code Case: 1361-2 (a)

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Edition, No Addenda

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of . Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped Yes/No
Pressurizer Heater	Watlow / C.E.	19	N/A	S21201ME608	1980	Replaced	Yes
Pressurizer Heater	Framatome Technologies	29	N/A	RSO 1810-98-01, Part # 1251084-100	1998	Replacement	Yes

7. Description of Work:

A replacement pressurizer heater was installed in plant location S21201ME608 (at heater sleeve D4) in accordance with Repair Specification 030-00 and weld record WR2-00-416. Post weld NDE examination (2PT-037-00) was performed with satisfactory results.

8.

5.

Tests Conducted: System Leakage [X] System Functional [] System Inservice [] Hydrostatic [] Pneumatic [] Other [] Pressure: NOP

(VT-2 performed per Procedure S023-XVII-3.1.1)

Temp: NOT

Note:

Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 ½ in. x 11 in., (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's Designee and the AIA.

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9. Remarks: None.

(Applicable Manufacturer's Data Reports are available on-site)						
CERTIFICATE	OF COMPLIANCE					
We certify that the statements made in the report are corr	ect and this replacement conforms to the rules					
of the ASME Code, Section XI.	· • • • • • • • • • • • • • • • • • • •					
Type Code Symbol Stamp: N/A						
Certificate of Authorizaton No: N/A	Expiration Date: N/A					
Signed: AMaill Super	vising ASME Codes Engineer Date: 11/28/97					
Owner or Owner's Designee, Title						
CERTIFICA	TE OF INSPECTION					
the State or Province of <u>California</u> and employed by <u>F</u> <u>Johnston, Rhode Island</u> have inspected the components <u>10/10/00</u> to <u>11/29/00</u> , and has performed examinations and taken corrective measure requirements of the ASME Code, Section XI.	d state that to the best of my knowledge and belief, the Owner res described in this Owner's Report in accordance with the					
	employer makes any warranty, expressed or implied, concerning his Owner's Report. Furthermore, neither the Inspector nor his injury or property damage or a loss of any kind arising from or					
Inspector's Signature	sions <u>1862</u> <u>California</u> National Board, State, Province, and Endorsements					
Date Mov. 29, 2000	- -					

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required by the Provisions of the ASME Code Section XI

1.	Owner: Southern California Edison 2244 Walnut Grove Avenue		Sheet 1 of 1 Unit: CWO: FCN:	2 00090617000 F23561G	
2.	Plant: San Onofre Nuclear Gener San Clemente, CA 92674-0	•	Repair Spec: P&ID: N-5:	031-00 Rev. 0 40111B (E6) S2-1201-2	
3.	Work Performed by: Southern Califor P.O. Box 123 San Clemente, C		Type Code Sy Authorization	No:	N/A N/A N/A
4.	Identification of System: React	or Coolant (1201)	Expiration Da	.c:	NA

(a) Applicable Construction Code: ASME Section III, Class 1, 1971 Edition, S'71 Addenda, Code Case: 1361-2

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Edition, No Addenda

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped Yes/No
Pressurizer Heater	Watlow / C.E.	11	N/A	S21201ME609	1980	Replaced	Yes
Pressurizer Heater	Framatome Technologies	30	N/A	RSO 1810-98-01, Part # 1251084-100	1998	Replacement	Yes

7. Description of Work:

5.

Note:

A replacement pressurizer heater was installed in plant location S21201ME609 (at heater sleeve C4) in accordance with Repair Specification 031-00 and weld record WR2-00-418. Post weld NDE examination (2PT-038-00) was performed with satisfactory results.

8. Tests Conducted: System Leakage [X] System Functional [] System Inservice [] Hydrostatic [] Pneumatic [] Other [] Pressure: NOP Temp: NOT

(VT-2 performed per Procedure S023-XVII-3.1.1)

Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 ½ in. x 11 in., (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's Designee and the AIA.

9. Remarks: None.

(Applicable Manufacturer's Data Reports are available	: on-site)
CERTIFICATE OF COMPLIA	NCE
We certify that the statements made in the report are correct and this r of the ASME Code, Section XI.	replacement conforms to the rules
Type Code Symbol Stamp: N/A	
Certificate of Authorizaton No: N/A Expire	ation Date: N/A
Signed: <u>Cluber Luc</u> Supervising ASME Owner or Owner's Designee, Title	Codes Engineer Date: 11/28/00
CERTIFICATE OF INSPE	CTIONI
I, the undersigned holding a valid commission issued by the National E the State or Province of <u>California</u> and employed by <u>Factory Mutua</u> <u>Johnston, Rhode Island</u> have inspected the components described in t <u>IO//O/O/</u> to <u>///O/</u> , and state that to has performed examinations and taken corrective measures described in requirements of the ASME Code, Section XI.	this Owner's Report during the period the best of my knowledge and belief, the Owner
By signing this certificate, neither the Inspector nor his employer make the examinations and corrective measures described in this Owner's Re employer shall be liable in any manner for any personal injury or prop connected with this inspection.	eport. Furthermore, neither the inspector nor ms
Inspector's Signature Commissions	California I Board, State, Province, and Endorsements
Date <u>MOU. 29, 2000</u>	

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FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required by the Provisions of the ASME Code Section SI

. (Owner:	Southern Californ	nia Edison Company	Sheet 1 of 1 Unit:	2	
		2244 Walnut Gro	we Avenue, Rosemead, CA 91770	CWO: FCN:	00090618000 F23562G	
F	Plant:	San Onofre Nucl	ear Generating Station	Repair Spec:	032-00 Rev. 0	
		San Clemente, C.	A 92674-0128	P&ID:` N-5:	40111B (E6) S2-1201-2	
v	Work Per	formed by: Southe	rn California Edison	N-J.	32-1201-2	
		P.O. E	30x 128	Type Code Sy	mbol Stamp:	N/A
		San Cl	lemente, CA 92674-0128	Authorization	No:	N/A
			· · · · · · · · · · · · · · · · · · ·	Expiration Da	le:	N/A
T	Identificat	tion of System:	Reactor Coolant (1201)	•		

(a) Applicable Construction Code: ASME Section III, Class 1, 1971 Edition, S'71 Addenda, Code Case: 1361-2

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Edition, No Addenda

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped Yes/No
Pressurizer Heater	Watlow / C.E.	1	N/A	S21201ME611	1980	Replaced	Yes
Pressurizer Heater	Framatome Technologies	32	N/A	RSO 1810-98-01, Part # 1251084-100	1998	Replacement	Yes

Description of Work:

A replacement pressurizer heater was installed in plant location S21201ME611 (at heater sleeve C3) in accordance with Repair Specification 032-00 and weld record WR2-00-420. Post weld NDE examination (2PT-039-00) was performed with satisfactory results.

8.

5.

Tests Conducted: System Leakage [X] System Functional [] System Inservice [] Hydrostatic [] Pneumatic [] Other [] Pressure: NOP Temp: NOT

(VT-2 performed per Procedure S023-XVII-3.1.1)

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 ½ in. x 11 in., (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's Designee and the AIA.

9. Remarks: None.

(Applicable Manufacturer's Data Reports are available on-site)
CERTIFICATE OF COMPLIANCE
We certify that the statements made in the report are correct and this replacement `conforms to the rules of the ASME Code, Section XI. repair or replacement
Type Code Symbol Stamp: N/A
Certificate of Authorizaton No: N/A Expiration Date: N/A
Signed:
CERTIFICATE OF INSPECTION
L the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> , and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>10/10/100</u> to <u>11/29/00</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.
Inspector's Signature Commissions 1862 California National Board, State, Province, and Endorsements
Date <u>MOU.29, 2000</u>

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FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS

As Required by the Provisions of the ASME Code Section XI

1	Owner:	Southern California Edison Company	Unit:	2			
1.	Owner.	2244 Walnut Grove Avenue	•	00101151000			
		Rosemead, California 91770	Rspec	: ASME SECTION	XI DATA-0125		
			PID:	4011A			
2.	Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-012	N5:	S2-1201-3			
-			Type	Code Symbol Stamp	x N/A		
3.	Work Per	formed by: Southern California Edison Company	Autho	vrization No:	N/A		
4.	Identificat	tion of System: Reactor Coolant	Expira	ation Date:	N/A		
5.	(a) Applic	(a) Applicable Construction Code: ASME Section III, Class 1, 1974 Edition, S'75 Addenda; Code Case: None					

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Editon. No Addenda

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
Hydraulic Snubber (826 KIP)	Paul Munroe Hydraulics	PD 16154-256	N/A	S2-RCP-04-H-001	N/A		No
Snubber Centrol Valve	Paul Munroe Hydraulics	Original	N/A		N/A	Replaced	No
Snubber Control Valve	Paul Munroe Hydraulics	143	N/A	RSO-4968-85 R1, SA564 Tp.630	N/A	Replacement	No

7. Description of Work:

The rod side control valve on hydraulic snubber S2-RCP-04-H-001 (at location S21201MP004) was replaced. The snubber was visually examined (VT-3) after installation of the replacement control valve, with satisfactory results.

8. Tests Conducted: N/A

Pressure: N/A

Temp: <u>N/A</u>

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x11 in., (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

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9. Remarks: None.

(Applicable Manufacturer's [Jats Kickwes's are available on-ane)						
CERTIFICATE OF COMPLIANCE						
We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI.						
of the ASME Code, Section AL						
Type Code Symbol Stamp: N/A						
Certificate of Authorizaton No: N/A Expiration Date: N/A						
Signed: Configuration Supervising ASME Codes Engineer Date: 11/22/06						
Owner or Owner's Designee, Title						
CERTIFICATE OF INSPECTION						
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>JOHNSTON</u> to <u>JI/29/00</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the						
requirements of the ASME Code, Section XI.						
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.						
Commissions 1862 California National Board, State, Province, and Endorsements						
Inspector's Signature National Board, State, Province, and Endorsements						
Date MON, 29, 2000						

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS

As Required by the Provisions of the ASME Code Section XI

1.	Owner:	Southern California Edison Company 2244 Walnut Grove Avenue	Unit: MO:	2 00101229000	
		Rosemead, California 91770	Rspec	: GEN-150	
			PID:	40123A (F6)	
2.	Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-012	N5:	S2-1208-1	
			Type	Code Symbol Stamp:	N/A
3.	Work Per	formed by: Southern California Edison Company			N/A
4.	Identificat	tion of System: Chemical and Volume Control	Expir	ation Date:	N/A
5.	(a) Applic	cable Construction Code: ASME Section III. Class 2. NF.	<u>1974 E</u>	dition. S'74 Addenda:	Code Case: None

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Editon. No Addenda</u>

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Replaced or Replacement	ASME Code Stamped Yes/No
3/4-2.5" Mechanical Snubber	Pacific Scientific	111	N/A	S2-VC-001-H-009E	1988	Replaced	No
3/4-2.5" Mechanical Snubber	Pacific Scientific	100	N/A	RSO-0786-91, P/N 1801033-07	N/A	Replacement	No

7. Description of Work:

The mechanical snubber was replaced with an in-kind replacement. The snubber assembly was visually examined (VT-3) after installation with satisfactory results. The removed snubber was placed into the snubber rebuild program.

8. Tests Conducted: <u>N/A</u>

Pressure: N/A

Temp: <u>N/A</u>

9. Remarks: The replacement snubber was certified to a higher code class ASME III-1 as allowed by ASME III paragraph NCA-2134.

(Applicable Manufacturer's Data Reports are available on-site)
CERTIFICATE OF COMPLIANCE
We certify that the statements made in the report are correct and this replacement conforms to the rules
of the ASME Code, Section XI. repair or replacement
Type Code Symbol Stamp: N/A
Certificate of Authorizaton No: N/A Expiration Date: N/A
Signed: Supervising ASME Codes Engineer Date: 11/22/00 Owner or Owner's Designee, Title
CERTIFICATE OF INSPECTION
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>10/19/00</u> to <u>11/09/00</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.
Inspector's Signature Commissions <u>1262</u> California National Board, State, Province, and Endorsements
Date M.01/, 29, 2000

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FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS

As Required by the Provisions of the ASME Code Section XI

	l. Owner:	Southern California Edison Company 2244 Walnut Grove Avenue	Unit: MO:	2 00101517000	
		Rosemead, California 91770		001001895-06	
			-	40111B (G7)	
2	2. Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-012	N5:	S2-1201-2	
3	8. Work Per	formed by: Southern California Edison Company		Code Symbol Sta	mp: N/A
			Author	rization No:	N/A
4	. Identificat	tion of System: Reactor Coolant	Expira	tion Date:	N/A

5. (a) Applicable Construction Code: ASME Section III, Class 1, 1974 Edition, Summer 1974 Addenda; Code Case: None

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Editon, No Addenda</u>

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Yea r Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
6" Piping	Pullman Inc.	S2-RC-032-001	N/A	S2-1201-ML-032	1978	Repaired	Yes

7. Description of Work:

Machined the gasket seating surface of the piping flange on the inlet side of Pressurizer Safety Valve (2PSV0200), line S2-1201-ML-032. The repair was required to remove gouges and restore the surface per NCR 001001895 and in accordance with Repair Specification 001001895-6. Liquid penentrant examination 2PT-041-00 was performed on the flange surface after machining with satisfactory results.

8. Tests Conducted: N/A

Pressure: N/A

Temp: N/A

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x 11 in, (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

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9. Remarks: None.

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(Appheable Manufacturer's Data Reports are available on-stic)					
CERTI	FICATE OF COMPLIANCE				
We certify that the statements made in the report	t are correct and this repair conforms to the rules				
of the ASME Code, Section XI.	repair or replacement				
Type Code Symbol Stamp: N/A					
Certificate of Authorizaton No: N/A	Expiration Date: N/A				
A.M					
Signed:	Supervising ASME Codes Engineer Date: 11/13/00				
Owner or Owner's Designee, Title					
CER'	TIFICATE OF INSPECTION				
the State or Province of <u>California</u> and employ <u>Johnston, Rhode Island</u> have inspected the corr <u>10/25/00</u> to <u>11/14/00</u> has performed examinations and taken corrective requirements of the ASME Code, Section XI.	nponents described in this Owner's Report during the period , and state that to the best of my knowledge and belief, the Owner e measures described in this Owner's Report in accordance with the				
the examinations and corrective measures described employer shall be liable in any manner for any p connected with this inspection.	nor his employer makes any warranty, expressed or implied, concerning bed in this Owner's Report. Furthermore, neither the Inspector nor his ersonal injury or property damage or a loss of any kind arising from or				
Inspector's Signature	Commissions /SG2 California National Board, State, Province, and Endorsements				
Date M.O.V. 14, 2000					

As Required by the Provisions of the ASME Code Section XI

1.	Owner:	Southern California Edison Company	Unit:	2		
		2244 Walnut Grove Avenue	MO:	00101518000		
		Rosemead, California 91770	Rspec	: 001001895-06		
			PID:	40111B (G5)		
2.	Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-012	N5:	S2-1201-2		
3.	Work Perf	formed by: Southern California Edison Company		Code Symbol Stamp: prization No:	: N/A N/A	
4.	Identificat	ion of System: Reactor Coolant	Expire	ation Date:	N/A	
5.	(a) Applic	able Construction Code: ASME Section III, Class 1, 197	4 Editio	n, Summer 1974 Add	denda: Code Case: 1	None

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Editon, No Addenda</u>

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
6" Piping	Pullman Inc.	S2-RC-033-001	N/A	S2-1201-ML-033	1978	Repaired	Yes

7. Description of Work:

المتعادية والمعادة

Machined the gasket seating surface of the piping flange on the inlet side of Pressurizer Safety Valve (2PSV0201), line S2-1201-ML-033. The repair was required to remove gouges and restore the surface per NCR 001001895 and in accordance with Repair Specification 001001895-6. Liquid penentrant examination 2PT-030-00 was performed on the flange surface after machining with satisfactory results.

8. Tests Conducted: <u>N/A</u>

Pressure: <u>N/A</u>

Temp: N/A

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9. Remarks: None.

(Appàcable Man	utácturer's Data Reports are available on-atte)
CERTIF	ICATE OF COMPLIANCE
We certify that the statements made in the report of the ASME Code, Section XI.	are correct and this repair conforms to the rules repair or replacement
Type Code Symbol Stamp: N/A	
Certificate of Authorizaton No: N/A	Expiration Date: N/A
Signed:	Supervising ASME Codes Engineer Date: 11/13/50
CERT	TIFICATE OF INSPECTION
the State or Province of <u>California</u> and employed <u>Johnston, Rhode Island</u> have inspected the com	sued by the National Board of Boiler and Pressure Vessel Inspectors and ed by <u>Factory Mutual Insurance Company</u> of ronents described in this Owner's Report during the period , and state that to the best of my knowledge and belief, the Owner measures described in this Owner's Report in accordance with the
the examinations and corrective measures describ employer shall be liable in any manner for any per connected with this inspection.	for his employer makes any warranty, expressed or implied, concerning and in this Owner's Report. Furthermore, neither the Inspector nor his ersonal injury or property damage or a loss of any kind arising from or commissions $\frac{122}{122}$ California National Board, State, Province, and Endorsements
Date MON, 14, 2000	

FORM NIS-2 OWNER'S REPORT FO	R REPAIRS OR REPLACEMENTS
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As Required by the Provisions of the ASME Code Section XI

1. Owner:	Southern California Edison Company	Unit:	2		
	2244 Walnut Grove Avenue	MO:	00110826000		
	Rosemead, California 91770	Rspec:	GEN-107b		
		PID:	40111A		
2. Plant:	San Onofre Nuclear Generating Station	N5:	S2-1201-3		
	San Clemente, California 92674-012				
3. Work Per	formed by: Southern California Edison Company	Туре С	Code Symbol Sta	mp: N/A	
4 . 7.4		Author	rization No:	N/A	
4. Identifica	ition of System: Reactor Coolant	Expira	tion Date:	N/A	
5. (a) Applicable Construction Code: ASME Section III, Class 1, 1971 Edition, W73 Addenda: Code Case: None					

5. (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Editon. No Addenda</u>

6. Identification of Components Repaired or Replaced and Replacement Component

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
CEDM #61 Vent Valve Assembly	ABB Combustion Engineering	1370-152	N/A	S21104CEDM #61	1978	Repaired	Yes

- 7. Description of Work:

Seal welded the housing nut to the ball seal housing in accordance with weld record WR2-00-490 and NCR 001100873-02, disposition item 1, and Repair Specification Gen-107b due to leakage after venting evolution.

8. Tests Conducted: System Leakage Pressure Test

Pressure: NOP

Temp: <u>N/A</u>

VT-2 performed per Procedure SO23-XVII-3.1.

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x 11 in. (2) information in laters 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

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9. Remarks: None.

(Applicable Manufacturer's Data Reports are available on-site)					
CERTIFICATE OF COMPLIANCE					
We certify that the statements made in the report are correct and this repair conforms to the rules					
of the ASME Code, Section XI. repair of replacement					
Type Code Symbol Stamp: N/A					
Certificate of Authorizaton No: N/A Expiration Date: N/A					
Signed:					
CERTIFICATE OF INSPECTION					
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>IV////OO</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.					
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection. Inspector's Signature Inspector's Signature					
Inspector's Signature National Board, State, Province, and Endorsements					

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FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS

As Required by the Provisions of the ASME Code Section $\boldsymbol{X}\boldsymbol{I}$

1. Owner:	Southern California Edison Company 2244 Walnut Grove Avenue	Unit: MO:	2 00121178000	
	Rosemead, California 91770		ASME SECTION	I XI DATA-0272
		PID:	40123C (C2)	
2. Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-012	N5:	S2-1208-11	
3 Work Per	formed by: Southern California Edison Company		Code Symbol Stam	p: N/A
5. WORLD	Tormed by: Boundary Camornal Edison Company	Autho	rization No:	N/A
4. Identifica	tion of System: Chemical and Volume Control	Expira	ation Date:	N/A

5. (a) Applicable Construction Code: ASME Section III, Class 2. 1971 Edition. S. 73 Addenda; Code Case: None

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Editon. No Addenda

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name of Manufacturer	Manufacturer Serial No	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
1 1/2" 600# Y-Type Globe Valve	Kerotest	YG13-20	N/A	S21208MU106	1978		Yes
Disc	Kerotest	ACN20-5	N/A		1983	Replaced	Yes
Disc	Flowserve	S/N 1, Ht. #8546J	N/A	RSO-1429-00, SA479 316	2000	Replacement	Yes

7. Description of Work:

Replaced the valve disc in the valve located in plant position S21208MU106 (S/N YG13-20) due to leakage.

8. Tests Conducted: <u>System Functional Pressure Test</u> Pressu <u>See: AR 001201054-02</u>

Pressure: NOP

Temp: <u>N/A</u>

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x11 in, (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

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9. Remarks: The replacement disc was certified to a higher code class ASME III-1 as allowed by ASME III paragraph NCA-2134.

(Applicable Manufacturer's Data Reports are available on-site)					
CERTIFICATE OF COMPLIANCE					
We certify that the statements made in the report are correct and this <u>replacement</u> conforms to the rules of the ASME Code, Section XI. repair or replacement					
Type Code Symbol Stamp: N/A					
Certificate of Authorizaton No: N/A Expiration Date: N/A					
Signed: <u>Supervising ASME Codes Engineer</u> Date: <u>01/03/01</u> Owner or Owner's Designee, Title					
CERTIFICATE OF INSPECTION					
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>IQ</u> to <u>D</u> / <u>O</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.					
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection. Inspector's Signature Commissions $B_{6,2}$ California National Board, State, Province, and Endorsements					
Date An. 8, 2001					

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FORM NIS-2	OWNER'S	REPORT FOR	REPAIRS OR	REPLACEMENTS

As Required by the Provisions of the ASME Code Section XI

1. Owner:	Southern California Edison Company 2244 Walnut Grove Avenue	Unit: MO:	2 96030149001				
	Rosemead, California 91770			ON XI DATA-0059, GEN-			
		PID:	40112A (B6)				
2. Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-012	N5:	N/A				
7 World Do	formed her Southern California Edizon Company	Type (Code Symbol Sta	mp: N/A			
5. WORK PE	formed by: Southern California Edison Company	Autho	rization No:	N/A			
4. Identifica	tion of System: Safety Injection and Shutdown Cooling	Expira	ation Date:	N/A			
5. (a) Appli	5. (a) Applicable Construction Code: ASME Section III. Class 2, 1974 Edition, S'75 Addenda; Code Case: None						

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Editon, No Addenda</u>

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
24" Duo Check Valve	TRW Mission	D5805	N/A	S21204MU003	1977		Yes
1 1/4"-8 All Thread Stud	Nova Machine Products	Ht. #93347, Ht. Code X9L	N/A	RSO-0752-95, SA193 Gr. .B7 (CR-2001-93)	N/A	Replacement	No
I 1/4"-8 All Thread Stud	Nova Machine Products	Ht. #94950, Ht. Code DWZ	N/A	RSO-0086-97, SA193 Gr. B7 (CR-2001-93)	N/A	Replacement	No
1 1/4"-8 Heavy Hex Nuts (4)	Nova Machine Products	Ht. #73265 32-2, Ht. Code RYK	N/A	RSO-1059-00, SA194 Gr. 7 (SEE 92-0065 & CR- 2001-93)	N/A	Replacement	No

7. Description of Work:

Replaced the flange bolting during reinstallation of check valve S21204MU003. (3) each 16" length replacement studs were cut from all-thread material with the required markings being transferred to the cut pieces in accordance with Repair Specification GEN-139 Rev. 1. (4) each heavy hex nuts also were replaced with in-kind replacements.

8. Tests Conducted: <u>System Functional Pressure Test</u> Pressu <u>See: AR 991001300-04</u>

Pressure: NOP

Temp: NOT

Note: Supplemental sheets in the form of first, sketches, or drawings may be used provided (1) size is 8 1/2 in. x 1 1 in. (2) information in Items 1 through 6 on this report is included on each sheet. (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

 Remarks: CR-2001-93 reconciles the replacement bolting which was certified to ASME III-2, 1989 Edition, No Addenda. SEE 92-0065 reconciles the replacement nuts to SA194 Gr. 7.

(Applicable Manufacturer's Data Reports are available on-site)				
CERTIFICATE OF COMPLIANCE				
We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI. repair or replacement Type Code Symbol Stamp: N/A				
Certificate of Authorizaton No: N/A Expiration Date: N/A				
Signed: <u>Certificialit</u> Supervising ASME Codes Engineer Date: <u>11/2e/00</u> Owner or Owner's Designee, Title				
L the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> and employed by <u>Factory Mutual Insurance Company</u> of Johnston, Rhode Island have inspected the components described in this Owner's Report during the period 10/17/00to, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI. By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or				
Connected with this inspection. <u>Uniformatic</u> Commissions <u>1862</u> California Inspector's Signature Date <u>MM, 29, 2000</u>				

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS

s	Required	by the	Provisions	of the	ASME	Code S	ection XI

1.	Owner:	Southern California Edison Company 2244 Walnut Grove Avenue Rosemead, California 91770	Shoet 1 of 1 Unit: 2 MO: 96070175001 FCN: F12746M, F12750M
2.	Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-0128	Rspec: 119-98 P&ID: 40156B (B2) N-5: S2-1305-7
3.	Work Per	formed by: Southern California Edison Company	Type Code Symbol Stamp: N/A Authorization No: N/A
4.	Identifica	tion of System: Feedwater	Expiration Date: N/A

5. (a) Applicable Construction Code: <u>ASME Section III, Class 2, 1974 Ed., S.'74 Add. (material, design, and fabrication):</u> Section III, NC-5000, 1992 Ed., No Add. (NDE): Code Case: None

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Edition. No Addenda</u>; 1992 Edition. No Addenda (VT-2): Code Case: N-416-1

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name Of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
20" 720# Pow-R-Seal Gate Valve (BW)	WKM	503456	1742	2HV4052	1979		Yes
2" NPS 6000# Socket Weld Elbow	Ladish Co.	Ht. Code BS7M	N/A	RSO-1341-96, SA105 (CR-3001- 96)	N/A	Replacement	No
2" NPS Sch. 160 Pipe	Quanex Corp.	Ht. Code N06364	N/A	RSO-1341-96, SA333 Gr. 6 (CR- 3002-00)	N/A	Replacement	No
2" 1500# Flanges (1 ea. Socket Weld) & (1 ea. Blind Flange)	WFI Nuclear Products	Ht. Code 978XNF	N/A	RSO-1341-96, SA350 Gr. LF2 (CR-3003-00)	N/A	Replacement	No
7/8" x 36" All Thread Stud (2)	Nova Machine Products	Ht. #8099192/ Ht. #69541	N/A	RSO-0697- 95/RSO-1440-00, SA193 Gr. B7 (CR- 3005-96)	N/A	Replacement	No
7/8"-9 Heavy Hex Nuts (16)	Vitco Nucl. Prod./ Nova Mach.	Ht. #6019676/ Ht. Code DJP	N/A	RSO-0675-95 (8 ea.)/RSO-1485-98 (8ea.) SA194 Gr. 2H (CR-3004-00, SEE 92-0065)	N/A	Replacement	No

7. Description of Work:

Removed the existing body drain valve MR-792 from 2HV4052 per FCN F12750M and replaced it with new piping and flanges. Fabrication and installation of the new replacement body drain piping, flanges and subsequent PT and MT examinations, was performed in accordance with weld record WR2-98-252, Repair Specification 119-98, and FCN's F12750M and F12746M.

8. Tests Conducted: <u>System Leakage Pressure Test</u> Pres See: AR 960200294-08

Pres: NOP

Temp: NOT

This test was performed in lieu of a hydrostatic pressure test as allowed under Code Case N-416-1.

NOTE: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x 11 in., (2) information in Items 1 through 6 on this report is included on each sheet, 3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

9. Remarks: CR-3002-00, CR-3003-00, CR-3001-96, CR-3004-00 and CR-3005-96 reconciles the replacement material which was certified to ASME III-2, 1974 Ed., S.'75 Add. (pipe & flanges); '86 Ed., '86 Add. (elbow); '89 Ed., No Add. (bolting).

(Applicable Manufacturer's Data Reports are available on-site)									
CERTIFICATE OF COMPLIANCE									
We certify that the statements made in the report are correct and this <u>repair and replacement</u> conforms to the rules of the ASME Code, Section XI. repair or replacement									
Type Code Symbol Stamp: N/A									
Certificate of Authorizaton No: N/A Expiration Date: N/A									
Signed:									
CERTIFICATE OF INSPECTION									
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> , and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>1//23/99</u> to <u>0//08/09</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.									
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.									
Inspector's Signature/ National Board, State, Province, and Endorsements									
Date Am. 8, 2001									

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FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS

As Required by the Provisions of the ASME Code Section XI

1. Owner:	Southern California Edison Company	Unit: 2	
	2244 Walnut Grove Avenue	MO: 97011254001	
	Rosemead, California 91770	Rspec: ASME SECTIO	N XI DATA-0123
		PID: 40156B (B1)	
2. Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-012	N5: S2-1305-7	
2 World De	anterned by Southern California Edison Company	Type Code Symbol Star	mp: N/A
J. WOIK FE	erformed by: Southern California Edison Company	Authorization No:	N/A
4. Identific	ation of System: Feedwater	Expiration Date:	N/A
5. (a) Appl	icable Construction Code: ASME Section III, Class 2, 1	974 Edition, S.'75 Addenda	Code Case: 1781

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Editon</u>. No Addenda

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
20" 720# Pow-R-Seal Gate Valve (BW)	WKM (Cooper)	503456	1742	2HV4052	1979		Yes
Bonnet	Cooper Cameron Valves	Part #257880, Ht. #879XNF1	N/A	RSO-0597-97, SA350 LF2	1996	Replacement	No

7. Description of Work:

The valve bonnet was replaced on the feedwater isolation valve in plant postion 2HV4052 (S/N 503456).

8. Tests Conducted: <u>System Leakage Pressure Test</u> See: AR 960200294-08

Pressure: NOP

Temp: NOT

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x11 in. (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

9. Remarks: None.

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(Applicable Manufacturer's Data Reports are available on-site)								
C	CERTIFICATE OF COMPLIANCE							
We certify that the statements made in the of the ASME Code, Section XI.	e report are correct and this replacement conforms to the rules repair or replacement							
Type Code Symbol Stamp: N/A								
Certificate of Authorizaton No: N/A	Expiration Date: N/A							
Signed: Owner or Owner's Designee, Titl	Supervising ASME Codes Engineer Date: 1/8/01							
L								
	CERTIFICATE OF INSPECTION							
the State or Province of <u>California</u> and Johnston. Rhode Island have inspected to 0/05/07 to 0/08	ssion issued by the National Board of Boiler and Pressure Vessel Inspectors and employed by <u>Factory Mutual Insurance Company</u> of the components described in this Owner's Report during the period , and state that to the best of my knowledge and belief, the Owner prrective measures described in this Owner's Report in accordance with the a XI.							
the examinations and corrective measure	spector nor his employer makes any warranty, expressed or implied, concerning s described in this Owner's Report. Furthermore, neither the Inspector nor his or any personal injury or property damage or a loss of any kind arising from or							
Inspector's Signature	Commissions <u>1862</u> California National Board, State, Province, and Endorsements							
Date An. 8, 2001								
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FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required by the Provisions of the ASME Code SectionXI

1.	Owner:	Southern California Edison Company 2244 Walnut Grove Avenue Rosemead, California 91770	Sheet 1 of 1 Unit: MO: FCN:	N 97061153000 F13553M	
2.	Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-0128	P&ID:	078-97 R1 N/A N/A	
3.	Work Per	formed by: Southern California Edison Company		ode Symbol Stamp ization No:	o: N/A N/A
4.	Identifica	ation of System: N/A - Spare	Expirat	tion Date:	N/A

5. (a) Applicable Construction Code: ASME Section III, Class 1, 1971 Edition, Summer 1972 Addenda; Code Case: N-474-1

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Edition, No Addenda</u>; <u>1992 Edition, No</u> Addenda (NDE); Code Case: N-416-1

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name Of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
RCS Pressure Nozzle	SCE	RS-046-97-E, RSO-0639-97, SA479-316L, Ht. Code FAL	N/A	RSO-1084-96, SB166-NO6690, Ht.#ED84	N/A	Replacement (spare)	No

7. Description of Work:

Spare Reactor Coolant Loop Piping pressure measurement nozzle serial number RS-046-97-E was partially fabricated in accordance with Repair Specification 046-97, M.O. 97040953 (machining), and M.O. 97041119 (welding) and weld record WR3-97-235. Completion status was as follows:

Welding, internal machining, and internal electro-chemical machining was completed. See NCR 970500430 for acceptance of the .010" oversize socket end bore. The nozzle outside diameter was only rough machined. NDE and final machining of exterior was not completed.

M.O. 97061153 completed the fabrication as follows:

Completed the external machining to meet the final dimensions of drawing 41116, Sheet 1. Examined all accessible surfaces with liquid penetrant (3PT-146-97).

Examined the groove weld with radiography (3RT-074-97).

8. Tests Conducted: <u>N/A</u>

Pres: <u>N/A</u>

Temp: <u>N/A</u>

NOTE: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x 11 in., (2) information in Items 1 through 6 on this report is included on each sheet, 3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the ALA.

9. Remarks : None.

	(Appheable Manufacturer's Data Reports are available on-site)	
	CERTIFICATE OF COMPLIANCE	·····
We certify that the statements made in the of the ASME Code, Section XI. Type Code Symbol Stamp: N/A	report are correct and this <u>replacement</u> repair or replace	conforms to the rules ment
Certificate of Authorization No: N/A	Expiration Date: N/A pervising ASME Codes Engineer Da	te: <u>6/9/00</u>
I, the undersigned holding a valid commiss the State or Province of <u>California</u> , and en <u>Johnston, Rhode Island</u> have inspected th	ployed by <u>Factory Mutual Insurance C</u> components described in this Owner's R	Company of eport during the period
to <u>DG/D4/9</u> has performed examinations and taken corr requirements of the ASME Code, Section 2 By signing this certificate, neither the Inspe	Ц.	Report in accordance with the
examinations and corrective measures desc mployer shall be liable in any manner for a connected with this inspection.	ibed in this Owner's Report. Furthermore	neither the Inspector nor his
Inspector's Signature	Commissions <u>1862</u> National Board, Stat	California e, Province, and Endorsements
Date Hune 9, 200		

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FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required by the Provisions of the ASME Code SectionXI

1.	Owner:	Southern California Edison Company 2244 Walnut Grove Avenue Rosemead, California 91770	MO: Rspec:	N 97061274000 080-97 R1	
2.	Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-0128	P&ID: N-5:		
3.	Work Per	formed by: Southern California Edison Company		ode Symbol Stamp: zation No:	N/A N/A
4.	Identifica	ation of System: N/A - Spare	Expirati	on Date:	N/A

5. (a) Applicable Construction Code: ASME Section III, Class 1, 1971 Ed., S 72 Add; Code Case: N-474-1(Note: per Code Case N-416-1, welding NDE was per ASME III, NB5000, 1992 Ed; No Add.).

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Edition, No Addenda: Code Case: N-416-1</u>

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name Of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
RCS Pressure Nozzle		RS-046-97-G; RSO-0639-97, Ht. Code FAL, SA479- 316L		RSO-1084-96, SB166-NO6690, Ht.#ED84	N/A	Replacement (spare)	No

7. Description of Work:

Spare Reactor Coolant Piping pressure measurement nozzle, serial number RS-046-97-G was partially fabricated in accordance with Repair Specification 046-97, M.O. 97040953 (machining), M.O. 97041119 (welding) and welding record WR3-97-243. All welding was completed, machining and NDE still needed to be performed. The nozzle fabrication was completed on M.O. 97061274. Internal and external machining of the nozzle was completed per drawing 41116, Sheet 1. Final NDE is documented on reports 3RT-073-97 and 3PT-142-97. Note: AR's 970700325 and 970900470 were generated to document and address not having performed the electro polishing of the nozzle bore per 41116, Sheet 1, Note 4.

8. Tests Conducted: N/A

Pressure: N/A

'n

Temp: N/A

Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in x 11 in., (2) information in Items 1 through 6 on this report is included on each sheet, 3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

NOTE:

9. Remarks : None.

(Applicable Manufacturer's Data Reports are available on-site)

CERTIFICATE OF COMPLIANCE
We certify that the statements made in the report are correct and this of the ASME Code, Section XI. replacement
Type Code Symbol Stamp: N/A
Certificate of Authorization No: N/A Expiration Date: N/A Signed:
CERTIFICATE OF INSPECTION
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> , and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>07/04/97</u> to <u>06/04/00</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.
Inspector's Signature Commissions /862 California National Board, State, Province, and Endorsements
Date 111-9,2000

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FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required by the Provisions of the ASME Code Section XI

1.	Owner:		fornia Edison Com Grove Avenue, Rose		Sheet 1 of 1 Unit: CWO: FCN:	2 97101708000 F13904M, F13	908M
2.	Plant:		iclear Generating S CA 92674-0128	itation	Repair Spec: P&ID: N-5:	217-97, REV.0 40111A S2-1201-3	
3.	Work Per	P.0	htel Construction C . Box 450 Clemente, CA 926	• •	Type Code Sy Authorization	No:	N/A N/A
4.	Identifica	tion of System:	REACTOR	COOLANT (1201)	Expiration Dat	ie:	N/A

5. (a) Applicable Construction Code: ASME Section III, Class 1, 1971 Edition, S'72 Addenda, Code Cases: N-474-1

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Edition, No Addenda

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name of Manufacturer	Manufactu re r Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped Yes/No
INCONEL 690 Half Nozzle	SCE	098-97	N/A	2PDT0979-2	N/A	Replacement	No
INCONEL 690 Half Nozzie	SCE	103-97	N/A	2PDT0979-3	N/A	Replacement	No

7. Description of Work:

The instrument nozzle assemblies at plant instrument locations 2PDT0979-2 and 2PDT0979-3 were replaced with INCONEL 690 replacements as a leak prevention measure. Cutting, milling, pre-heat and installation of replacement nozzles was performed in accordance with Repair Spec. 217-97 Rev. 0, and weld records WR2-97-491 and WR2-97-492. The existing root valve assemblies (S2-1201-MR-191 and S2-1201-MR-193) were reinstalled on the new nozzles. Instrument nozzles are located on C.E. spool 503-03 (E-088 Hot Leg).

 Tests Conducted: System Leakage [X] System Functional [] System In-service [] Hydrostatic [] Pneumatic [] Other [] Pressure: NOP Temp: N/A (Reference: AR #980100396-07 for VT2)

Note:

9. Remarks : None.

(Appikable Manutacturer's Dat	a Reports are available on-site)
CERTIFICATE O	F COMPLIANCE
We certify that the statements made in the report are correct and of the ASME Code, Section XI.	this <u>replacement</u> conforms to the rules repair or replacement
Type Code Symbol Stamp: N/A	
Certificate of Authorization No: N/A Expiration Signed: <u>Supervising ASME Coo</u> Owner or Owner's Designee, Title	n Date: N/A des Engineer Date: 1/20/00
CERTIFICATE C	OF INSPECTION
the State or Province of <u>California</u> , and employed by <u>Factory</u> Johnston, Rhode Island have inspected the components descri <u>01/09/99</u> to <u>01/21/00</u> , and stat has performed examinations and taken corrective measures description requirements of the ASME Code, Section XI.	bed in this Owner's Report during the period e that to the best of my knowledge and belief, the Owner
By signing this certificate, neither the Inspector nor his employe examinations and corrective measures described in this Owner's employer shall be liable in any manner for any personal injury o connected with this inspection.	Report. Furthermore, neither the Inspector nor his
CommissionsCommissions	1862 California
Inspector's Signature	National Board, State, Province, and Endorsements

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FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required by the Provisions of the ASME Code Section XI

1. 2. 3.	Owner: Plant: Work Perf	Southern California 2244 Walnut Grove San Onofre Nuclear San Clemente, CA	Avenue, Rosemead, CA 91770 Generating Station 92674-0128	Sheet 1 of 1 Unit: CWO: FCN(S): Repair Spec: P&ID: N-5:	2 97110883000, 97 F14192M, F139 215-97 REV. 0, 2 40111A S2-1201-3	00M
4.	Identificat	ion of System:	REACTOR COOLANT (1201)	Type Code Syr Authorization I Expiration Date	No:	N/A N/A N/A

- 5. (a) Applicable Construction Code: ASME Section III, Class I, 1971 Edition Summer 1972 Addenda (half nozzles); ASME Section III, Class 2, 1971 Edition, S'73 Addenda (valve); 1974 Edition, Summer 1974 Addenda (tube adapter & fabrication); Code Cases: N-474-1
 - (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Edition, No Addenda
- 6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped Yes/No
INCONEL 690 Half Nozzle	SCE	205-97	N/A	2PDT0978-1	N/A	Replacement	No
3/4" X 3/8" Tubing Adapter	Parker Hannifin	HT. VAZJ	N/A	RSO 2720-93, SA479 Tp.316	N/A	Replacement	No
3/4" 1500# S.S. Globe Valve	Kerotest	AHW4-16	N/A	RSO-4471-85, S21201MR181	1985	Replacement	Yes
INCONEL 690 Half Nozzle	SCE	099-97	N/A	2PDT0978-2	N/A	Replacement	No

7. Description of Work:

New Root Valve Assembly (S21201MR181) was fabricated with a replacement INCONEL 690 half nozzle in accordance with Repair Spec. 215-97 Rev. 0 and Weld Record WR2-97-488 (Ref.: CWO 97110883000).

The instrument nozzle assemblies at locations 2PDT0978-1 and 2PDT0978-2 were replaced using INCONEL 690 material as a leak prevention measure. Repair Spec. 216-97 Rev. 0 and weld records WR2-97-489 and WR2-97-490 provide the guidelines for cutting, milling and installing the existing root valve assembly (MR-183) on 2PDT0978-2 and for installing the new root valve assembly (MR-181) on nozzle 2PDT0978-1. The instrument nozzles are located on C.E. Spool 503-01 (E-989 Hot Leg).

 Tests Conducted: System Leakage [X] System Functional [] System Inservice [] Hydrostatic [] Pneumatic [] Other [] Pressure: NOP Temp: N/A (Reference: AR #980100396-08 for VT-2)

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 ½ in. x 11 in., (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's Designee and the AIA.

(Applicable Manufacturer's Data Reports are available on-site)

9. Remarks : The replacement valve was certified to a higher code class, ASME III-1, as allowed by ASME III, paragraph NCA-2134.

· · · · · · · · · · · · · · · · · · ·		CERTIFICATE OF (OMI LANCE	
		CERTIFICATE OF (OMPLIANCE	
We certify that to of the ASME Co	he statements made in the xde, Section XI.	report are correct and th	is <u>replacement</u> or repair or replacement	
Type Code Sym	bol Stamp: N/A			
Signed:	athorization No: N/A	Expiration I upervising ASME Codes		e:1/10/00
		CERTIFICATE OF IN	SPECTION	
Waltham, Mas	vince of <u>California</u> , and e sachusetts have inspecte <u>z</u> to <u>0//19/12</u> xaminations and taken co the ASME Code, Section	d the components describ 2, and state th rrective measures describ	ed in this Owner's at to the best of my	Report during the period knowledge and belief, the Owner Report in accordance with the
examinations ar	d corrective measures des e liable in any manner for	scribed in this Owner's R	eport. Furthermore	, expressed or implied, concerning the c, neither the Inspector nor his a loss of any kind arising from or
Inspector's	Signature	Commissions	<u>1862</u> National Board, Sta	California ite, Province, and Endorsements
Date John	19,2000			

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As Required by the Provisions of the ASME Code Section XI

1. Owner:	Southern California Edison Company	Unit: 2	
	2244 Walnut Grove Avenue	MO: 98051825000	
	Rosemead, California 91770	Rspec: ASME SECTION XI DATA-0460	
		PID: 40124B (H2)	
2. Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-012	N5: S2-1208-5	
3. Work Pe	rformed by: Southern California Edison Company	Type Code Symbol Stamp: N/A Authorization No: N/A	
4. Identifica	ation of System: Chemical and Volume Control	Expiration Date: N/A	
5. (a) Appli	icable Construction Code: ASME Section III. Class 2, 1	974 Edition, Summer 1974 Addenda; Code Case: N	Ione

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Edition</u>. No Addenda

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
1 1/2" x 2" Nozzle Type Relief Valve	Crosby Valve & Gage	N59380-00-0010	N/A	2PSV9225	1985	Replaced	Yes
1 1/2" x 2" Nozzle Type Relief Valve	Crosby Valve & Gage	N59380-00-0011	N/A	Rebuild MO.97121745, Mat Code 025-83508	1985	Replacement	Yes

7. Description of Work:

Replaced the relief valve located in plant position 2PSV9225 with an in-kind rebuilt and tested spare. The replacement spare was rebuilt and tested under MO 97121745. The removed valve to be rebuilt under MO 99110011. The VT-2 examination performed under AR 980600186 failed. The boric acid leak was evaluated and it was determined that the component is acceptable for continued service in accordance with AR 991200796. Note: MO 00061336 was generated to rework/replace the leaky valve.

8. Tests Conducted: N/A

Pressure: N/A

Temp: <u>N/A</u>

See: AR 991200796-02

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x 11 in. (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

9. Remarks : None.

(Applicable Manufacturer's Data Reports are available on-site)

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI. Tepair or replacement Type Code Symbol Stamp: N/A Certificate of Authorization No: N/A Expiration Date: N/A Date: 12/21/00 Supervising ASME Codes Engineer Signed: \angle Owner or Owner's Designee, Title CERTIFICATE OF INSPECTION I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of California, and employed by Factory Mutual Insurance Company of Johnston, Rhode Island have inspected the components described in this Owner's Report during the period to $\frac{12/21/00}{100}$, and state that to the best of my knowledge and belief, the Owner 10/6/00 has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI. By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection. Commissions _1862 California insem National Board, State, Province, and Endorsements Inspector's Signature Date 1/2 21, 200

As Required by the Provisions of the ASME Code SectionXI

1	. Owner:	Southern California Edison Company 2244 Walnut Grove Avenue Rosemead, California 91770	Unit: 2 MO: 98051989001 98051989000 Rspec: ASME SECTION XI DATA-0207
2	. Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-0128	P&ID: 40112D (C5) N-5: S2-1201-4
		rformed by: Southern California Edison Company ation of System: Safety Injection and Shutdown Cooling	Type Code Symbol Stamp:N/AAuthorization No:N/AExpiration Date:N/A

5. (a) Applicable Construction Code: ASME Section III, Class 2, 1974 Edition. Summer 1974 Addenda; Code Case: None

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Edition. No Addenda</u>

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name Of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
6" x 8" Relief Valve (L-Top)	Crosby Valve & Gage	N60061-00-0004	N/A	2PSV9349	1984	Replaced	Yes
6" x 8" Relief Valve (L-Top)	Crosby Valve & Gage	N60061-00-0003	N/A	Mat Code 026- 44409 (Rebuilt under MO 97030424)	1980	Replacement	Yes

7. Description of Work:

Replaced the relief valve located in plant position 2PSV9349 with an in-kind rebuilt and tested spare. Removed valve to be rebuilt under MO 99051790.

8. Tests Conducted: <u>System Functional Pressure Test</u> <u>See: AR 980701362-30</u>

Pressure: NOP

Temp: N/A

9. Remarks : None.

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(Applicable Manuf	actumer's Data Re	DOTE ST SVETS	hie on-stel

CERTIFICATE OF COMPLIANCE
We certify that the statements made in the report are correct and this of the ASME Code, Section XI. replacement conforms to the rules repair or replacement
Type Code Symbol Stamp: N/A
Certificate of Authorization No: N/A Expiration Date: N/A Signed:
CERTIFICATE OF INSPECTION
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> , and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnstan, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>11/06/98</u> to <u>06/09/00</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.
Commissions 1862 California
Inspector's Signature National Board, State, Province, and Endorsements Date fine 9, 2000

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As Remired by the Provisions of the ASME Code Section XI

- Southern California Edison Company Unit² 1. Owner: CWO: 98060026000 98060170000 2244 Walnut Grove Avenue Rosemead, California 91770 FCN: F14828M, F16308M, F14939M Rspec: 113-98 R3 San Onofre Nuclear Generating Station PID: 40192C (C6) 2. Plant: San Clemente, California 92674-012 S2-2418-2 N5:
- 3. Work Performed by: Southern California Edison Company
- 4. Identification of System: Service Gas (Nitrogen)
- Expiration Date: 5. (a) Applicable Construction Code ASME Section III, Class 2. 1977 Ed., S. 77 Add. (Valve); 1974 Ed., S. 74 Add (Installation); Code Case: None
- 5. (b) Applicable Edition of Section XI Utilized for Repairs or Replacements:

1989 Editon. No Addenda: 1992 Edition. No Addenda (VT-2): Code Case: N-116-1

N/A

N/A

Type Code Symbol Stamp: N/A

Authorization No:

6. Identification of Components Repaired or Replaced and Replacement Component

Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
Kerotest	JAW 29-10	N/A	S22418MU108	1985	Replaced	Yes
Flowserve	E-172P-1-1	N/A	RSO-1357-99	1999	Replacement	Yes
	Kerotest	No. Kerotest JAW 29-10	No. Board No. Kerotest JAW 29-10	No. Board No. Kerotest JAW 29-10 N/A S22418MU108	No.Board No.BuiltKerotestJAW 29-10N/AS22418MU1081985	Name of Manufacturer Manufacturer Serial No. National Board No. Other Identification Year Built Replaced or Replacement Kerotest JAW 29-10 N/A \$22418MU108 1985 Replaced

7. Description of Work:

After removing the existing valve (Kerotest S/N JAW 29-10) in location S22418MU108, a replacement valve (Flowserve S/N E-172P-1-1) with an improved design was installed on line S2-2418-ML-092-2"-C-HKO in accordance with weld record WR2-98-194 and Repair Specification 113-98 Rev. 3. CWO 98060170000 welded the non-Code (Project Class "R") piping to the Code valve. Reference FCN's: F14828M, F16308M, F14939M.

8. Tests Conducted: System Leakage Pressure Test

See: AR 980100211-11

Pressure: NOP

Temp: NOT

This test was performed in lieu of a hydrostatic pressure test as allowed under Code Case N-416-1.

Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is \$ 1/2 in. x11 in. (2) information in Items 1 through 6 on this report is included on each Note: sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

9. Remarks: None.

(Applicable Manufacturer's Data Reports are available on-site)					
CERTIFICATE OF COMPLIANCE					
We certify that the statements made in the report are correct and this repair of the ASME Code, Section XI.	r and replacement conforms to the rules				
Type Code Symbol Stamp: N/A					
Certificate of Authorizaton No: N/A Expiration	n Date: N/A				
	les Engineer Date:				
Owner or Owner's Designee, Title					
CERTIFICATE OF INSPECTI	ON				
I, the undersigned holding a valid commission issued by the National Board the State or Province of <u>California</u> and employed by <u>Factory Mutual In</u> <u>Johnston, Rhode Island</u> have inspected the components described in this <u>JOHNT/CO</u> to <u>JAH9/CO</u> , and state that to the I has performed examinations and taken corrective measures described in this requirements of the ASME Code, Section XI.	surance Company of Owner's Report during the period best of my knowledge and belief, the Owner				
By signing this certificate, neither the Inspector nor his employer makes ar the examinations and corrective measures described in this Owner's Repor employer shall be liable in any manner for any personal injury or property connected with this inspection.	t. Furthermore, neither the inspector nor ms				
Inspector's Signature Commissions /862 National Bo	California Pard, State, Province, and Endorsements				
Date Mec. 19, 2000					

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As Required by the Provisions of the ASME Code SectionXI

1. Owner:	Southern California Edison Company 2244 Walnut Grove Avenue Rosemead, California 91770	Sheet 1 of 1 Unit: 2 MO: 98063094000 FCN: F16075M
2. Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-0128	Rspec: ASME SECTION XI DATA-0599 P&ID: 40123B (E5) N-5: S2-1208-4
3. Work Pe	rformed by: Southern California Edison Company	Type Code Symbol Stamp: N/A Authorization No: N/A
4. Identific	ation of System: Chemical and Volume Control	Expiration Date: N/A

 5. (a) Applicable Construction Code: <u>ASME Section III, Class 2. 1974 Edition, Summer 1974 Addenda (Valve design): ASME</u> <u>II. 1989 Edition, No Addenda (Spindle): Code Case: None</u> (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Edition, No Addenda</u>

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name Of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
2" 600# Globe Drag Valve (BW)	Control Components	36995-1-2	N/A	2PV0201B	1984		Yes
Spindle (INCONEL Unbalanced)	Control Components	Ht. #35457	N/A	RSO-1296-99, SB637-N07718	1999	Replacement	Yes

7. Description of Work:

Replaced the valve spindle in the valve located in plant position 2PV0201B with a new replacement unbalanced INCONEL 718 spindle per FCN F16075M.

8. Tests Conducted: <u>System Functional Pressure Test</u> See: <u>AR 980900986-09</u>

Pres: NOP

Temp: NOT

9. Remarks : None.

(Applicable Manufacturer's Data Reports are available on-site)
CERTIFICATE OF COMPLIANCE
We certify that the statements made in the report are correct and this of the ASME Code, Section XI. repair or replacement
Type Code Symbol Stamp: N/A
Certificate of Authorization No: N/A Expiration Date: N/A Signed: Supervising ASME Codes Engineer Date: 1/17/00 Owner or Owner's Designee, Title
CERTIFICATE OF INSPECTION
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> , and employed by <u>Arkwright Mutual Insurance Company</u> of <u>Waltham. Massachusetts</u> have inspected the components described in this Owner's Report during the period <u>OB/23/99</u> to <u>O///B/OO</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.
Inspector's Signature Commissions <u>1862</u> California National Board, State, Province, and Endorsements
Date <u>01/18/00</u>

As Required by the Provisions of the ASME Code Section XI

1.	Owner:	Southern California Edison Company 2244 Walnut Grove Avenue	Unit: MO:	2 99021229000		
		Rosemead, California 91770	Rspec:	ASME SECTION 2 990201060-04	XI DATA-(0073,
			PID:	40140B (G5)		
2.	Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-012	N5:	S2-1415-1		
3.	Work Perf	ormed by: Southern California Edison Company	Type (Code Symbol Stamp:	N/A	
		•		rization No:	N/A	
4.	Identificat	ion of System: Nuclear Service Water	Expira	tion Date:	N/A	

5. (a) Applicable Construction Code: ASME Section III. Class 2, 1971 Edition, S.'73 Addenda: Code Case: 1649

5. (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Editon</u> No Addenda: <u>1992 Edition</u>. No Addenda (VT-2): Code Case: <u>N-416-1</u>

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
3" 150# Swing Check Valve	Walworth-Aloyco	A2788	767	S21415MU236	1977	Replaced	Yes
3" 150# Swing Check Valve	Crane Valves	C4790	N/A	RSO-0102-96, mark #675, sch. 10s bore	1995	Replacement	Yes

7. Description of Work:

Replaced the swing check value in plant position S21415MU236 (s/n A2788) with an in-kind replacement value (s/n C4790). The replaced value was cut out and the replacement value welded into place in accordance with weld record WR2-99-214 and Repair Specification 990201060-04.

8. Tests Conducted: <u>System Leakage Pressure Test</u> See: AR 990201060-06

Pressure: NOP

Temp: NOT

This test was performed in lieu of a hydrostatic pressure test as allowed under Code Case N-416-1.

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x 11 in. (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

9. Remarks: None.

(Appöcable Manufacture's Data Reports are available on-site)
CERTIFICATE OF COMPLIANCE
We certify that the statements made in the report are correct and this repair and replacement conforms to the rules of the ASME Code, Section XI.
Type Code Symbol Stamp: N/A
Certificate of Authorizaton No: N/A Expiration Date: N/A
Signed: <u>Multill</u> Supervising ASME Codes Engineer Date: <u>12/18/00</u> Owner or Owner's Designee, Title
CERTIFICATE OF INSPECTION
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston. Rhode Island</u> have inspected the components described in this Owner's Report during the period $\frac{2}{18}/00$ to $\frac{12}{19}/900}{100}$, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.
Inspector's Signature Commissions 1862 California National Board, State, Province, and Endorsements
Date <u>Alec. 19, 2000</u>

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As Required by the Provisions of the ASME Code SectionXI

1. Owner:	Southern California Edison Company 2244 Walnut Grove Avenue Rosemead, California 91770	Unit: A MO: 99031617000 (SOG-99-001) Rspec: N/A
2. Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-0128	P&ID: N/A N-5: N/A
 Work Pe Identific 	rformed by: Southern California Edison Company ation of System: Reactor Coolant	Type Code Symbol Stamp:N/AAuthorization No:N/AExpiration Date:N/A

5. (a) Applicable Construction Code: <u>ASME Section III, NB (Class 1), 1971 Ed., Summer 1972 Add. (design); 1986 Ed., No</u> <u>Add. (material); Code Case: N-474-1</u>

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Edition. No Addenda</u>

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name Of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
Reactor Coolant Loop RTD Thermowell (2 each)	Weed Instrument Co.	N13212, N13214	N/A	027-83249, Ht. #NX0643HG1, Lot #136518, RSO- 1685-97	N/A	Replacement	No

7. Description of Work:

Two spare thermowells were machined from SB166-N06690 bar stock by the Weed Instrument Co. The bar stock material was supplied to Weed Instrument Co. by SCE. The fabrication was documented on (hard copy) ASME Section XI Traveler # SOG-99-001, Revision 0. The thermowells were machined per drawing # SO23-924-E222. A PT examination of all accessible surfaces was performed by SCE (NDE Report # 2PT-142-99) on the completed thermowells. Receipt inspection of the completed thermowells by SCE will be documented on RSO-1741-99. References: AR 990301156 and P.O. 6B249005

8. Tests Conducted: <u>N/A</u>

Pressure: N/A

Temp: <u>N/A</u>

9. Remarks : No

(The second s	ta Reports are available on-sate)
CERTIFICATE O	F COMPLIANCE
le certify that the statements made in the report are correct and f the ASME Code, Section XI.	this <u>replacement</u> conforms to the rules repair or replacement
ype Code Symbol Stamp: N/A	
ertificate of Authorization No: N/A Expiration igned: <u>Supervising ASME Cod</u> Owner or Owner's Designee, Title	n Date: N/A des Engineer Date: <u>9/20/99</u>
CERTIFICATE C	OF INSPECTION
the State or Province of <u>California</u> , and employed by <u>Arkwrigh</u> <u>Waltham</u> , <u>Massachusetts</u> have inspected the components desc <u>$09-03-99$</u> to <u>$9/21/99$</u> , and stat as performed examinations and taken corrective measures desc equirements of the ASME Code, Section XI.	ribed in this Owner's Report during the period te that to the best of my knowledge and belief, the Owner
by signing this certificate, neither the Inspector nor his employe xaminations and corrective measures described in this Owner's mployer shall be liable in any manner for any personal injury o connected with this inspection.	s Report. Furthermore, neither the Inspector nor his
Commissions_ Commissions	1862 California
Inspector's Signature	National Board, State, Province, and Endorsements
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As Required by the Provisions of the ASME Code SectionXI

1. Owner:	Southern California Edison Company	Unit:	A		
• •	2244 Walnut Grove Avenue	MO:	99031617000 (hardcopy tra	weler) SOG-99-
	Rosemead, California 91770		001 Rev. 1		
		Rspec:	990301156-01		n Berling a
2. Plant:	San Onofre Nuclear Generating Station	P&ID:		· • ·	
	San Clemente, California 92674-0128	N-5:	N/A		• Yest in t
3. Work Pe	rformed by: Southern California Edison Company	T C	ada Sambal Stan	NI/A	
	· · · · · · · · · · · · · · · · · · ·	I ype C	ode Symbol Stan		
	* .		zation No:	. N/A	•
4. Identific	ation of System: Reactor Coolant	Expirat	ion Date:	N/A	

5. (a) Applicable Construction Code: <u>ASME Section III, NB (Class 1), 1971 Edition, Summer 1972 Addenda (design); 1986</u> <u>Edition, No Addenda and Code Case N-474 (material)</u>

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Edition, No Addenda

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name Of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
Thermowell, RCS Loop RTD	Weed Instrument Co.	N13228	N/A	027-83249, RSO- 0096-00	N/A	Replacement	No
Thermowell, RCS Loop RTD	Weed Instrument Co.	N13229	N/A	027-83249, RSO- 1795-99	N/A	Replacement	No
Thermowell, RCS Loop RTD	Weed Instrument Co.	N13230	N/A	027-83249, RSO- 1795-99	N/A	Replacement	No

7. Description of Work:

Certified SB-166-N06690 (INCONEL 690) material was shipped to Weed Instrument to machine the thermowells from. The material, heat# NX0643HG1, Lot# 136518, RSO-1685-97, was from SCE stock. The machining was performed to requirements of drawing SO23-924-E222 and Section XI "hard copy" traveler SOG-99-001, Revision 1. PT examinations were performed on all accessible surfaces by SCE. The thermowells were fabricated as spars replacements for SCE warehouse stock. The Traveler and all supporting documents is filed in CDM as an attachment to M.O. 99031617. Reference: AR 991001072

8. Tests Conducted: N/A

Pressure: N/A

Temp: N/A

NOTE: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x 11 in., (2) information in Items 1 through 6 on this report is included on each sheet. 3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

9. Remarks : None.

(Applicable Manufacturers Data Reports are available on-site) CERTIFICATE OF COMPLIANCE We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI. Tepair or replacement Type Code Symbol Stamp: N/A Expiration Date: N/A Certificate of Authorization No: N/A Date: 2/24/00 Signed: Cindlin Supervising ASME Codes Engineer Owner or Owner's Designee, Title CERTIFICATE OF INSPECTION I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of California, and employed by Factory Mutual Insurance Company of Johnston, Rhode Island have inspected the components described in this Owner's Report during the period 12/03/98 to 02/24/00, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI. By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection. Commissions <u>1862</u> <u>California</u> National Board, State, Province, and Endorsements Inspector's Signature Date Jul. 24, 1999

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required by the Provisions of the ASME Code Section XI

			Sheet 1 of 1
Ŧ.	Owner:	Southern California Edison Company	Unit: 2
•••	•	2244 Walnut Grove Avenue	MO: 99041084000
		Rosemead, California 91770	FCN: FCN F16640M
2.	Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-0128	Rspec: ASME SECTION XI DATA-0384 990400907-12 P&ID: 40122B (F5)
3.	Work Per	rformed by: Southern California Edison Company	N-5: S2-1201-4
4.	Identifica	ation of System: Safety Injection and Shutdown Cooling	Type Code Symbol Stamp:N/AAuthorization No:N/AExpiration Date:N/A

5. (a) Applicable Construction Code: <u>ASME Section III, Class 2 (NC), 1971 Edition, Summer 1973 Addenda: Code Case:</u> <u>None</u>

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Edition. No Addenda

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name Of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
14" 300# Swing Check Valve	Anchor/Darling	E9877-7-3	N/A	S21201MU200	1982	Repaired	Yes

7. Description of Work:

For the valve located in plant position S21201MU200, the disc nut was welded to the threaded disc post in accordance with FCN F16640M and weld record WR2-99-288.

8. Tests Conducted: <u>N/A</u>

Temp: N/A

9. Remarks : None.

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(Applicable Manufacturer's Data Reports are available on-site)
CERTIFICATE OF COMPLIANCE
We certify that the statements made in the report are correct and this repair conforms to the rules
of the ASME Code, Section XI. repair or replacement
Type Code Symbol Stamp: N/A
Certificate of Authorization No: N/A Expiration Date: N/A
Signed: Mail Supervising ASME Codes Engineer Date: 7/14/99
Owner or Owner's Designee, Title
CERTIFICATE OF INSPECTION
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and
the State or Province of California, and employed by Arkwright Mutual Insurance Company of
Waltham. Massachusetts have inspected the components described in this Owner's Report during the period
Waitham. Massachusetts have inspected the components described in this Owner's Report during the period
04/24/99 to $07/13/99$, and state that to the best of my knowledge and belief, the Owner
has performed examinations and taken corrective measures described in this Owner's Report in accordance with the
requirements of the ASME Code, Section XI.
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the
examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his
employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or
connected with this inspection.
Commissions 1862 California
Inspector's Signature National Board, State, Province, and Endorsements
hispector's Signature
A contract of the second se
Date Hug 7, 1999

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS As Required by the Provisions of the ASME Code Section XI

,	<u></u>	Sauthan California Edizon Company	Sheet 1 of 1 Unit:	2	
٤.	Owner:	Southern California Edison Company 2244 Walnut Grove Avenue	MO:	2 99041368000	
		Rosemead, California 91770	FCN:	F16640M	
				ASME SECTION 2	VT DATA 0294
2. Plant:	Plant:	San Onofre Nuclear Generating Station	Rspec.	990400907-12	MDAIA-0304,
		San Clemente, California 92674-0128	P&ID:	40112B (F5)	
3.	Work Per	formed by: Southern California Edison Company	N-5:	S2-1201-4	
			Type C	ode Symbol Stamp:	N/A
I Identifie		cation of System: Safety Injection and Shutdown Cooling Authorization			N/A
F -	10010100	and of System. Sheet, mjorith and Shukdown cooring	Expirat	ion Date:	N/A

5. (a) Applicable Construction Code: <u>ASME Section III, Class 2 (NC), 1971 Edition. Summer 1973 Addenda: Code Case:</u> <u>None</u>

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Edition. No Addenda</u>

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name Of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
14" 300# Swing Check Valve	Anchor/Darling	E9877-7-4	N/A	S21201MU202	1982	Repaired	Yes

7. Description of Work:

2

For the valve located in plant position S21201MU202, the disc nut was welded to the threaded disc post in accordance with FCN F16640M and weld record WR2-99-289.

8. Tests Conducted: N/A

Pres: N/A

Temp: <u>N/A</u>

9. Remarks : None.

(Applicable Manufacturer's Data Reports are available on-site)	
CERTIFICATE OF COMPLIANCE	
We certify that the statements made in the report are correct and this of the ASME Code, Section XI.	
Type Code Symbol Stamp: N/A	
Certificate of Authorization No: N/A Expiration Date: N/A Signed:	
CERTIFICATE OF INSPECTION	
I. the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> , and employed by <u>Arkwright Mutual Insurance Company</u> of <u>Waltham, Massachusetts</u> have inspected the components described in this Owner's Report during the period <u>04/22/99</u> to <u>07/13/99</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.	
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning to examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection. Commissions 1862 California Inspector's Signature	ne
Date 13, 1999	

As Required by the Provisions of the ASME Code SectionXI

1. Owner:	Southern California Edison Company 2244 Walnut Grove Avenue Rosemead, California 91770	Unit: N MO: 99050737000 Rspec: GEN-166 R1
2. Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-0128	P&ID: N/A N-5: N/A
3. Work Pe	rformed by: Southern California Edison Company	Type Code Symbol Stamp: N/A Authorization No: N/A
4. Identific	ation of System: Main Steam	Expiration Date: N/A

5. (a) Applicable Construction Code: ASME Section III, Class 2, 1974 Edition, Summer 1974 Addenda: Code Case: None

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Edition. No Addenda

6.	Identification o	of Components Re	paired or Re	placed and Re	placement Components:
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Name of Component	Name Of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Replaced or Replaced or Replacement	ASME Code Stamped Yes/No
1 3/8" x length 36" All Thread Stock (14 ea)	Nova Machine Products	Ht.#97138, Ht. Code LBB	N/A	RSO-1584-98, SA193 Gr.B7 (CR- 3005-96)	N/A	Replacement	No
1 3/8" x length 36" All Thread Stock (40 ea)	Nova Machine Products	Ht.#28007	N/A	RSO-1268-98, SA193 Gr.B7 (CR- 3005-96)	N/A	Replacement	No

7. Description of Work:

(162) spare replacement studs (for the inlets of the main steam safety valves) were manufactured by cutting to length and then machining as necessary from all-thread stock. Fourteen pieces of all-thread stock (RSO-1584-98) were cut into studs (42 each, 9" lengths) and forty pieces of all-thread stock (RSO-1268-99) were cut into studs (120 each, 9" lengths), with the required markings being transferred to the cut pieces in accordance with Repair Specification GEN-166 Revision 1 and DWG SO23-507-3-17, DCN #7.

8. Tests Conducted: N/A

Pressure: <u>N/A</u>

Temp: <u>N/A</u>

NOTE:

Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x 11 in., (2) information in Items 1 through 6 on this report is included on each sheet, 3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

9. Remarks : CR-3005-96 reconciles the replacement studs which were certified to ASME III-2, 1989 Edition. No Addenda.

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(Appheable Manufacture's Data Reports' are available on-site)
CERTIFICATE OF COMPLIANCE
We certify that the statements made in the report are correct and this of the ASME Code, Section XI.
Type Code Symbol Stamp: N/A
Certificate of Authorization No: N/A Expiration Date: N/A Signed: <u>U/MC Supervising ASME Codes Engineer</u> Date: <u>5/3/00</u> Owner or Owner's Designee, Title
CERTIFICATE OF INSPECTION
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> , and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>OG/OI/99</u> to <u>OS/OS/OD</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI. By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his
employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.
Inspector's Signature National Board, State, Province, and Endorsements
Date Man 4, 200

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	As Required by the Provisions of the ASME C	code Section 7	xa	
1. Owner:	Southern California Edison Company	Unit:	A	
I. Owner.	2244 Walnut Grove Avenue	MO:	99051280000	
	Rosemead, California 91770	Rspec	: ASME SECTION	ON XI DATA-0207
		PID:	N/A	•
2. Plant:	San Onofre Nuclear Generating Station	N5:	N/A	
	San Clemente, California 92674-012	_		77/4
1	Council tom California Edison Company		Code Symbol Sta	
3. Work Pe	rformed by: Southern California Edison Company		rization No:	N/A
4. Identifica	ation of System: Safety Injection and Shutdown Cooling	Expira	ation Date:	N/A
5. (a) Appli	icable Construction Code: ASME Section III, Class 2, 1974	4 Edition	n, Summer 1974	Addenda; Code Case: None

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Editon, No Addenda

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
6"x8" Relief Valve (L-Top)	Crosby Valve & Gage	N60061-00-0001	N/A	026-44409-N60061-00- 0001-IST	1978	—	Yes
Adjusting Bolt	Crosby Valve & Gage	N91316-40- 0014, Ht.# 656369	N/A	RSO-1006-86, SA479 316 (CR-2005-93)		Replacement	
1"-8 x 6" All-Thread Stud (2)	Nova Machine Products	Ht.# 95369	N/A	RSO-0041-97, SA193 B7 (CR-3005-96)	N/A	Replacement	No

7. Description of Work:

The relief valve (S/N N60061-00-0001) that was removed from plant position 3PSV9349 on MO 98070177 was rebuilt using a new replacement adjusting bolt and (2) new replacement bonnet studs. The (2) new 6" bonnet studs were fabricated on MO 00071187. The rebuilt valve was bench tested and returned to stock.

8. Tests Conducted: N/A

Pressure: N/A

Temp: N/A

Remarks: CR-2005-93 reconciles the replacement adjusting bolt which was certified to ASME III-2, '83 Ed., W.
 '84 Add. CR-3005-96 reconciles the replacement bonnet studs which were certified to ASME III-2, '89 Ed., No Add.

(Applicable Manufacturer's Data Reports are available on-site)
CERTIFICATE OF COMPLIANCE
We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI.
Type Code Symbol Stamp: N/A
Certificate of Authorizaton No: N/A Expiration Date: N/A
Signed: <u>Alle Supervising ASME Codes Engineer</u> Date: <u>9/26/00</u> Owner or Owner's Designee, Title
CERTIFICATE OF INSPECTION
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> , and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period $\frac{0.5}{25} + \frac{0.9}{25} + \frac{0.9}{25$
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.
Commissions <u>1822</u> California Inspector's Signature National Board, State, Province, and Endorsements
Date Apt. 26,200

As Required by the Provisions of the ASME Code Section XI

1. Owner:	Southern California Edison Company 2244 Walnut Grove Avenue	Unit: MO:	2 99051554000	
	Rosemead, California 91770	Rspec:	ASME SECTIO	N XI DATA-0142
		PID:	40141D (E6)	
2. Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-012	N5:	S2-1301-1	
		Туре (Code Symbol Sta	mp: N/A
3. Work Per	formed by: Southern California Edison Company	Autho	rization No:	N/A
4. Identifica	tion of System: Main Steam	Expira	tion Date:	N/A

5. (a) Applicable Construction Code: ASME Section III. Class 2, 1974 Ed., S.'74 Addenda; Code Case: None

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Editon</u>, No Addenda

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
8" 900# Drag Valve	B&W/CCI	18447-3-1	N/A	2HV8419	1979		Yes
Valve Plug	ССІ	S/N 4, Ht. #242292	N/A	RSO-1627-00, SA182 F11	2000	Replacement	Yes
1 3/8"-8 Heavy Hex Nut (14)	Nova Machine Products	Ht. #69161, Ht. Code LUW	N/A	RSO-0234-99, SA194 Gr.7 (SEE-92-0065, CR- 3004-96)	N/A	Replacement	No

7. Description of Work:

Replaced the valve plug and (14) each bonnet nuts in the valve located in plant position 2HV8419 (s/n 18447-3-1) with inkind replacements.

8. Tests Conducted: <u>System Inservice Pressure Test</u> See: AR 990402126-05

Pressure: NOP

Temp: <u>N/A</u>

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x1 l in. (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

9. Remarks: CR-3004-96 reconciles the replacement nuts which were certified to ASME III-2, 1989 Ed., No Addenda (Reference: SEE 92-0065).

(Applicable Manufacturer's Data Reports are available on-site)
CERTIFICATE OF COMPLIANCE
We certify that the statements made in the report are correct and this <u>replacement</u> conforms to the rules of the ASME Code, Section XI. repair or replacement
Type Code Symbol Stamp: N/A
Certificate of Authorizaton No: N/A Expiration Date: N/A
Signed: A.B.M. Supervising ASME Codes Engineer Date: 01/26/01 Owner or Owner's Designee, Title
CERTIFICATE OF INSPECTION
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> , and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period $\frac{9/18/00}{100}$ to $\frac{1126/00}{100}$, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.
Inspector's Signature Commissions /862 California National Board, State, Province, and Endorsements
Date <u>All, Le, 2000</u>

1. Owner:	Southern California Edison Company 2244 Walnut Grove Avenue Rosemead, California 91770	Unit: A MO: 99051790000 Rspec: ASME SECTION	XI DATA-0207
2. Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-012	PID: N/A N5: N/A Type Code Symbol Stam	
3. Work Per	formed by: Southern California Edison Company	Authorization No:	N/A
4. Identifica	tion of System: Safety Injection and Shutdown Cooling	Expiration Date:	N/A

5. (a) Applicable Construction Code: ASME Section III, Class 2, 1974 Edition, Summer 1974 Addenda; Code Case: None

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Editon, No Addenda</u>

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Replaced or Replacement	ASME Code Stamped Yes/No
6"x8" Relief Valve (L-Top)	Crosby Valve & Gage	N60061-00-0004		026-44409-N60061-00- 0004-IST	1984		Yes
1"-8 x 6" All-Thread Stud (2)	Nova Machine Products	Ht.# 95369	N/A	RSO-0041-97, SA193 B7 (CR-3005-96)	N/A	Replacement	No

7. Description of Work:

The relief valve (S/N N60061-00-0004) that was removed from plant position 2PSV9349 on MO 98051989 was rebuilt using (2) new replacement bonnet studs. The (2) new 6" bonnet studs were fabricated on MO 00071187. The rebuilt valve was bench tested and returned to stock.

8. Tests Conducted: N/A

Pressure: N/A

Temp: N/A

FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS

As Required by the Provisions of the ASME Code Section XI

9. Remarks: CR-3005-96 reconciles the replacement bonnet studs which were certified to ASME III-2, 1989 Ed., No Add.

(Applicable Manufacturer's Data Reports are available on-site)
CERTIFICATE OF COMPLIANCE
We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI. repair or replacement
Type Code Symbol Stamp: N/A
Certificate of Authorizaton No: N/A Expiration Date: N/A
Signed: <u>Butter</u> Supervising ASME Codes Engineer Date: <u>9/26/00</u> Owner or Owner's Designee, Title
CERTIFICATE OF INSPECTION
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period $\underline{O(4/24/96)}$ to $\underline{O(4/24/96)}$, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.
Inspector's Signature Commissions /SG2 California Inspector's Signature
Date Sept. 26,2000

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As Required by the Provisions of the ASME Code SectionXI

 Owner: Plant: 	Southern California Edison Company 2244 Walnut Grove Avenue Rosemead, California 91770 San Onofre Nuclear Generating Station San Clemente, California 92674-0128	Unit: 2 MO: 99060050000 Rspec: ASME SECTION XI DATA-0460 P&ID: 40124B (C4) N-5: S2-1208-5)
	erformed by: Southern California Edison Company cation of System: Chemical and Volume Control	Type Code Symbol Stamp:N/AAuthorization No:N/AExpiration Date:N/A	

5. (a) Applicable Construction Code: ASME Section III, Class 2, 1974 Edition, Summer 1974 Addenda; Code Case: None

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Edition, No Addenda</u>

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name Of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Replaced or Replacement	ASME Code Stamped Yes/No
1 1/2" x 2" Nozzle Type Relief Valve	Crosby Valve & Gage	N59380-00-0001	N/A	2PSV9227	1977	Replaced	Yes
1 1/2" x 2" Nozzle Type Relief Valve	Crosby Valve & Gage	N59380-00-0013	N/A	025-83508, Rebuilt on MO 99100415	1985	Replacement	Yes

7. Description of Work:

Replaced the relief valve (S/N N59380-00-0001) located in plant position 2PSV9227 with an in-kind rebuilt and tested spare (S/N N59380-00-0013). The replacement spare was rebuilt and tested under MO 99100415. The removed valve to be rebuilt under MO 99121408.

8. Tests Conducted: <u>System Functional Pressure Test</u> Pressure: <u>NOP</u> See: <u>AR 990601263-01, 991200976-02</u> Temp: N/A

9. Remarks : None.

(Applicable Manufacturer's Data Reports are svallable on-site)
CERTIFICATE OF COMPLIANCE
We certify that the statements made in the report are correct and this of the ASME Code, Section XI.
Type Code Symbol Stamp: N/A
Certificate of Authorization No: N/A Expiration Date: N/A Signed: <u>Multiple Supervising ASME Codes Engineer</u> Date: <u>1/25/30</u> Owner or Owner's Designee, Title
CERTIFICATE OF INSPECTION
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> , and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period to <u>0//25/00</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.
Inspector's Signature Commissions <u>1862</u> <u>California</u> National Board, State, Province, and Endorsements
Date 15 2000

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As Required by the Provisions of the ASME Code Section XI

1. Owner:	Southern California Edison Company	Unit: 2	
	2244 Walnut Grove Avenue	CWO: 99060413000	
	Rosemead, California 91770	Rspec: GEN-170	
		PID: 40111A	
2. Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-012	N5: S2-1201-3	
3 Work Pe	rformed by: Southern California Edison Company	Type Code Symbol Sta	mp: N/A
J. WOIRIC	normed by: Southern Camornia Edison Company	Authorization No:	N/A
4. Identifica	ation of System: Reactor Coolant	Expiration Date:	N/A
E (a) A			

5. (a) Applicable Construction Code: <u>ASME Section III, Class 1, 1971 Edition, Summer 1971 Addenda (SG), Class 1, 1989</u> Edition, No Addenda (tube sleeves); Code Case: N-20

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Editon, No Addenda</u>

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
Steam Generator	ABB Combustion Engineering	71270-2	22219	S21301ME088P	1976		Yes
Weld-In Tube Sleeves, hot leg *	Framatome Techn. Inc.	Ht. Code 763898/752250	N/A	RSO-1848-00, SB-163, N06690	N/A	Repaired/ Replacement	No

*See attached SONGS-2 SLEEVE LIST S/G 88 Oct. 00 2C11 (2 pages) for tube locations (row/column) of installed tubesleeves.

7. Description of Work:

Framatome, a qualified contractor, performed tubesleeving in the steam generator channelheads under the Site ASME Section XI Program. The work group responsible for coordinating and overseeing this work was Nuclear Construction (NCE). A visual examination (VT-1) of the steam generator tube sleeve welds was performed satisfactorily.

8. Tests Conducted: N/A

Pressure: N/A

Temp: N/A

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x 11 in. (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

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9. Remarks: None.

(Applicable Manufacturer's Data Reports are available on-site)
CERTIFICATE OF COMPLIANCE
We certify that the statements made in the report are correct and this repair and replacement conforms to the rules of the ASME Code, Section XI.
Type Code Symbol Stamp: N/A
Certificate of Authorizaton No: N/A Expiration Date: N/A
Signed:
CERTIFICATE OF INSPECTION
L the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the company nents described in this Owner's Report during the period <u>JOPOC</u> to <u>OPOS</u> to <u>OPOS</u> and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective n easures described in unis Conner's Report in accordance with the requirements of the ASNE Code, Section XI.
By signing this certificate, neither the Inspector not his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.
Inspector's Signature Commissions 1862 California National Board, State, Province, and Endorsements
Date + A.M. 8, 2001

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SG 88	72	78	Sleeve	A	9	sci	1SH	-0.05	52	79	8	CRG WE/BD
SG 88	22	32	Sleeve	Ą	8	SAI	TSH	+1.53	8	80	8	CREVING 100
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As Required by the Provisions of the ASME Code Section XI

1. Owner:	Southern California Edison Company 2244 Walnut Grove Avenue	Unit: 2 CWO: 99060414000
	Rosemead, California 91770	Rspec: GEN-170
		PID: 40111A
2. Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-012	N5: S2-1201-3
3. Work Pe	rformed by: Southern California Edison Company	Type Code Symbol Stamp: N/A Authorization No: N/A
4. Identifica	ation of System: Reactor Coolant	Expiration Date: N/A

^{5. (}a) Applicable Construction Code: <u>ASME Section III, Class 1, 1971 Edition, Summer 1971 Addenda (SG); Class 1, 1989</u> Edition, No Addenda (tube sleeves): Code Case: N-20

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Editon. No Addenda

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
Steam Generator	ABB Combustion Engineering	71270-1	22218	S21301ME089P	1976		Yes
Weld-In Tube Sleeves, hot leg *	Framatome Techn. Inc.	Ht. Code 763898/752250	N/A	RSO-1848-00, SB-163, N06690	N/A	Repaired/ Replacement	No

*See attached SONGS-2 SLEEVE LIST S/G 89 Oct. 00 2C11 (2 pages) for tube locations (row/column) of installed tubesleeves.

7. Description of Work:

Framatome, a qualified contractor, performed tubesleeving in the steam generator channelheads under the Site ASME Section XI Program. The work group responsible for coordinating and overseeing this work was Nuclear Construction (NCE). A visual examination (VT-1) of the steam generator tube sleeve welds was performed satisfactorily.

8. Tests Conducted: N/A

Pressure: <u>N/A</u>

Temp: <u>N/A</u>

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x 1 1 in. (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

9. Remarks: None.

(Applicable Manufacturer's Data Reports are available on-site)
CERTIFICATE OF COMPLIANCE
We certify that the statements made in the report are correct and this repair and replacement conforms to the rules of the ASME Code, Section XI.
Type Code Symbol Stamp: N/A
Certificate of Authorizaton No: N/A Expiration Date: N/A
Signed:
CERTIFICATE OF INSPECTION
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period $\frac{10/26/00}{10/26/00}$ to $\frac{01/08/00}{00}$, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.
Inspector's Signature Commissions <u>1862</u> California National Board, State, Province, and Endorsements
Dare <u>fran. B. 2001</u>

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SONGS-2 SLEEVE LIST S/G 89 Oct. 00 2C11

	S/G	Row	Col	Hot Leg	Coid Leg	Reas	on For Plu	Indipa	Tube	Siv	Rev.	LOCATION VERIF/DATE
	SG 89	16	24	Sleeve	NA	ID SC			Qty	Qty	No.	
	SG 89	9	29	Sieeve	NA					1	00	E 1/2/0;
	SG 89	12	40	Sleeve	NA	ID SA			2	2	00	@ 11/2/or
	SG 89	60	48	Sieeve	NA	ID SC		and the second	3	3	00	@ 11/2/01
	SG 89	83	49	Sieeve	NA	ID SC		and the second	4	4	00	0 11/2/00
	SG 89	8	52	Sleeve	NA				5	5	00	C: 11/2/02
	SG 89	28	52	Sleeve	NA	OD SC		in the second	6	6	00	Q 11/2/00
	SG 89	84	54	Sleeve	NA	ID SC				7	00	E 11/2/00
x	SG 89	65	57	Sleeve	NA	OD SA			8	8	00	E 1, /2/01
	SG 89	62	58	Sleeve	NA	ID SA		-5.37	9	9	00	@ i.12/00
	SG 89	26	60	Sleeve	NA	ID SA		-2.29	10	10	00	· C 11/2/00
	SG 89	11	63	Sleeve	NA	OD SC		+0.11		11	00	E 11/2/00
	SG 89	11	63	Sleeve	NA	ID SA		-0.74	12	12	00	11/2/00
	SG 89	34	64	Sleeve	NA	OD SA			12 13	12	00	11
	SG 89	25	66	Sleeve	NA	ID SAI		+1.31		13	00	@ 11/2/00
	SG 89	57	67	Sleeve	NA	OD SAI		-3.53 +3.51	14 15	14	00	@ 11/20
	SG 89	57	67	Sleeve	NA	OD SAL	@ TSH	+3.38	15	15	00	@ 11/5/00
	SG 89	63	67	Sieeve	NA	ID SCI	@ TSH	-0.14	16	15	00	-11-11
	SG 89	44	68	Sleeve	NA	OD MAI	@ TSH	+0.55	10	16 17	00	@ 11/5/00
	SG 89	58	70	Sleeve	NA	OD SAI	@ TSH	+2.53	18	17	00	\$ 11/5/00
X	SG 89	78	82	Sleeve	NA	ID SAI	@ TSH	-6.23	19	19	00	Q 11/5/0
	SG 89	56	84	Sleeve	NA	OD SCI	@ TSH	+0.04	20	20	00	1/11/2/00
	SG 89	120	84	Sleeve	NA	OD SCI	@ TSH	+0.04	21	20	00	C 11/2/00
	SG 89	83	89	Sleeve	NA	ID SCI	@ TSH	-0.11	22	22	00	G 11/2/00
	SG 89	107	89	Sleeve	NA	OD SCI	@ TSH	+0.07	23		00	G 11/1/00
	SG 89	64	92	Sleeve	NA	OD SAI	@ TSH	+1.77	-24	23 24	00	O il 1/00
	SG 89	57	93	Sieeve	NA	ID SAI	@ TSH	-1.25	25	24	00	Q 11/2/00
	SG 39 (57	93	Sieeve	NA	ID SAI	@ TSH	-5.73	25		00	
Ĩ	SG 89	63	93	Sleeve	NA I	OD SAI	@ TSH	+1.32	26	25 26	00	11
[SG 89	64	96	Sleeve	NA	ID SAI	@ TSH	-0.92	20	20 27	00	C 11/2/08
	SG 89	64	98	Sleeve	NA	OD SAI	@ TSH	+0.63	28	28	00.	111100
	SG 89	78	98	Sleeve	NA	ID SAI	@ TSH	-6.09	29	29	00	7
[SG 89	54	102	Sleeve	NA	ID SAI	@ TSH	-5.96	30	30	00	Ex 1,121,00
AG	SG 89	41	105	Sleeve	NA	ID SAI	@ TSH	-3.24	31	31	00	P. 11/2/00.
49	SG 89	34	106	Sleeve	NA	ID SAI	@ TSH	-4.71	32	32		hin 11/200
49	SG 89	38	106	Sleeve	NA	ID SAI	@ TSH	-0.61	33	33		4m 11/2/2000
[SG 89	56	106	Sieeve	NA	OD SAI	@ TSH		34			upu .c/z/2000
49 [SG 89	36	108	Sleeve	NA	ID SAI	the second s	-1.16	35	<u>34</u> 35	00	E 1/2/00
4-	SG 89	37 .	109	Sleeve	a de la companya de l	OD SAI		+1.30	36		_	WHU 11/2/2000
49	the second se		110	Sleeve	NA	ID SAI	@ TSH		37	36 37	~~ !	the 117. /200
Π	SG 89		110	Sleeve	NA	ID SAI		-1.34	37	37		NAM infituoso
Γ	SG 89	the second s	10	Sleeve	NA	ID SAI		-3.46	37	37	00	
49	SG 89	the second s	10	Sleeve		OD SAI		+1.01	38	the second s	00	
45	SG 89		10	Sleeve		OD SAI		+2.13	39	38 39	00 T	un 11/2/2000
— Г		The second s	11.	Sleeve		OD SCI		+0.02		the second se		WM 11/2/2010
-							- non	TU.UZ	40	40	00	um il/1200

SONGS-2 **SLEEVE LIST** S/G 89 Oct. 00 2C11

Us #				•			Tube	Slv	Rev.	LOCATION
	S/G	Row	Col	Hot Leg	Cold Leg	Reason For Plugging	Qty	Qty	No.	VERIF / DATE
AT. AG	SG 89	21	113	Sleeve	NA	OD \$CI @ TSH +0.03	41	41	.00	ilisan 11/2/200
49	SG 89	37	113	Sleeve	NA	ID SAI @ TSH -1.94	42	42	00	M+4 11/2/2000
۲¥	SG 89	49	113	Sleeve	NA	OD SAI @ TSH +1.71	43	43	00	4 Juc 11/2/200
47	SG 89	59	113	Sleeve	NA	ID SAI @TSH -5.27	44	44	00	Kular / 11/2 /2000:
•	SG 89	59	113	Sleeve	NA	ID SAI @ TSH -5.68	44	44	00	
15	SG 89	48	114	Sieeve	NA	ID SAI @TSH -5.03	45	45	00	45au 11/2/200
-4-7	SG 89	62	116	Sleeve	NA	ID SAI @ TSH -5.80	46	46	00	min/ 11/2/2000
	SG 89	62	116	Sleeve	NA	ID SAI @ TSH -6.31	46	46	00	· · · · · · · · · · · · · · · · · · ·
47	SG 89	68	118	Sieeve	NA	ID SAI @ TSH -5.18	47	47	00	lesin 11/2/200
46	SG 89	20	120	Sleeve	NA	ID SCI @TSH -6.87	48	48	00	Rijun 11/2/2000
	SG 89	82	122	Sleeve	NA	ID SCI @ TSH -0.09	49	49	00	M. 11/2/00
49	SG 89 -	8	124	Sleeve	NA	ID SCI @TSH -5.14	50	50	00	Wim U/2/2000
44	SG 89	9	125	Sieeve	NA	ID SCI @TSH -6.44	51	51	00	45% XL 72000
	SG 89	9	125	Sleeve	NA	ID SCI @TSH -4.95	51	51	00	
41	SG 89	46	126	Sleeve	NA	ID SCI @TSH -0.10	52	52	00	how 11/2/2000
44	SG 89	5	127	Sieeve	/ NA	ID SCI @TSH -5.86	53	53	00	MIN 11/2 1000
	SG 89	11	129	Sleeve	NA	ID MCI @ TSH -3.84	54	54	00	Auton 11/2/2000
	SG 89	7	133	Sleeve	NA	ID SCI @TSH -7.46	55	55	00	M34 11/2/2001
	SG 89	10	136	Sleeve	NĂ	ID MCI @TSH -4.70	56	56	00	Min 11/2/200
	SG 89	78	136	Sleeve	NA	ID SAI @ TSH -7.48	57	57	00	(P. 1/2/00
	SG 89	78	136	Sleeve	NA	ID SAI @ TSH -6.86	57	57	00	17 - 11
- 44	SG 89	19	139	Sleeve	NA	ID SCI @TSH -5.04	58	58	00	Kifte / 11/2/2000
	SG 89	8	146	Sleeve	NA	ID SAI @ TSH -6.46	59	59	00	@ 11/5/00

<u>x</u> Carl D. Hunstern 11/2/00 x Chardies Jardner 11/02/00 FTI Tube Integrity Engineering FTI Level III

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<u>x A.J. Mathemy 11-2-00 x Ard Aluc 11/2/00</u> SCE Engineering Concurrence SCE Engineering Concurrence

As Required by the Provisions of the ASME Code Section XI

1				
1	. Owner:	Southern California Edison Company	Unit: 2 '	
		2244 Walnut Grove Avenue	MO: 99070170000	
		Rosemead, California 91770	FCN: F20327M	
			Rspec: GEN-173	
2	. Plant:	San Onofre Nuclear Generating Station	PID: 40141A	
		San Clemente, California 92674-012	N5: S2-1201-3	
3	. Work Per	formed by: Southern California Edison Company	Type Code Symbol Sta	mp: N/A
			Authorization No:	N/A
4	. Identifica	tion of System: Reactor Coolant	Expiration Date:	N/A
5	. (a) Applie	cable Construction Code: ASME Section III, Class 1, 1	971 Edition_S'71 Addenda;	Code Case: None

5. (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Editon. No Addenda

6. Identification of Components Repaired or Replaced and Replacement Component

Name of Component .	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
Steam Generator	CE	71270-2	22219	S21301ME088P	1976		Yes
1 1/2" Threaded Insert w/Retaining Pin (2 each)	ABB Combustion Engineering	Ht. Code M57689	N/A	RSO-0769-99, SA193 B7	N/A	Replacement	No

7. Description of Work:

Installed threaded repair inserts in steam generator E088 cold leg manway stud holes #18 and #20. The work scope included boring the damaged bolt holes oversize, cutting new threads into the manway pad of the vessel, installing the inserts, drilling/pinning the inserts in place and machining the pins and inserts flush with the vessel manway pad surface. NDE examination (2PT-044-00) was performed after machining on the manway pad surface of stud hole #20 (stud hole #18 didn't require a PT) with satisfactory results.

8. Tests Conducted: System Leakage Pressure Test

Pressure: NOP

Temp: NOT

VT-2 performed per Procedure SO23-XVII-3.1.

9. Remarks: None.

(Applicable Manufacture's Data Reports are available on-site)
CERTIFICATE OF COMPLIANCE
We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI. repair or replacement
Type Code Symbol Stamp: N/A
Certificate of Authorizaton No: N/A Expiration Date: N/A
Signed: Supervising ASME Codes Engineer Date: 1/21/co Owner or Owner's Designee, Title
CERTIFICATE OF INSPECTION
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> , and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>10/10/00</u> to <u>11/22/00</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection. Inspector's Signature
Date 101. 22, 2000

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As Required by the Provisions of the ASME Code Section XI

1. Owner:	Southern California Edison Company	Unit: 2	
•	2244 Walnut Grove Avenue	MO: 99080603000	
	Rosemead, California 91770	Rspec: ASME SECTIO PID: 40111B (G5)	N XI DATA-0173
2. Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-012	N5: S2-1201-2	
3. Work Pe	rformed by: Southern California Edison Company	Type Code Symbol Star	np: N/A
		Authorization No:	N/A
4. Identifica	ation of System: Reactor Coolant	Expiration Date:	N/A
5. (a) Appli	icable Construction Code: ASME Section III, Class 1, 1	974 Edition, No Addenda; C	Code Case: None

5. (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Editon</u>, No Addenda

6. Identification of Components Repaired or Replaced and Replacement Component

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
6" x 8" Pressurizer Safety Valve	Dresser	BS-03212	N/A	2PSV0200	1978	Replaced	Yes
6" x 8" Pressurizer Safety Valve	Dresser	BS-03209	N/A	RSO-0549-97, Tested Spare	1978	Replacement	Yes

7. Description of Work:

,

The pressurizer safety valve was replaced for preventative maintenance action with a set-point tested spare valve. A VT-1 examination was performed on the existing inlet flange bolting with satisfactory results. A VT-3 examination of the internal surface of the valve body was not required (VT-3 examination was performed on 96042078 on 5/17/97 and is only required once per ten years). The removed valve was placed into the rebuild program.

8. Tests Conducted: System Leakage Pressure Test

Pressure: NOP

Temp: NOT

VT-2 performed per Procedure SO23-XVII-3.1.1

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x11 in, (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

9. Remarks: None.

(Applicable Manufacturer's Data Reports are available on-site)								
CERTIFICATE OF COMPLIANCE								
We certify that the statements made in the report are correct and this <u>replacement</u> conforms to the rules								
of the ASME Code, Section XI. repair or replacement								
Type Code Symbol Stamp: N/A								
Certificate of Authorizaton No: N/A Expiration Date: N/A								
Ault								
Signed: Supervising ASME Codes Engineer Date: 1/16/01								
CERTIFICATE OF INSPECTION								
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>O3/03/00</u> to <u>01/0/0/</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.								
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.								
Date Jan. 10, 2001								

As Required by the Provisions of the ASME Code Section XI

1				
•	1.	Owner:	Southern California Edison Company	Unit: 2 MO: 99080621000
			2244 Walnut Grove Avenue	
			Rosemead, California 91770	Rspec: GEN-106 R2
				PID: 40111A
	2.	Plant:	San Onofre Nuclear Generating Station	N5: S2-1201-3
			San Clemente, California 92674-012	
	3	Work Per	formed by: Southern California Edison Company	Type Code Symbol Stamp: N/A
	٦.	WOIKICI		Authorization No: N/A
	4.	Identifica	tion of System: Reactor Coolant	Expiration Date: N/A
	5.	(a) Appli	cable Construction Code: ASME Section III, Class 1, 19	71 Ed., W. 71 Add. (Pump), 1980 Ed., S. 82 Add. (Seal
		(/ 	Cartridge). Code Case: None	

5. (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Editon. No Addenda</u>

6. Identification of Components Repaired or Replaced and Replacement Component

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
36" Reactor Coolant Pump	Byron Jackson	701-N-0558		S21201MP001	1977		Yes
Mechanical Seal Cartridge	Bingham- Williamette	1639057-2	1173	S023-CART-#23	1986	Replaced	Yes
Mechanical Seal Cartridge	Bingham- Williamette	1659057-11	1219	RSO-2320-88, SO23- CART-#25	1986	Replacement	Yes

7. Description of Work:

The RCP seal cartridge was replaced with a spare which had been rebuilt in accordance with the SONGS rebuild program. The removed seal cartridge was placed into the SONGS rebuild program to be rebuilt under MO 00110595.

8. Tests Conducted: System Leakage Pressure Test

Pressure: NOP

Temp: NOT

VT-2 performed per Procedure SO23-XVII-3.1.

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x11 in. (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

9. Remarks: None.

(Applicable Manufacture's Data Reports are available on-site)						
CERTIFICATE OF COMPLIANCE						
We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI. repair or replacement						
Type Code Symbol Stamp: N/A						
Certificate of Authorizaton No: N/A Expiration Date: N/A						
Signed:						
CERTIFICATE OF INSPECTION						
L the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>O//26/00</u> to <u>Mutual Insurance</u> and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.						
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection. Inspector's Signature Inspector's Signature National Board, State, Province, and Endorsements						
Inspector's Signature/ National Board, State, Province, and Endorsements						

As Required by the Provisions of the ASME Code Section $\boldsymbol{X}\boldsymbol{I}$

1. Ow	vner:	Southern California Edison Company	Unit:	2	
		2244 Walnut Grove Avenue	MO:	99080631000	
		Rosemead, California 91770	Rspec:	ASME SECTION	XI DATA-0185
			PID:	40141D	
2. Pla	int:	San Onofre Nuclear Generating Station	N5:	S2-1301-1	
		San Clemente, California 92674-012			
o 117.	. 1	Same die Geuthern Colifornie Edison Company	Type (Code Symbol Stamp	N/A
э. wo	ork Pen	formed by: Southern California Edison Company	Autho	rization No:	N/A
4. Ide	entificat	ion of System: Main Steam	Expira	ation Date:	N/A
5. (a)	Applic	able Construction Code: ASME Section III. Class 2. 1974	Ed., S.	'74 Addenda: Code	Case: None

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Editon, No Addenda

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
6" x 10" Main Steam Safety Valve	Crosby Valve & Gage	N58737-01-0028	N/A	2PSV8401	1977	Replaced	Yes
6" x 10" Main Steam Safety Valve	Crosby Valve & Gage	N58737-01-0014	N/A	RSO-0016-00	1976	Replacement	Yes
1 3/8" x 9" Inlet Studs (12)	Nova Machine Products	Ht. #97138, Tr. LBB	N/A	RSO-1584-98, SA193 Gr. B7 (See MO 99050737)	N/A	Replacement	No
1 3/8"-8 Heavy Hex Nuts (12)	Nova Machine Products	Ht. #69161	N/A	RSO-0234-99, SA194 Gr.7 (CR-2001-93, SEE- 92-0065)	N/A	Replacement	No

7. Description of Work:

The main steam safety valve located in plant position 2PSV8401 (s/n N58737-01-0028) was replaced as a scheduled preventative maintenance action with a spare valve (s/n N58737-01-0014) which had been returned to the vendor for rework and testing. The inlet bolting was also replaced. (12) each studs and (12) each nuts were replaced (the studs were manufactured on MO 99050737). The removed valve was placed into the rebuild program to be rebuilt under MO 00010974.

8. Tests Conducted: <u>System Inservice Pressure Test</u> See: AR 000300902-03

Pressure: NOP

Temp: NOT

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x 1 1 in. (2) information in Items 1 through 6 on this report is included on each sheet. (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

9. Remarks: CR-2001-93 reconciles the replacement nuts which were certified to ASME III-2, 1989 Ed., No Add.; CR-3005-96 reconciles the replacement studs which were certified to ASME III-2, 1989 Ed., No Add.

(Applicable Manufacturer's Data Reports are available on-site)								
CERTIFICATE OF COMPLIANCE								
We certify that the statements made in the report are correct and this replacement conforms to the rules								
of the ASME Code, Section XI. repair or replacement								
Type Code Symbol Stamp: N/A								
Certificate of Authorizaton No: N/A Expiration Date: N/A								
Signed: Supervising ASME Codes Engineer Date: 1/8/01								
Owner or Owner's Designee, Title								
CERTIFICATE OF INSPECTION								
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>OU/OH/OO</u> to <u>OU/OH/O/</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.								
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.								
Commissions 1862. California								
Inspector's Signature / National Board, State, Province, and Endorsements Date An, 8, 2001								

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As Required by the Provisions of the ASME Code Section XI

	1. Owner: 2. Plant:	Southern California Edison Company 2244 Walnut Grove Avenue Rosemead, California 91770 San Onofre Nuclear Generating Station	Unit: 2 MO: 99080667000 Rspec: ASME SECTION XI DAT PID: 40111B (G7) N5: S2-1201-2	A-0173
		San Clemente, California 92674-012	Type Code Symbol Stamp: N/A	
	3. Work Pe	rformed by: Southern California Edison Company	Authorization No: N/A	
•	4. Identifica	ation of System: Reactor Coolant	Expiration Date: N/A	
		Lite Construction Code: ASIAE Section III Class 1 1	974 Ed No Add (Valve): 1974 Ed., S	.'74 Add. (Inl

5. (a) Applicable Construction Code: <u>ASME Section III, Class 1, 1974 Ed., No Add. (Valve); 1974 Ed., S.'74 Add. (Inlet</u> <u>Bolting); Code Case: None</u>

5. (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Editon. No Addenda

6. Identification of Components Repaired or Replaced and Replacement Component

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Replaced or Replacement.	ASME Code Stamped Yes/No
6" x 8" Pressurizer Safety Valve	Dresser	BU-06253	N/A	2PSV0201	1980	Replaced	Yes
6" x 8" Pressurizer Safety Valve	Dresser	BU-06254	N/A	RSO-0549-97, Tested Spare	1980	Replacement	Yes
2"-8 x 14 1/2" Stud (2)	Nova Machine Products	Ht. #83633, Ht. Code LPP	N/A	RSO-0146-99, SA193 Gr. B7	N/A	Replacement	No
2"-8 x 14 1/2" Stud (3)	Nova Machine Products	Ht. #96517, Ht. Code FKE	N/A	RSO-0998-97, SA193 Gr. B7	N/A	Replacement	No
2"-8 Heavy Hex Nuts (10)	Nova Machine Products	Ht. #95335, Ht. Code FHZ	N/A	RSO-0904-97, SA194 Gr. 7	N/A	Replacement	No

7. Description of Work:

The pressurizer safety valve was replaced for preventative maintenance action with a set-point tested spare valve. During installation 5 inlet studs and 10 inlet nuts were also replaced. A VT-1 examination was performed on the replacement flange bolting with satisfactory results. A VT-3 examination of the internal surface of the valve body was not required (VT-3 examination was performed on 96042132 on 5/17/97 and is only required once per ten years). The removed valve was placed into the rebuild program.

8. Tests Conducted: System Leakage Pressure Test

Pressure: NOP

Temp: NOT

VT-2 performed per Procedure SO23-XVII-3.1.1

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x11 in. (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is mumbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

9. Remarks: None.

(Applicable Manufacturer's Data Reports are available on-site)							
CERTIFICATE OF COMPLIANCE ·							
We certify that the statements made in the report are correct and this <u>replacement</u> conforms to the rules of the ASME Code, Section XI. repair or replacement							
Type Code Symbol Stamp: N/A							
Certificate of Authorizaton No: N/A Expiration Date: N/A							
Signed:							
CERTIFICATE OF INSPECTION							
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> , and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>03/03/00</u> to <u>0//00</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.							
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.							
Inspector's Signature National Board, State, Province, and Endorsements Date An. 10, 2001							

As Required by the Provisions of the ASME Code Section XI

1. O	Owner: Southern California Edison Company 2244 Walnut Grove Avenue	Unit: 2 MO: 99080671000
	Rosemead, California 91770	Rspec: ASME SECTION XI DATA-0186
		PID: 40141D
2. PI	Plant: San Onofre Nuclear Generating Station San Clemente, California 92674-012	N5: S2-1301-1
3 W	Vork Performed by: Southern California Edison Compan	Type Code Symbol Stamp: N/A
J. W	vork i chormed by. Southern Camornia Edison Compan	Authorization No: N/A
4. Id	dentification of System: Main Steam	Expiration Date: N/A

5. (a) Applicable Construction Code: ASME Section III. Class 2, 1974 Ed., S.'74 Addenda; Code Case: None

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Editon, No Addenda

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
6" x 10" Main Steam Safety Valve	Crosby Valve & Gage	N58737-01-0029	N/A	2PSV8402	1977	Replaced	Yes
6" x 10" Main Steam Safety Valve	Crosby Valve & Gage	N58737-01-0018	N/A	RSO-0016-00	1976	Replacement	Yes
1 3/8" x 9" Inlet Studs (12)	Nova Machine Products	Ht. #97138, Tr. LBB	N/A	RSO-1584-98, SA193 Gr. B7 (See MO 99050737)	N/A	Replacement	No
1 3/8"-8 Heavy Hex Nuts (12)	Nova Machine Products	Ht. #10150	N/A	RSO-0409-00, SA194 Gr.7 (CR-2001-93, SEE- 92-0065)	N/A	Replacement	No

7. Description of Work:

The main steam safety valve located in plant position 2PSV8402 (s/n N58737-01-0029) was replaced as a scheduled preventative maintenance action with a spare valve (s/n N58737-01-0018) which had been returned to the vendor for rework and testing. The inlet bolting was also replaced. (12) each studs and (12) each nuts were replaced (the studs were manufactured on MO 99050737). The removed valve was placed into the rebuild program to be rebuilt under MO 00011032.

8. Tests Conducted: <u>System Inservice Pressure Test</u> See: AR 000300902-03

Pressure: NOP

Temp: NOT

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x 11 in, (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

 Remarks: CR-2001-93 reconciles the replacement nuts which were certified to ASME III-2, 1989 Ed., No Add.: CR-3005-96 reconciles the replacement studs which were certified to ASME III-2, 1989 Ed., No Add.

(Applicable Manufacturer's Data Reports are available on-site)
CERTIFICATE OF COMPLIANCE
We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI.
Type Code Symbol Stamp: N/A
Certificate of Authorizaton No: N/A Expiration Date: N/A
Signed:
CERTIFICATE OF INSPECTION
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> , and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>D2D3/60</u> to <u>D1/08/0/</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.
Inspector's Signature Commissions 1862 California National Board, State, Province, and Endorsements
Date Am. 8, 2001

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"As Required by the Provisions of the ASME Code Section XI

1. Owner:	Southern California Edison Company 2244 Walnut Grove Avenue Rosemead, California 91770	Unit: 2 MO: 99080708000 Rspec: ASME SECTIO PID: 40123B (C6)	N XI DATA-0489
2. Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-012	N5: S2-1208-4	
3. Work Per	rformed by: Southern California Edison Company	Type Code Symbol Star Authorization No:	N/A
4. Identifica	ation of System: Chemical and Volume Control	Expiration Date:	N/A

5. (a) Applicable Construction Code: ASME Section III, Class 2, 1974 Edition, No Addenda: Code Case: None

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Editon. No Addenda</u>

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
Heat Exchanger	Ametek	78826	10781	S21208ME062	1977		Yes
1" x 8 1/2" All-Thread Stud (28)	Nova Machine Products	Ht. #69463	N/A	RSO-0604-00, SA193 B7 (CR-3005-96)	N/A	Replacement	No
1"- 8 UNC Heavy Hex Nut (56)	Nova Machine Products	Ht. #8990206, Ht. Code HDF	N/A	RSO-0645-00, SA194 2H (CR-3005-00)	N/A	Replacement	No

7. Description of Work:

Replaced letdown heat exchanger (S21208ME062) cover bolting with in-kind replacements (28) each studs and (56) each nuts.

8. Tests Conducted: <u>System Functional Pressure Test</u> See: AR 000300902-05

Pressure: NOP

Temp: <u>N/A</u>

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x11 in. (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

9. Remarks: CR-3005-96 reconciles the replacement studs which were certified to ASME III-2, 1989 Ed., No Add. CR-3005-00 reconciles the replacement nuts which were certified to ASME III-2, 1989 Ed., No Add.

(Applicable Manufacturer's Data Reports are available on-site)
CERTIFICATE OF COMPLIANCE
We certify that the statements made in the report are correct and this <u>replacement</u> conforms to the rules of the ASME Code, Section XI. repair or replacement
Type Code Symbol Stamp: N/A
Certificate of Authorizaton No: N/A Expiration Date: N/A
Signed:
CERTIFICATE OF INSPECTION
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period to <u>JJOLO OL</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection. Inspector's Signature Commissions 1862 California National Board, State, Province, and Endorsements
Inspector's Signature National Board, State, Province, and Endorsements Date Ann. 20, 2001

As Required by the Provisions of the ASME Code Section XI

1. Owner:	Southern California Edison Company	Unit: 2	
	2244 Walnut Grove Avenue	MO: 99080709000	
	Rosemead, California 91770	Rspec: ASME SECTIC	N XI DATA-0188
		PID: 40141D	
2. Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-012	N5: S2-1301-1	-
2 Weste De	formed have Southorn Collifornia Edison Company	Type Code Symbol Star	mp: N/A
5. WOIK PE	rformed by: Southern California Edison Company	Authorization No:	N/A
4. Identifica	ation of System: Main Steam	Expiration Date:	N/A
5. (a) Appli	cable Construction Code: ASME Section III. Class 2. 1	974 Ed., S.'74 Addenda: Co	de Case: None

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Editon. No Addenda</u>

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name of Manufacturer	Mænufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
6" x 10" Main Steam Safety Valve	Crosby Valve & Gage	N58737-01-0025	N/A	2PSV8404	1977	Replaced	Yes
6" x 10" Main Steam Safety Valve	Crosby Valve & Gage	N58737-01-0005	N/A	RSO-0016-00	1976	Replacement	Yes
1 3/8" x 9" Inlet Studs (12)	Nova Machine Products	Ht. #97138, Tr. LBB	N/A	RSO-1584-98, SA193 Gr. B7 (See MO 99050737)	N/A	Replacement	No
1 3/8"-8 Heavy Hex Nuts (12)	Nova Machine Products	Ht. #69161	N/A	RSO-0234-99, SA194 Gr.7 (CR-2001-93, SEE- 92-0065)	N/A	Replacement	No

7. Description of Work:

The main steam safety valve located in plant position 2PSV8404 (s/n N58737-01-0025) was replaced as a scheduled preventative maintenance action with a spare valve (s/n N58737-01-0005) which had been returned to the vendor for rework and testing. The inlet bolting was also replaced. (12) each studs and (12) each nuts were replaced (the studs were manufactured on MO 99050737). The removed valve was placed into the rebuild program to be rebuilt under MO 00040337.

8. Tests Conducted: <u>System Inservice Pressure Test</u> See: AR 000300902-03

Pressure: NOP

Temp: NOT

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x11 in. (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

9. Remarks: CR-2001-93 reconciles the replacement nuts which were certified to ASME III-2, 1989 Ed., No Add.; CR-3005-96 reconciles the replacement studs which were certified to ASME III-2, 1989 Ed., No Add.

(Applicable Manufacturer's Data Reports are available on-site)
CERTIFICATE OF COMPLIANCE
We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI. repair or replacement
Type Code Symbol Stamp: N/A
Certificate of Authorizaton No: N/A Expiration Date: N/A
Signed:
CERTIFICATE OF INSPECTION
L the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>02/03/00</u> to <u>0//08/0</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection. Commissions 1862 California
Inspector's Signature National Board, State, Province, and Endorsements Date

As Required by the Provisions of the ASME Code Section XI

1. Owner:	Southern California Edison Company 2244 Walnut Grove Avenue Rosemead, California 91770	Unit: 2 MO: 99080725000 Rspec: ASME SECTIC PID: 40141D)N XI DATA-0190
2. Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-012	N5: S2-1301-1	
3. Work Per	rformed by: Southern California Edison Company	Type Code Symbol Star	mp: N/A
	tion of System: Main Steam	Authorization No: Expiration Date:	N/A N/A

5. (a) Applicable Construction Code: ASME Section III, Class 2, 1974 Ed., S. 74 Addenda: Code Case: None

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Editon</u>. No Addenda

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
6" x 10" Main Steam Safety Valve	Crosby Valve & Gage	N58737-01-0022	N/A	2PSV8406	1977	Replaced	Yes
6" x 10" Main Steam Safety Valve	Crosby Valve & Gage	N58737-01-0013	N/A	RSO-0016-00	1976	Replacement	Yes
1 3/8" x 9" Inlet Studs (12)	Nova Machine Products	Ht. #28007	N/A	RSO-1268-99, SA193 Gr. B7 (See MO 99050737)	N/A	Replacement	No
1 3/8"-8 Heavy Hex Nuts (12)	Nova Machine Products	Ht. #69161	N/A	RSO-0234-99, SA194 Gr.7 (CR-2001-93, SEE- 92-0065)	N/A	Replacement	No

7. Description of Work:

The main steam safety valve located in plant position 2PSV8406 (s/n N58737-01-0022) was replaced as a scheduled preventative maintenance action with a spare valve (s/n N58737-01-0013) which had been returned to the vendor for rework and testing. The inlet bolting was also replaced. (12) each studs and (12) each nuts were replaced (the studs were manufactured on MO 99050737). The removed valve was placed into the rebuild program to be rebuilt under MO 00011106.

8. Tests Conducted: <u>System Inservice Pressure Test</u> See: AR 000300902-03

Pressure: NOP

Temp: NOT

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x11 in., (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

9. Remarks: CR-2001-93 reconciles the replacement nuts which were certified to ASME III-2, 1989 Ed., No Add.; CR-3005-96 reconciles the replacement studs which were certified to ASME III-2, 1989 Ed., No Add.

(Applicable Manufacturer's Data Reports are available on-site)
CERTIFICATE OF COMPLIANCE
We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI. repair or replacement
Type Code Symbol Stamp: N/A
Certificate of Authorizaton No: N/A Expiration Date: N/A
Signed:
CERTIFICATE OF INSPECTION
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> , and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnstop, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>OZIOU/OC</u> to <u>OI/OS/O</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.
Commissions <u>1862</u> <u>California</u> Inspector's Signature National Board, State, Province, and Endorsements Date: <u>m 8, 2001</u>

As Required by the Provisions of the ASME Code Section XI

1. Owner:	Southern California Edison Company 2244 Walnut Grove Avenue Rosemead, California 91770	Unit: 2 MO: 99080731000 Rspec: ASME SECTIC PID: 40141D	N XI DATA-019	1
2. Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-012	N5: S2-1301-1 Type Code Symbol Sta	mp: N/A	
	erformed by: Southern California Edison Company	Authorization No: Expiration Date:	N/A N/A	
4. Identific	cation of System: Main Steam	-	1 Creek North	

5. (a) Applicable Construction Code: ASME Section III. Class 2, 1974 Ed., S.'74 Addenda; Code Case: None

1989 Editon. No Addenda (b) Applicable Edition of Section XI Utilized for Repairs or Replacements:

ntification of Components Repaired or Replaced and Replacement Components:

6. Identification of Con Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
6" x 10" Main Steam Safety Valve	Crosby Valve & Gage	N58737-01-0032	N/A	2PSV8407	1977	Replaced	Yes
6" x 10" Main Steam Safety Valve	Crosby Valve & Gage	N58737-01-0008	N/A	RSO-0016-00	1976	Replacement	
1 3/8" x 9" Inlet Studs (12)	Nova Machine Products	Ht. #28007	N/A	RSO-1268-99, SA193 Gr. B7 (See MO 99050737)	N/A		
1 3/8"-8 Heavy Hex Nuts (12)	Nova Machine Products	Ht. #69161	N/A	RSO-0234-99, SA194 -Gr.7 (CR-2001-93, SEE- 92-0065)	N/A	Replacemen	t No

7. Description of Work:

The main steam safety valve located in plant position 2PSV8407 (s/n N58737-01-0032) was replaced as a scheduled preventative maintenance action with a spare valve (s/n N58737-01-0008) which had been returned to the vendor for rework and testing. The inlet bolting was also replaced. (12) each studs and (12) each nuts were replaced (the studs were manufactured on MO 99050737). The removed valve was placed into the rebuild program to be rebuilt under MO 00011110.

8. Tests Conducted: System Inservice Pressure Test See: AR 000300902-03

Pressure: NOP

Temp: NOT

10105

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x 11 in, (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

9. Remarks: CR-2001-93 reconciles the replacement nuts which were certified to ASME III-2, 1989 Ed., No Add.; CR-3005-96 reconciles the replacement studs which were certified to ASME III-2, 1989 Ed., No Add.

(Applicable Manufacturer's Data Reports are available on-site)						
CERTIFICATE OF COMPLIANCE						
We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI.						
Type Code Symbol Stamp: N/A						
Certificate of Authorizaton No: N/A Expiration Date: N/A						
Signed: Supervising ASME Codes Engineer Date: 1/0/01 Owner or Owner's Designee, Title						
CERTIFICATE OF INSPECTION						
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> , and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>D2/D3/D0</u>						
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.						
Date for 8, 2001						

As Required by the Provisions of the ASME Code Section XI

1. Owner:	Southern California Edison Company 2244 Walnut Grove Avenue Rosemead, California 91770	Unit: 2 MO: 99080768000 Rspec: ASME SECTIC	N XI DATA-0191
2. Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-012	PID: 40141D N5: S2-1301-2	27/4
3. Work Pe	rformed by: Southern California Edison Company	Type Code Symbol Star Authorization No:	N/A
4. Identifica	ation of System: Main Steam	Expiration Date:	N/A

5. (a) Applicable Construction Code: ASME Section III, Class 2, 1974 Edition, S. 74 Addenda; Code Case: None

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Editon. No Addenda

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
6" x 10" Main Steam Safety Valve	Crosby Valve & Gage	N58737-01-0033	N/A	2PSV8416	1977	Replaced	Yes
6" x 10" Main Steam Safety Valve	Crosby Valve & Gage	N58737-01-0012	N/A	RSO-0016-00	1976	Replacement	Yes
1 3/8" x 9" Inlet Studs (12)	Nova Machine Products	Ht. #97138 Tr. Code LBB (6); Ht. #28007 (6)	N/A	RSO-1584-98/ RSO-1268- 99, SA193 Gr. B7 (See MO 99050737)	N/A	Replacement	No
1 3/8"-8 Heavy Hex Nuts (12)	Nova Machine Products	Ht. #69161 (4); Ht. #10150 (8)	N/A	RSO-0234-99/ RSO-0409- 00, SA194 Gr.7 (CR-2001- 93, SEE-92-0065)	N/A	Replacement	No

7. Description of Work:

The main steam safety valve located in plant position 2PSV8416 (s/n N58737-01-0033) was replaced as a scheduled preventative maintenance action with a spare valve (s/n N58737-01-0012) which had been returned to the vendor for rework and testing. The inlet bolting was also replaced. (12) each studs and (12) each nuts were replaced (the studs were manufactured on MO 99050737). The removed valve was placed into the rebuild program to be rebuilt under MO 00011169.

8. Tests Conducted: <u>System Inservice Pressure Test</u> See: AR 000300902-03

Pressure: NOP

Temp: <u>NOT</u>

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x11 in., (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

9. Remarks: CR-2001-93 reconciles the replacement nuts which were certified to ASME III-2, 1989 Ed., No Add.; CR-3005-96 reconciles the replacement studs which were certified to ASME III-2, 1989 Ed., No Add.

(Applicable Manufacturer's Data Reports are available on-site)
CERTIFICATE OF COMPLIANCE
We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI. repair or replacement
Type Code Symbol Stamp: N/A
Certificate of Authorizaton No: N/A Expiration Date: N/A
Signed:
CERTIFICATE OF INSPECTION
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> , and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period to <u>DI/DS/D</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.
Date

As Required by the Provisions of the ASME Code Section XI

1. Owner:	Southern California Edison Company 2244 Walnut Grove Avenue	Unit: 2 CWO: 99081503000	
	Rosemead, California 91770	Rspec: GEN-105s	
2. Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-012	PID: 40141A N5: S2-1201-3	
3. Work Per	formed by: Southern California Edison Company	Type Code Symbol Stan	-
	•	Authorization No:	N/A
4. Identifica	tion of System: Reactor Coolant	Expiration Date:	N/A
5. (a) Appli	cable Construction Code ASME Section III, Class 2, 19	71 Edition, S'71 Addenda; C	ode Case: None

5. (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Editon</u>, No Addenda

6. Identification of Components Repaired or Replaced and Replacement Component

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
Steam Generator (E088)	CE	71270-2	22219	S21301ME088	1976		Yes
1 1/2"x 9"-8N-2A Stud (1)	Nova Machine Products	Ht. #78055, Ht. Code NPA	N/A	RSO-1431-99, SA540 Gr. B24 Cl. 3 (Stud #8)	N/A	Replacement	No
1 1/2"-8N-2B Heavy Hex Nut (1)	Nova Machine Products	Ht. #73265 32-2, Ht. Code RZW	N/A	RSO-1076-00, SA193 Gr. B7 (Nut #8)	N/A	Replacement	No

7. Description of Work:

The west secondary manway cover on Steam Generator S21301ME088 was removed and reinstalled. (1) each stud (stud #8) and (1) each nut (nut #8) were replaced with in-kind replacement bolting.

8. Tests Conducted: <u>System Inservice Pressure Test</u> See: AR 000300902-06

Pressure: NOP

Temp: N/A

Note: Supplemental sheets in the form of lists, skewhes, or drawings may be used provided (1) size is 8 1/2 in. x 11 in. (2) information in Items 1 through 6 on this report is included on each shoet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

9. Remarks: None.

(Applicable Manufacturer's Data Reports are available on-site)						
CERTIFICATE OF COMPLIANCE						
We certify that the statements made in the report are correct and this replacement conforms to the rules						
of the ASME Code, Section XI. repair or replacement						
Type Code Symbol Stamp: N/A						
Certificate of Authorizaton No: N/A Expiration Date: N/A						
Signed: <u><i>QUMpichula</i></u> Supervising ASME Codes Engineer Date: <u>12/19/60</u> Owner or Owner's Designee, Title						
Owner of Owner's Designee, The						
CERTIFICATE OF INSPECTION						
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>U25/99</u> to <u>12/19/00</u> , and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.						
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected, with this inspection.						
Inspector's Signature Commissions <u>1862</u> California National Board, State, Province, and Endorsements						
Inspector's Signature National Board, State, Province, and Endorsements Date <u>Alc. 19</u> , 2000						

FORM NIS-2 OWNER'S REPORT FOR R	EPAIRS OR REPLACEMENTS
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As Required by the Provisions of the ASME Code Section XI

1.	Owner:	Southern California Edison Company 2244 Walnut Grove Avenue Rosemead, California 91770		2 99081807000 GEN-105s 40141A	
2.	Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-012	N5:	S2-1201-3	N1/A
3.	Work Perf	formed by: Southern California Edison Company		Code Symbol Stamp: rization No:	N/A N/A
4.	4. Identification of System: Reactor Coolant		Expira	ition Date:	N/A

5. (a) Applicable Construction Code ASME Section III, Class 1, 1971 Edition, S'71 Addenda: Code Case: None

5. (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Editon</u>. No Addenda

6. Identification of Components Repaired or Replaced and Replacement Component

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
Steam Generator	CE	71270-1	22218	S21301ME089	1976	 ·	Yes
1"-8N-2A x 6" Handhole Stud (2)	ABB Combustion Engineering	Ht. #85689	N/A	RSO-2991-91 R1, SA193 B7 (CR-2001-93)	N/A	Replacement	No
1"-8N-2B Handhole Nut (2)	ABB Combustion Engineering	Ht. #11472	N/A	RSO-2991-91 R1, SA193 B7 (CR-2001-93)	N/A	Replacement	No

7. Description of Work:

The handhole cover without the instrument connection on steam generator S21301ME089 was removed and reinstalled using replacement studs (2 each) and nuts (2 each) in location #1 and #4.

8. Tests Conducted: <u>System Inservice Pressure Test</u> See: <u>AR 000300902-07</u>

Pressure: NOP

Temp: NOT

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x 1 1 in. (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

9. Remarks: CR-2001-93 reconciles the replacement bolting which was certified to ASME III-1, 1974 Ed.; W'74 Add. (studs); 1980 Ed.; W'82 Add. (nuts).

the State or Province of <u>California</u> , and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period						
of the ASME Code, Section XI. repair or replacement Type Code Symbol Stamp: N/A Expiration Date: N/A Certificate of Authorizaton No: N/A Expiration Date: N/A Signed: <u>Owner of Owner's Designee, Title</u> CERTIFICATE OF INSPECTION I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> and employed by <u>Factory Mutual Insurance Company</u> of Johnston, Rhode Island have inspected the components described in this Owner's Report during the period USE State of Type Cole The Components described in this Owner's Report during the period						
Type Code Symbol Stamp: N/A Certificate of Authorizaton No: N/A Signed: <u>Multilut</u> Supervising ASME Codes Engineer Date: Owner of Owner's Designee, Title CERTIFICATE OF INSPECTION I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> , and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period MADE Made Island have inspected the components described in this Owner's Report during the period						
Certificate of Authorizaton No: N/A Expiration Date: N/A Signed: <u>Owner of Owner's Designee</u> , Title CERTIFICATE OF INSPECTION I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> , and employed by <u>Factory Mutual Insurance Company</u> of Johnston, Rhode Island have inspected the components described in this Owner's Report during the period N25100 to <u>IMI9100</u> , and state that to the best of my knowledge and belief, the Owner						
Signed: Supervising ASME Codes Engineer Date: 12/19/05 Owner of Owner's Designee, Title CERTIFICATE OF INSPECTION I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of California, and employed by Factory Mutual Insurance Company of Johnston, Rhode Island have inspected the components described in this Owner's Report during the period USE 12/19/00 , and state that to the best of my knowledge and belief, the Owner						
Owner of Owner's Designee, Title CERTIFICATE OF INSPECTION L, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> , and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>J25/00</u> to <u>J219/00</u> , and state that to the best of my knowledge and belief, the Owner						
L, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> , and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>125/00</u> to <u>1219/00</u> , and state that to the best of my knowledge and belief, the Owner						
L, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> , and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>125/00</u> to <u>1219/00</u> , and state that to the best of my knowledge and belief, the Owner						
I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u> , and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>125/00</u> to <u>1219/00</u> , and state that to the best of my knowledge and belief, the Owner						
Date Ale. 19, 2000						

As Required by the Provisions of the ASME Code SectionXI

1. Owner:	Southern California Edison Company 2244 Walnut Grove Avenue Rosemead, California 91770	Unit: A MO: 99100415000 Rspec: ASME SECTION XI DATA-0460)
2. Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-0128	P&ID: N/A N-5: N/A	
 Work Pe Identific 	rformed by: Southern California Edison Company ation of System: N/A - Spare	Type Code Symbol Stamp:N/AAuthorization No:N/AExpiration Date:N/A	

5. (a) Applicable Construction Code: ASME Section III, Class 2, 1974 Edition, Summer 1974 Addenda; Code Case: None

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Edition. No Addenda

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name Of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
1 1/2" x 2" Nozzle Type Relief Valve	Crosby Valve & Gage	N59380-00-0013	N/A	025-83508- N59380-00-13 (removed from 3PSV9225 on MO 99100231)	1985		Yes
Disc Insert	Crosby Valve & Gage	N91241-43-0060	N/A	RSO-3226-91, Part #N91241 Stellite 6B	N/A	Replacement	No

7. Description of Work:

Replaced the disc insert with an in-kind replacement disc insert on the spare relief valve (S/N N59380-00-0013) that was removed from plant position 3PSV9225 on M.O. 99100213 and returned the valve to warehouse stock.

8. Tests Conducted: <u>N/A</u>

Pressure: N/A

Temp: N/A

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9. Remarks : None.

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	CERTIFICATE O	F COMPLIANCE	
We certify that the statements of the ASME Code, Section X	made in the report are correct and I.	this <u>replacement</u> (repair or replacem	
Type Code Symbol Stamp:	N/A	· · ·	•
Certificate of Authorization N	o: N/A Expiration	n Date: N/A	
Signed: <u><u><u>M</u></u> Owner or Owner's De</u>	Supervising ASME Cod signee, Title	les Engineer Dat	e:/00
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		· · ·	
	CERTIFICATE O	F INSPECTION	
the State or Province of <u>Califo</u> Waltham, Massachusetts has 10/15/99 to	ve inspected the components descr 0///8/00, and state	nt Mutual Insurance ribed in this Owner's I that to the best of my	Report during the period knowledge and belief, the Owner
he State or Province of <u>Califo</u> <u>Waltham, Massachusetts</u> has <u>10//5/99</u> to tas performed examinations an equirements of the ASME Co By signing this certificate, neit examinations and corrective m employer shall be liable in any connected with this inspection.	ornia, and employed by <u>Arkwrigh</u> ve inspected the components descr <u><i>OUTSIDD</i></u> , and state and taken corrective measures descr ode, Section XI. ther the Inspector nor his employer reasures described in this Owner's manner for any personal injury of	that to the best of my ribed in this Owner's I that to the best of my ribed in this Owner's I makes any warranty, Report. Furthermore, property damage or a	<u>Company</u> of Report during the period knowledge and belief, the Owner Report in accordance with the expressed or implied, concerning the neither the Inspector nor his a loss of any kind arising from or
he State or Province of <u>Califo</u> <u>Waltham, Massachusetts</u> has <u>10//5/99</u> to tas performed examinations an equirements of the ASME Co By signing this certificate, neit examinations and corrective m employer shall be liable in any connected with this inspection.	ornia, and employed by <u>Arkwrigh</u> ve inspected the components descr <u>AIIISIAD</u> , and state and taken corrective measures descr bde, Section XI. ther the Inspector nor his employed reasures described in this Owner's manner for any personal injury on	the Mutual Insurance ribed in this Owner's I that to the best of my ribed in this Owner's I makes any warranty, Report. Furthermore, property damage or a 1862	<u>Company</u> of Report during the period knowledge and belief, the Owner Report in accordance with the expressed or implied, concerning the neither the Inspector nor his
he State or Province of <u>Califo</u> <u>Waltham, Massachusetts</u> has <u>10//5/99</u> to has performed examinations and equirements of the ASME Co By signing this certificate, neith examinations and corrective m employer shall be liable in any connected with this inspection.	ornia, and employed by <u>Arkwrigh</u> ve inspected the components descr <u><i>OUTSIDD</i></u> , and state and taken corrective measures descr ode, Section XI. ther the Inspector nor his employer reasures described in this Owner's manner for any personal injury of	the Mutual Insurance ribed in this Owner's I that to the best of my ribed in this Owner's I makes any warranty, Report. Furthermore, property damage or a 1862	<u>Company</u> of Report during the period knowledge and belief, the Owner Report in accordance with the expressed or implied, concerning the neither the Inspector nor his a loss of any kind arising from or <u>California</u>
the State or Province of <u>Califo</u> <u>Waltham, Massachusetts</u> has <u>10//5/99</u> to has performed examinations as requirements of the ASME Co By signing this certificate, neit examinations and corrective m employer shall be liable in any connected with this inspection.	ornia, and employed by <u>Arkwrigh</u> ve inspected the components descr <u><i>OUTSIDD</i></u> , and state and taken corrective measures descr ode, Section XI. ther the Inspector nor his employer reasures described in this Owner's manner for any personal injury of	the Mutual Insurance ribed in this Owner's I that to the best of my ribed in this Owner's I makes any warranty, Report. Furthermore, property damage or a 1862	<u>Company</u> of Report during the period knowledge and belief, the Owner Report in accordance with the expressed or implied, concerning the neither the Inspector nor his a loss of any kind arising from or <u>California</u>

As Required by the Provisions of the ASME Code SectionXI

<ol> <li>Owner:</li> <li>Plant:</li> </ol>	Southern California Edison Company 2244 Walnut Grove Avenue Rosemead, California 91770 San Onofre Nuclear Generating Station San Clemente, California 92674-0128	Unit: A MO: 99110008000 Rspec: ASME SECTION XI DATA-0460 P&ID: N/A N-5: N/A
	erformed by: Southern California Edison Company cation of System: N/A - Spare	Type Code Symbol Stamp:N/AAuthorization No:N/AExpiration Date:N/A

5. (a) Applicable Construction Code: ASME Section III, Class 2, 1974 Edition, Summer 1974 Addenda; Code Case: None

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Edition, No Addenda</u>

## 6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name Of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Replaced or Replacement	Code Stamped Yes/No
1 1/2"x 2" Nozzle Type Relief Valve	Crosby Valve & Gage	N59380-00-0006	N/A	025-83508- N59380-00-0006	1978		Yes
	Crosby Valve & Gage	N91241-44-0070	N/A	RSO-0137-92, part #N91241, Stellite 6B	1991	Replacement	Yes

#### 7. Description of Work:

Replaced the value disc on the spare value (S/N N59380-00-0006) that was removed from plant position 3PSV9226 under MO 99100503, with an in-kind replacement disc. The spare value was then bench tested and returned to warehouse stock.

8. Tests Conducted: N/A

Pressure: N/A

Temp: N/A

9. Remarks : None.

#### (Applicable Manufacturer's Data Reports are available on-site)

#### CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this of the ASME Code, Section XI. replacement replacement

Type Code Symbol Stamp: N/A

Certificate of Authorization No: N/A

Expiration Date: N/A

Supervising ASME Codes Engineer

Date:______

Signed: <u>Su</u> Owner or Owner's Designee, Title

#### CERTIFICATE OF INSPECTION

I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of <u>California</u>, and employed by <u>Factory Mutual Insurance Company</u> of <u>Johnston, Rhode Island</u> have inspected the components described in this Owner's Report during the period <u>11/05/99</u> to <u>01/01/00</u>, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Commissions _ California AUMOSO1 National Board, State, Province, and Endorsements Inspector's Signature

an. 21. 2000 Date

As Required by the Provisions of the ASME Code Section XI

1. Owner:	Southern California Edison Company 2244 Walnut Grove Avenue	Unit: A MO: 99110011000	
	Rosemead, California 91770	Rspec: ASME SECTION	ON XI DATA-0460
		PID: N/A	
2. Plant:	San Onofre Nuclear Generating Station San Clemente, California 92674-012	N5: N/A	
		Type Code Symbol Sta	imp: N/A
3. Work Pe	rformed by: Southern California Edison Company	Authorization No:	N/A
4. Identific	ation of System: N/A - Spare	Expiration Date:	N/A
			1 11. In Code Com

5. (a) Applicable Construction Code: ASME Section III, Class 2, 1974 Edition, Summer 1974 Addenda; Code Case: None

5. (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Editon</u>. No Addenda

6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Replaced or Replaced or Replacement	ASME Code Stamped Yes/No
1 1/2" x 2" Nozzle Type Relief Valve	Crosby Valve & Gage	N59380-00-0010		025-83508-N59380- 00-0010	1985		Yes
Disc	1 -	N91241-44-0069, Ht.# 18100187		RSO-2505-92, part# N91241, Stellite 6B	N/A	Replacement	No

#### 7. Description of Work:

Replaced the valve disc on the spare valve (S/N N59380-00-0010) that was removed from plant position 2PSV9225 under MO 98051825, with an in-kind replacement disc. The spare valve was then bench tested and returned to warehouse stock.

8. Tests Conducted: N/A

Pressure: N/A

Temp: N/A

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. x11 in. (2) information in Items 1 through 6 on this report is included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form, and (4) each sheet is initialed and dated by the Owner or Owner's designee and the AIA.

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۰. 9. Remarks: None.

(Appendit Manufactur	rer's Data Reports are available on-site)
CERTIFICA	TE OF COMPLIANCE
We certify that the statements made in the report are	correct and this replacement conforms to the rules
of the ASME Code, Section XI.	repair or replacement
	a the state of the
Type Code Symbol Stamp: N/A	and the second secon
Certificate of Authorizaton No: N/A	Expiration Date: N/A
But	The state have been and the state of the state of the state of the
	upervising ASME Codes Engineer Date: 7/24/00
Owner or Owner's Designee, Title	
CERTIFI	CATE OF INSPECTION
the State or Province of <u>California</u> and employed by <u>Johnston, Rhode Island</u> have inspected the component ////2/99 to <u>7/24/00</u> has performed examinations and taken corrective mea	by the National Board of Boiler and Pressure Vessel Inspectors and y <u>Factory Mutual Insurance Company</u> of ents described in this Owner's Report during the period , and state that to the best of my knowledge and belief, the Owner asures described in this Owner's Report in accordance with the
requirements of the ASME Code, Section XI.	
the examinations and corrective measures described i	is employer makes any warranty, expressed or implied, concerning in this Owner's Report. Furthermore, notther the Inspector nor his nal injury or property damage or a loss of any kind arising from or
Inspector's Signature	nissions <u>1862</u> California National Board, State, Province, and Endorsements
Date (11/2 24,200	•

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As Required by the Provisions of the ASME Code SectionXI

<ol> <li>Owner:</li> <li>Plant:</li> </ol>	Southern California Edison Company 2244 Walnut Grove Avenue Rosemead, California 91770 San Onofre Nuclear Generating Station San Clemente, California 92674-0128	Unit: A MO: 99121408000 Rspec: ASME SECTION XI DATA-0460 P&ID: N/A N-5: N/A
	rformed by: Southern California Edison Company ation of System: N/A - Spare	Type Code Symbol Stamp:N/AAuthorization No:N/AExpiration Date:N/A

5. (a) Applicable Construction Code: ASME Section III. Class 2. 1974 Edition. Summer 1974 Addenda: Code Case: None

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: <u>1989 Edition. No Addenda</u>

tification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name Of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Replaced or Replacement .	ASME Code Stamped Yes/No
1 1/2" x 2" Nozzle Type Relief Valve	Crosby Valve & Gage	N59380-00-0001	N/A	025-83508, Removed from 2PSV9227 on MO 99060050	1977		Yes
Disc Insert	Crosby Valve & Gage	N91241-41-0046	N/A	RSO-3635-85, Ht. #1810-0-1037 Stellite 6B	N/A	Replacement	No

### 7. Description of Work:

The spare relief valve (s/n N59380-00-0001) that was removed from plant location 2PSV9227 on MO 99060050 was inspected and found to need a new disc. The disc was replaced with an in-kind replacement and the valve was returned to the warehouse for restocking.

8. Tests Conducted: N/A

Pressure: N/A

Temp: N/A

9. Remarks : None.

Signed: /

#### (Applicable Manufacturer's Data Reports are available on-site)

#### CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI.

Tepair or replacement -

Type Code Symbol Stamp: N/A

Certificate of Authorization No: N/A

Expiration Date: N/A

Supervising ASME Codes Engineer

Owner or Owner's Designee, Title

# Date: 6/9/00

#### CERTIFICATE OF INSPECTION

I, the undersigned holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of California, and employed by Factory Mutual Insurance Company of Johnston, Rhode Island have inspected the components described in this Owner's Report during the period

to 06/09/00, and state that to the best of my knowledge and belief, the Owner 01/03/60 has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Inspector's Signature

Commissions

California

National Board, State, Province, and Endorsements

Date