SOUTHERN CALIFORNIA
EDISON
An *EDISON INTERNATIONAL*℠ Company

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,

Attachment

cc: (see attached list)

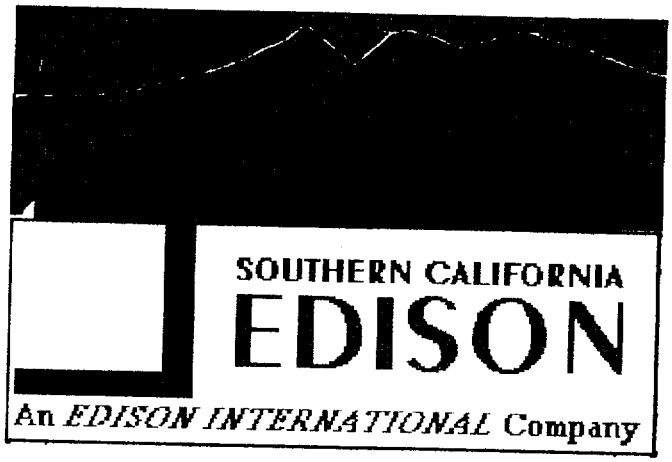
P. O. Box 128
San Clemente, CA 92674-0128
949-368-7501
Fax 949-368-6085

A047

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

1 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.

2 PLAN & SCHEDULE

SUBSECTION	CATEGORY	TOTAL EXAMS REQUIRED	PERIOD 1	PERIOD 2	PERIOD 3
IWB	B-A	27	3	2	23
	B-B	6	2	2	2
	B-D	34	10	0	24
	B-F	28	10	9	9
	B-G-1	248	84	82	82
	B-G-2	178	61	59	62
	B-J	165	57	54	54
	B-K	10	8	3	3
	B-L-1	2	0	0	2
	B-L-2(See Note-3)	1			
	B-M-1	8	2	0	6
	B-M-2(See Note-3)	6	0	2	
	B-N-1	3	1	1	1
	B-N-2	30	0	0	30
	B-N-3	2	0	0	2
	B-O	10	0	0	10
	B-P	Each Refueling Outage			
	B-Q	Per Tech Spec			
IWC	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
	C-H	Each Inspection Period			
IWD	D-A (System Pressure Test)	Each Inspection Period			
	D-B (System Pressure Test)	Each Inspection Period			
	D-C (System Pressure Test)	Each Inspection Period			
	D-A(Integral Attach's)	59	21	20	20

2 PLAN & SCHEDULE

SUBSECTION	CATEGORY	TOTAL EXAMS REQUIRED	PERIOD 1	PERIOD 2	PERIOD 3
IWF	F-A	284	97	93	94
IWE	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 APPENDIX J				
IWL	L-A (Concrete surfaces)	Every ten years			
	L-B(Unbonded Post-Tensioning System) Every five years alternative, Item L2.10, L2.20, and L2.30, L2.40, L2.50				
	Augmented ISI for Reactor Coolant pump flywheels and high energy lines				
	Flywheels	4	4	0	4
	High 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.

3 SUMMARY REPORT

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

Name & Address of Owners:

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

San Diego Gas & Electric Co.
101 Ash St.
San Diego, CA 92112

City of Anaheim
Public Utilities Department
City Hall West - 8th Floor
Ste. 802, 201 S. Anaheim Blvd.
Anaheim, CA 92805

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 Edison Company
2244 Walnut Grove Avenue, Rosemead, CA 91770

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:** N/A

5. **Commercial Service Date:** 8/18/83

6. **National Board Number for Unit:** N/A

7. **Components Inspected:**

Component or Appurtenance	Manufacturer or Installer	Manufacturer or Installer Serial Number	State or Province Number	National Board Number
Steam Gen 2ME088	Combustion Engineering	71270-2	35203-82	22219
Steam Gen 2ME089	Combustion Engineering	71270-1	35203-82	22218
Reactor Coolant Pump 2MP003	Byron Jackson	701-N-0560	N/A	N/A
Shutdown Cooling Heat Exchanger ME003	Engineers & Fabricators, Inc.	S-16644A	N/A	1353
Regenerative Heat Exchanger ME063	Combustion 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-Yr __**X**__ 2nd 10-Yr _____ 3rd 10-Yr _____ 4th 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 Plan...** October 5, 1999 Doc # 90063, Rev 6
13. **Abstract of Examination & Test.....** See page 9
14. **Abstract of Results of Examinations & Tests:.....** See page 10
15. **Abstract of Corrective Measures:.....** See page 11

We certify that a) the statement made in this report are correct, b) the examinations and tests meet the Inspection Plan as required by the ASME Code, Section XI, and c) corrective measures taken conform to the rules of the ASME Code, Section XI.

Certificate of Authorization No. N/A **Expiration Date:** N/A

Date: 1/26/2001 **Signed:** Southern California Edison (Owner) **By:** Michael P. Short
Manager, Site Technical Services

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.

_____ Commissions 8024 "N" "I" "S" "IS" 1862CA
Inspector's Signature NB, State, Province or Endorsements

Date: 1/26/01

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.

4 ABSTRACT OF NIS-2 REPAIRS & REPLACEMENTS

Abstract of Records of Repairs and Replacements

	MO	EQID	Class	NIS-2	Worksum
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	9/13/00	Replaced valve spindle/plug assembly
5	00022123000	S2RC031H001	III-1	11/6/00	Deleted snubber
6	00022516000	S21204MU068	III-2	12/19/00	Replaced valve internals
7	00040182000	025-83508-N59380-00-0012	III-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	III-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	III-1	11/29/00	Replaced pressurizer heater
15	00090618000	S21201ME611	III-1	11/29/00	Replaced pressurizer heater
16	00101151000	S2RCP04H001	III-1	11/29/00	Replaced hydraulic snubber control valve
17	00101229000	S2VC001H009E	III-2	11/29/00	Replaced snubber
18	00101517000	S21201ME087	III-1	11/14/00	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
21	00121178000	S21208MU106	III-2	1/8/01	Replaced valve disc
22	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	III-1	6/9/00	Fabricated instrument nozzle
26	97061274000	RS-046-97-G	III-1	6/9/00	Fabricated instrument nozzle
27	97101708000	503-03	III-1	1/21/00	Replaced instrument nozzles
28	97101713000	503-01	III-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	III-2	6/9/00	Replaced relief valve
32	98060026000	S22418MU108	III-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	III-2	1/18/00	Replaced unbalanced inconel 718 spindle
35	99021229000	S21415MU236	III-2	12/19/00	Replaced check valve
36	99031617000	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	III-2	5/4/00	Manufactured MSSV studs
41	99051280000	026-44409-N60061-00-0001-IST	III-2	9/26/00	Rebuilt relief valve (L-Top)
42	99051554000	2HV8419	III-2	1/26/01	Replaced valve plug and bonnet nuts
43	99051790000	026-44409-N60061-00-0004-IST	III-2	9/26/00	Rebuilt relief valve (L-Top)

Abstract of Records of Repairs and Replacements

	MO	EQID	Class	NIS-2	Worksum
44	99060050000	2PSV9227	III-2	1/25/00	Replaced relief valve
45	99060413000	S21301ME088P	III-1	1/8/01	Performed SG tube sleeving
46	99060414000	S21301ME089P	III-1	1/8/01	Performed SG sleeve tubing
47	99070170000	S21301ME088P	III-1	11/22/00	Installed threaded inserts in SG manway bolt holes
48	99080603000	2PSV0200	III-1	1/10/01	Replaced safety valve
49	99080621000	S21201MP001	III-1	12/4/00	Replaced mechanical seal cartridge
50	99080631000	2PSV8401	III-2	1/8/01	Replaced safety valve and inlet bolting
51	99080667000	2PSV0201	III-1	1/10/01	Replaced safety valve and inlet bolting
52	99080671000	2PSV8402	III-2	1/8/01	Replaced safety valve and inlet bolting
53	99080708000	S21208ME062	III-2	1/26/01	Replaced heat exchanger cover bolting
54	99080709000	2PSV8404	III-2	1/8/01	Replaced safety valve and inlet bolting
55	99080725000	2PSV8406	III-2	1/8/01	Replaced safety valve and inlet bolting
56	99080731000	2PSV8407	III-2	1/8/01	Replaced safety valve and inlet bolting
57	99080768000	2PSV8416	III-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	III-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

5 NDE RECORDS

NDE PROCEDURES:

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

SO23-XXVII-20.47	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

2) Appendix VIII (PDI) 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 UT 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 & Thomas, Inc.				
Layn R. Davis	UT, PT, MT	III	X	X
	VT-1 and 3	II	X	X
Kilpela F. Mathew	UT, PT, MT	II	X	X
Jeffery L. Devers	UT, PT, MT	II	X	X
Todd P. Blechinger	UT, PT, MT	II	X	X
Southern California Edison (SCE)				
Barry Seaholts	VT-1,2,3	II	X	X
T.M. Pierno	VT-1,2,3	II	X	X
H.Edward McNeill	VT-2	II	X	X
P.Fred Haderlie	VT-2	II	X	X
Joe Perschler	VT-2	II	X	X

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

SOUTHERN CALIFORNIA
EDISON
An EDISON INTERNATIONAL℠ Company

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

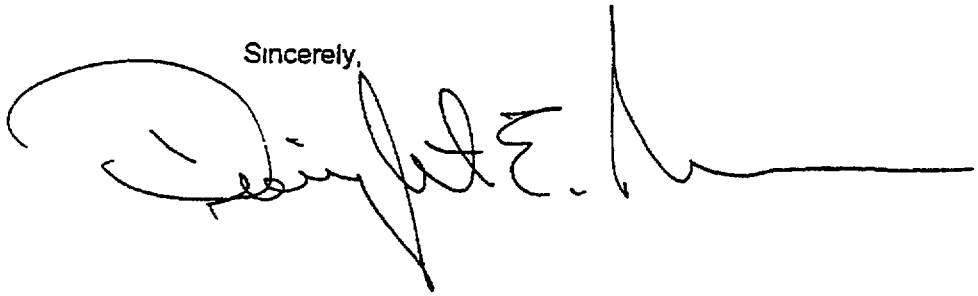
P O Box 128
San Clemente, CA 92674-0128
949-368-1480
Fax 949-368-1490

NO

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

cc: 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)

NO

bcc

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NRC CORRESPONDENCE

Review Req	Organization	Approvals	Date
X	Vice President, Engineering and Technical Services		
X	Mgr – Nuclear Oversight and Regulatory Affairs		11/13/00
	Mgr – Plant Licensing		
	Mgr – Nuc Eng Design		
	Mgr – Station Technical		
	Mgr – Operations		
X	Mgr – Site Technical Services	E-mail	11/10/00
	Nuclear/Mechanical		
	Electrical/Controls		
	Nuclear Safety Group/ Independent Safety Engineering Group		
	Mgr - Nuclear Fuel Engineering and Analysis		
	Supervisor/ Nuclear Fuel Analysis		
	Supervisor/ Core Performance Analysis		
	Supervisor/ Nuclear Safety Analysis		
X	Supervisor/ Compliance		11/13/2000
X	RCTS Completed	ADE	11/10/00
X	Verified RCTS		11/13/2000
	OTHER APPROVALS		
X	Supervisor/ Steam Generators	E-mail	11/10/00
X	Don Evans	E-mail	11/10/00
Affected RCTS			
001100807			

NO

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 summarizes 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.

NO

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;
(3) 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 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.

NO

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

NO

4. Boric 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

	Number of Tubes/Percentage of Tubes Steam Generator 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%
Full length of sleeves with the Plus-Point Probe	85 / 100%	52 / 100%

TABLE 2 - 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%

NO

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

Category	Indication Orientation/Location	Steam Generator E-088	Steam Generator E-089
1	Tubes with axially oriented 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 oriented 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	Tubes with circumferentially oriented OD indications near the expansion transition at the top of the hot leg tubesheet (OD Circ @ TSH)	7	7
6	Tubes with axially oriented 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

NO

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

Indication Orientation/Location	Probe Type for Detection	Probe Type for Characterization
Axially oriented ID (initiated on the inside-diameter of the tubing wall) indications at tube support locations	Bobbin Plus Point (Note 1)	Plus Point Plus Point
Axially oriented OD (initiated on the outside-diameter of the tubing wall) indications at tube support locations	Bobbin Plus Point (Note 1)	Plus Point Plus Point
Axially oriented OD indications not associated with a tube support (freespan)	Bobbin	Plus Point
Circumferentially oriented ID indications near or below the expansion transition at the top of the hot leg tubesheet	Plus Point	Plus Point
Circumferentially oriented 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	Bobbin	Plus Point

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

NO

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

Steam Generator E-088

TUBE AND EDDY CURRENT INFORMATION											IN-SITU TEST RESULTS			
REGION	TUBE INFORMATION			PLUS POINT DATA					BOBBIN DATA	SELECTION CRITERIA	GPM @ NOPD	GPM @ MSLB	GPM @ NOPD POST MSLB	PRESSURE 3xNOPD
	ROW	COL	LOCATION	LENGTH	VOLTS	Max. Depth %	PDA or Avg. Depth %	ORIENTATION	VOLTS					
EGGCRATE	24	62	07H + 0.09	1.37	0.43	39%	27.4% (AD)	OD AXIAL	0.26	-	0	0	0	5050
TUBESHEET	77	75	TSH - 0.09	0.26	0.73	95%	12.0% (PDA)	ID CIRC	N/A	L	0	0	0	5450
	62	98	TSH + 0.12	2.04	0.54	88%	49.9% (PDA)	OD CIRC	N/A	-	0	0	0	5450

Steam Generator E-089

TUBE AND EDDY CURRENT INFORMATION											IN-SITU TEST RESULTS			
REGION	TUBE INFORMATION			PLUS POINT DATA					BOBBIN DATA	SELECTION CRITERIA	GPM @ NOPD	GPM @ MSLB	GPM @ NOPD POST MSLB	PRESSURE 3xNOPD
	ROW	COL	LOCATION	LENGTH	VOLTS	Max. Depth %	PDA or Avg. Depth %	ORIENTATION	VOLTS					
EGGCRATE	71	73	07H + 0.51	0.57	0.79	54%	45.4% (AD)	ID AXIAL	0.92	-	0	0	0	5050
LOW ROW U-BEND	1	21	DBH + 5.90	N/A	2.4	N/A	N/A	GEOMETRY (GEO)	N/A	-	0	0	0	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
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.

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

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 Axial 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

NO

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

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

NO

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

Row	Column	Reason for Sleeving Tube (per Table 3)
18	30	ID Axial 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	64	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

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

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 Axial @ 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
41	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

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

NO

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

Row	Column	Reason for Plugging Tube (per Table 3)
45	7	Prevent @ Miscellaneous
25	17	OD Axial @ Freespan
1	21	Prevent @ Miscellaneous
30	28	OD Axial @ 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
15	65	OD Axial @ Freespan
64	70	OD Axial @ Sludge Pile TSH
138	70	OD Vol @ Miscellaneous
41	71	Wear @ Support
71	73	ID Axial @ 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

NO

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 Axial 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 Axial @ 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 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

NO

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

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

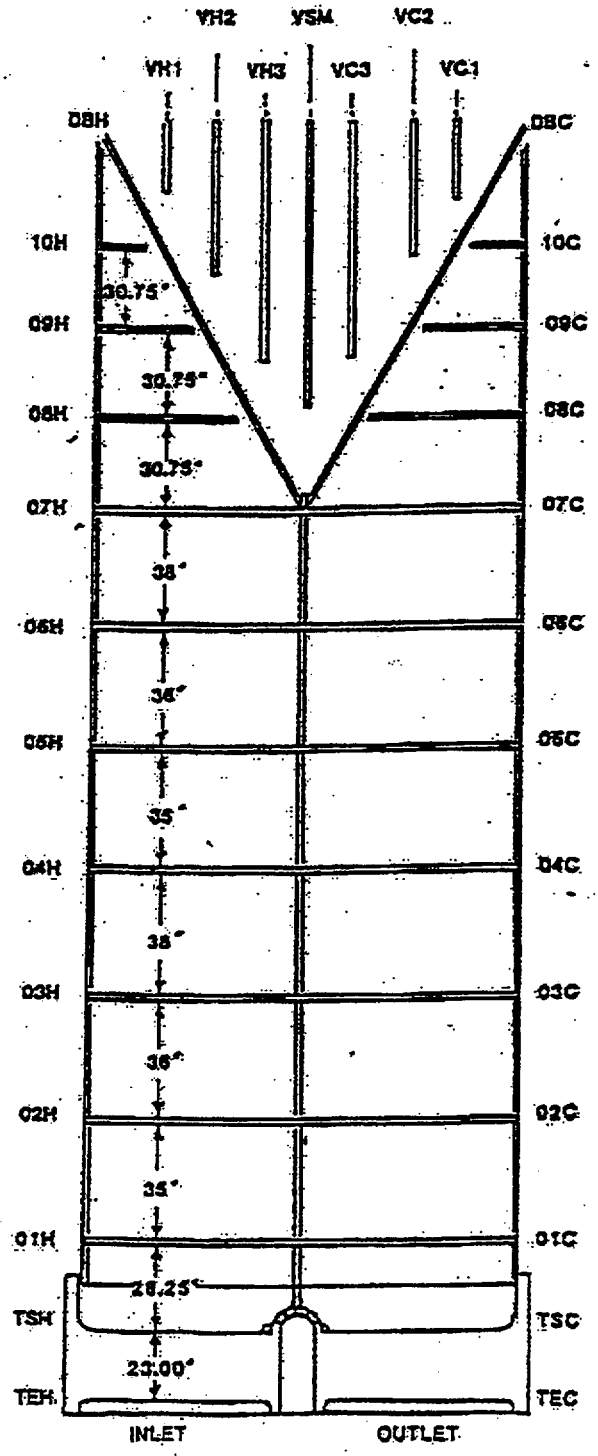
NO

Appendix 1

Steam Generator Reference Information

NO

CE MODEL 3410 TUBE SUPPORT DRAWING



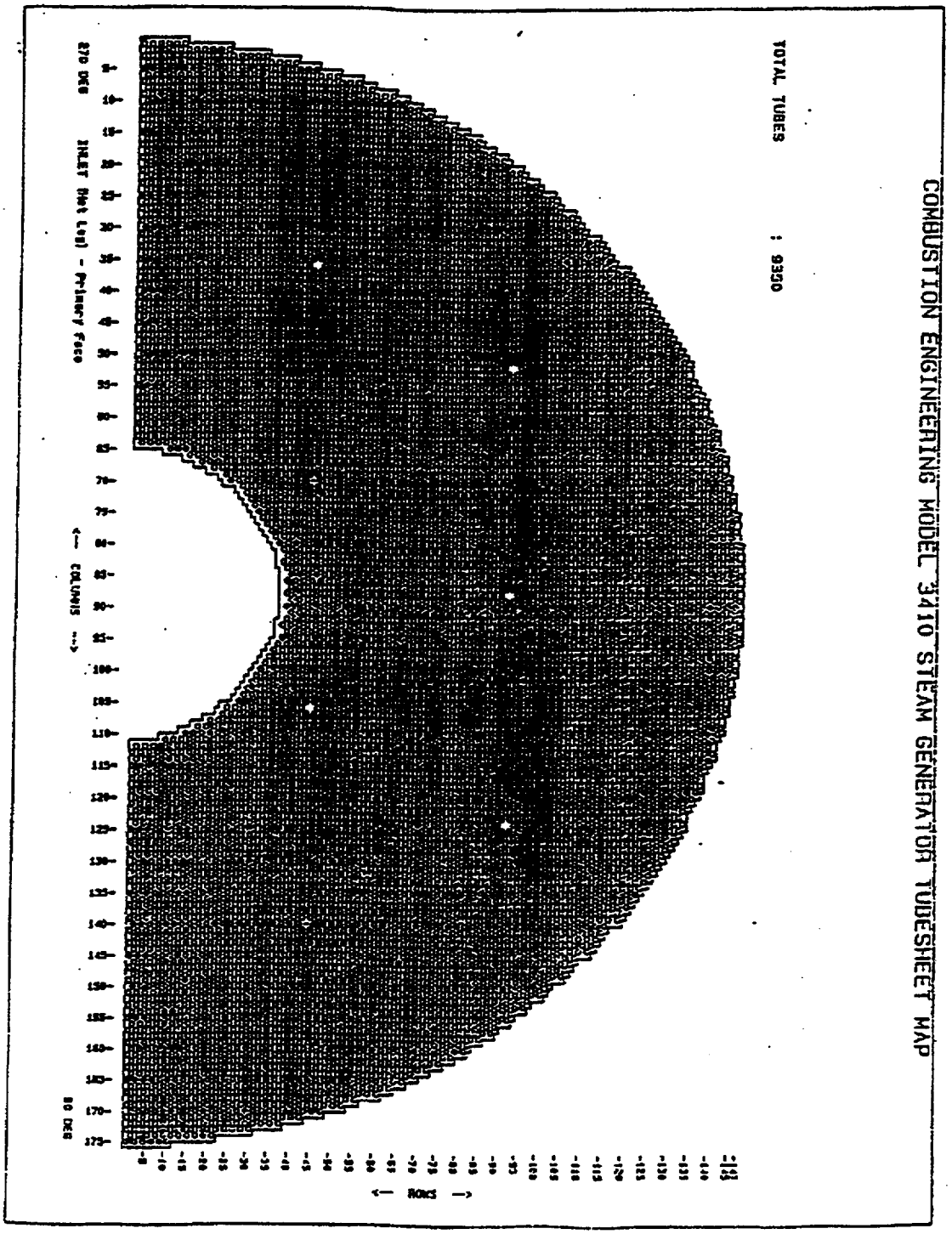
NO

CLARIFICATION OF TUBING/SUPPORT INTERFACES

ABOVE THE 7TH FULL EGGCRATE SUPPORT

ROW(S)	TUBING/SUPPORT INTERFACES
120-147	08H,09H,10H,DBH,VH1,VH2,VH3,VSM,VC3,VC2,VC1,DBC,10C,09C,08C
115-119	08H,09H DBH,VH1,VH2,VH3,VSM,VC3,VC2,VC1,DBC 09C,08C
84-114	08H,09H DBH VH2,VH3,VSM,VC3,VC2 DBC 09C,08C
83	08H DBH VH2,VH3,VSM,VC3,VC2 DBC 08C
51-82	08H DBH VH3,VSM,VC3, DBC 08C
49-50	08H DBH VSM DBC 08C
19-48	DBH VSM DBC
1-18	DBH DBC

NO


COMBUSTION ENGINEERING MODEL 3410 STEAM GENERATOR TUBESHEET MAP
TOTAL TUBES : 9350
270 DEG
INLET (Hot Leg) - Primary Face
<— COLUMNS —>
90 DEG
<— ROWS —>

NO

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

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.

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.

3. 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.

Appendix 3

Inspection Summary

Steam Generator E-088

NO

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	CHN	FLAW	LOCATION	EXTENT	UTIL1	UTIL2	NAME	TYPE	CAL GROUP	LEG	PROBE SIZE
1	50	8	0.35	141	14	P 2	VSM	+0.84	TEHTEC			H1748	reso	88C00005	C	600UL
2	52	8	0.39	38	14	P 2	VH3	+0.73	TEHTEC			T9924	seco	88C00004	C	600UL
3	13	9	0.47	78	18	P 2	OSH	-0.00	TEHTEC			H1748	reso	88C00005	C	600UL
4	52	10	0.36	35	13	P 2	VH3	+0.68	TEHTEC			T9924	seco	88C00004	C	600UL
5	31	11	0.35	70	11	P 3	DBH	+1.35	TEHTEC			V1371	prim	88C00004	C	600UL
6	37	11	0.37	122	MAI	2	06H	-0.49	06H06H	0.0	0.33	M0554	reso	88H00237	H	600PP
7			0.16	132	SAI	2	06H	+0.78	06H06H	0.27	0.30	M0554	reso	88H00237	H	600PP
8	63	11	0.36	103	13	P 2	VH3	-0.58	TEHTEC			V1371	prim	88C00004	C	600UL
9	67	11	0.42	65	15	P 2	VH3	-0.60	TEHTEC			V1371	prim	88C00004	C	600UL
10	54	12	0.23	125	9	P 2	VH3	-0.56	TEHTEC			V1371	prim	88C00004	C	600UL
11	39	13	0.37	138	14	P 2	VSM	+0.42	TEHTEC			T9924	seco	88C00004	C	600UL
12	24	14	0.31	89	11	P 2	VSM	+0.62	TEHTEC			B3170	prim	88C00007	C	600UL
13	43	19	0.62	130	21	P 2	O2H	+0.97	TEHTEC			M0554	reso	88C00006	C	600UL
14	16	20	0.28	140	11	P 3	DBC	+0.51	TEHTEC			W9658	seco	88C00009	C	600UL
15	70	20	0.43	108	16	P 2	VC3	+0.73	TEHTEC			V1371	prim	88C00008	C	600UL
16	43	21	0.27	85	11	P 2	VSM	+0.88	TEHTEC			L9158	prim	88C00008	C	600UL
17	78	22	0.79	129	25	P 2	VC3	-0.83	TEHTEC			D2003	prim	88C00070	C	600UL
18	81	23	0.35	86	12	P 3	DBC	+1.86	TEHTEC			D2003	prim	88C00070	C	600UL
19	35	25	0.60	124	20	P 2	VSM	-0.75	TEHTEC			B5926	seco	88C00068	C	600UL
20	91	25	0.15	122	SAI	2	06H	+24.53	06H07H	0.00	0.26	E1748	reso	88E00239	E	600PP
21	102	26	0.38	146	15	P 2	06H	+0.87	TEHTEC			D2003	prim	88C00070	C	600UL
22	18	30	1.58	27	SAI	2	TSH	+4.81	TSHTSH	0.73	0.35	E4963	reso	88E00133	E	600PP
23	106	30	0.51	126	21	P 2	06H	+0.85	TEHTEC			L9158	prim	88C00073	C	600UL
24	94	32	0.52	97	21	P 2	VH2	-0.81	TEHTEC			L9158	prim	88C00073	C	600UL
25	77	33	0.49	96	17	P 2	VSM	+1.04	TEHTEC			D5695	seco	88C00072	C	600UL
26	92	36	0.53	84	19	P 2	VH2	-0.54	TEHTEC			R9278	seco	88C00074	C	600UL
27			0.27	68	11	P 2	VSM	+0.88	TEHTEC			R9278	seco	88C00074	C	600UL
28	108	36	0.24	69	9	P 3	DBC	+1.51	TEHTEC			R8278	seco	88C00074	C	600UL
29	89	37	0.36	123	14	P 2	VH2	-0.54	TEHTEC			L3025	prim	88C00074	C	600UL
30			0.27	97	11	P 2	VH2	+0.60	TEHTEC			L3025	prim	88C00074	C	600UL
31	111	37	0.39	25	16	P 3	DBH	-1.59	TEHTEC			L9158	prim	88C00075	C	600UL
32	113	37	0.23	147	9	P 2	VH2	-0.91	TEHTEC			M7252	reso	88C00074	C	600UL
33	84	38	0.19	109	7	P 2	O9C	-1.11	TEHTEC			L3025	prim	88C00074	C	600UL
34	96	38	0.25	65	10	P 2	VH2	-0.78	TEHTEC			R9278	seco	88C00074	C	600UL
35	100	38	0.25	67	10	P 2	VC2	+0.88	TEHTEC			R9278	seco	88C00074	C	600UL
36	120	38	0.21	132	8	P 3	DBC	+1.83	TEHTEC			R8278	seco	88C00074	C	600UL
37	81	39	0.27	63	11	P 2	VSM	+0.85	TEHTEC			L3025	prim	88C00074	C	600UL
38	93	39	0.22	113	8	P 2	VC3	+0.95	TEHTEC			L3025	prim	88C00074	C	600UL
39	113	39	0.36	110	13	P 3	DBH	+1.79	TEHTEC			L3025	prim	88C00074	C	600UL
40	121	39	0.28	127	11	P 2	VH1	-0.67	TEHTEC			L3025	prim	88C00074	C	600UL
41			0.40	74	15	P 2	O3C	-0.93	TEHTEC			L3025	prim	88C00074	C	600UL
42	92	40	0.36	81	14	P 2	VSM	-0.73	TEHTEC			L3025	prim	88C00074	C	600UL
43	96	40	0.31	86	12	P 2	VC2	+0.80	TEHTEC			R8278	seco	88C00074	C	600UL
44	77	41	0.23	79	9	P 2	VSM	+0.78	TEHTEC			L3025	prim	88C00074	C	600UL
45	85	41	0.30	140	12	P 2	VH2	-0.80	TEHTEC			R9278	seco	88C00074	C	600UL
46			0.25	88	10	P 2	VH2	+0.80	TEHTEC			R8278	seco	88C00074	C	600UL
47	113	41	0.48	107	18	P 2	VH2	-0.51	TEHTEC			L3025	prim	88C00074	C	600UL
48	121	41	0.40	114	15	P 2	VH1	+0.76	TEHTEC			L3025	prim	88C00074	C	600UL
49	123	41	0.33	137	13	P 2	VH1	-0.69	TEHTEC			L3025	prim	88C00074	C	600UL

NO

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

	ROW	COL	VOLTS	DEG	PCT	CHN	FLAW	LOCATION	EXTENT	UTIL1	UTIL2	NAME	TYPE	CAL GROUP	LEG	PROBE SIZE
50	116	42	0.20	96	8	P 2	VSM	+0.93	TEHTEC			R8278	seco	88C00074	C	600UL
51	71	43	0.39	62	17	P 2	01H	+0.84	TEHTEC			M0554	reso	88C00075	C	600UL
52	85	43	0.23	124	9	P 2	VH2	-0.61	TEHTEC			R8278	seco	88C00074	C	600UL
53	18	44	0.26	80	10	P 3	DBH	-1.75	TEHTEC			T5144	seco	88C00085	C	600UL
54	41	45	0.49	23	SCI	P 1	TSH	-0.11	TSHTSH	0.00	0.20	M7262	reso	88E00132	E	600PP
55	24	46	0.28	22	SAI	2	05H	+0.52	05H05H	.20	.16	P4578	reso	88E00232	E	600PP
56			0.36	117	13	P 2	05H	+0.60	TEHTEC			M7262	reso	88C00086	C	600UL
57			0.33	103	SAI	2	06H	-0.27	06H06H	.49	.22	P4578	reso	88E00232	E	600PP
58			0.56	117	19	P 2	06H	-0.11	TEHTEC			M7262	reso	88C00086	C	600UL
59	34	46	0.32	21	SCI	P 1	TSH	-0.08	TSHTSH	0.00	0.20	M7262	reso	88E00191	E	600PP
60	27	47	0.42	22	SCI	P 1	TSH	-0.18	TSHTSH	0.57	0.16	G4841	reso	88E00194	E	600PP
61	37	47	0.48	126	17	P 2	VSM	+0.92	TEHTEC			B2265	prim	88C00085	C	600UL
62	129	47	0.63	144	22	P 2	VH3	-0.89	TEHTEC			W9213	seco	88C00078	C	600UL
63	4	48	0.93	17	SCI	P 1	TSH	-5.66	TSHTSH	0.57	0.19	G4841	reso	88E00194	E	600PP
64	28	48	0.44	117	SAI	2	07H	+0.48	07H07H	0.0	0.26	M0554	reso	88E00234	E	600PP
65	66	48	0.47	133	17	P 2	VSM	-0.72	TEHTEC			T5144	seco	88C00085	C	600UL
66	96	50	0.42	67	16	P 2	VC2	+0.86	TEHTEC			B2153	seco	88C00073	C	600UL
67	5	51	0.55	20	SCI	P 1	TSH	+4.85	TSHTSH	0.58	0.17	M7262	reso	88E00052	E	600PP
68	9	51	0.39	25	SCI	P 1	TSH	-6.89	TSHTSH	0.32	0.17	M7262	reso	88E00052	E	600PP
69	17	51	0.55	25	SCI	P 1	TSH	-0.04	TSHTSH	0.34	0.11	E7791	reso	88E00053	E	600PP
	43	51	0.79	125	26	P 2	VSM	+0.88	TEHTEC			T1371	prim	88C00043	C	600UL
	89	51	0.35	122	14	P 2	VH3	+0.92	TEHTEC			W9213	seco	88C00050	C	600UL
72	119	51	0.46	131	18	P 2	VH2	-0.58	TEHTEC			B8090	reso	88C00090	C	600UL
	22	52	0.40	21	SCI	P 1	TSH	-0.08	TSHTSH	0.0	0.18	M7262	reso	88E00053	E	600PP
	42	52	0.47	17	SCI	P 1	TSH	-0.14	TSHTSH	.23	.17	P4578	reso	88E00196	E	600PP
75	88	52	0.52	18	18	P 2	VH2	-0.87	TEHTEC			P4578	reso	88C00089	C	600UL
76	15	53	1.20	30	SCI	P 1	TSH	-6.50	TSHTSH	1.29	0.32	M7262	reso	88E00053	E	600PP
77	17	53	1.06	27	SCI	P 1	TSH	-5.52	TSHTSH	1.13	0.27	E7791	reso	88E00052	E	600PP
78			0.65	18	SAI	2	TSH	-1.98	TSHTSH	0.56	0.19	E7791	reso	88E00052	E	600PP
79	125	53	0.30	145	12	P 2	VH1	-0.75	TEHTEC			L9158	prim	88C00090	C	600UL
80	2	54	2.06	35	SCI	P 1	TSH	-5.55	TSHTSH	2.45	0.83	E1748	reso	88E00051	E	600PP
81	82	54	0.78	128	25	P 2	VH3	-0.61	TEHTEC			R3273	seco	88C00089	C	600UL
82	21	55	0.28	128	13	P 3	DBH	-1.39	TEHTEC			M7262	reso	88C00053	C	600UL
83	119	55	0.30	73	14	P 3	DBH	+1.66	TEHTEC			P1465	prim	88C00092	C	600UL
84	125	55	0.25	140	11	P 2	VH1	-0.83	TEHTEC			D2003	prim	88C00091	C	600UL
85	133	55	0.28	132	12	P 2	VH1	-0.82	TEHTEC			D2003	prim	88C00091	C	600UL
86	84	56	0.65	27	SCI	P 1	TSH	-0.15	TSHTSH	0.75	0.24	E4963	reso	88E00102	E	600PP
87	132	56	0.29	118	12	P 2	VH1	-0.82	TEHTEC			D2003	prim	88C00091	C	600UL
88	20	58	0.22	20	SCI	P 1	TSH	-0.04	TSHTSH	0.00	0.13	E1743	reso	88E00045	E	600PP
89	38	58	0.40	16	SAI	2	TSH	-0.85	TSHTSH	0.60	0.25	C0360	reso	88E00044	E	600PP
90	44	58	0.37	146	15	P 2	VSM	+0.80	TEHTEC			T5144	seco	88C00054	C	600UL
91	119	59	0.49	103	19	P 2	09H	-0.00	TEHTEC			M7262	reso	88C00092	C	600UL
92			0.37	76	15	P 2	VH1	-0.62	TEHTEC			B8090	reso	88C00092	C	600UL
93	125	59	0.27	155	11	P 2	VH1	-0.78	TEHTEC			D2003	prim	88C00091	C	600UL
94	26	60	0.51	16	SAI	2	TSH	-0.36	TSHTSH	0.50	0.20	E1743	reso	88E00045	E	600PP
95	28	60	1.93	23	SAI	2	TSH	-4.10	TSHTSH	2.25	1.2	E1748	reso	88E00044	E	600PP
	118	60	0.25	154	9	P 2	VC1	-0.75	TEHTEC			E4963	reso	88C00125	C	600UL
97	128	60	0.46	117	19	P 2	10H	-1.00	TEHTEC			G4841	reso	88C00092	C	600UL
98	37	61	0.45	134	17	P 2	VSM	+0.97	TEHTEC			D3858	reso	88C00059	C	600UL

NO

SG88 MAI, MCI, MMI, MVI, SAI, SCI, SVI, 0-100%TWD

UTILITY: Southern California Edison.
PLANT: San Onofre
UNIT: 2
SG: 88
DATABASE: SONGS_U2_1000_SG88_FINAL

NOV. 8,2000 8:44

PAGE 3

	ROW	COL	VOLTS	DEG	PCT	CHN	FLAW	LOCATION	EXTENT	UTIL1	UTIL2	NAME	TYPE	CAL	GROUP	LEG	PROBE	SIZE
99	117	61	0.26	77	9	P 2	VH2	+0.80	TEHTEC			B2027	prim	88C00093		C	600	UL
100	133	61	0.25	109	9	P 2	VH1	-0.85	TEHTEC			B2027	prim	88C00093		C	600	UL
101	24	62	0.43	92	SAI	2	07H	+0.09	07H07H	0.31	1.37	W3386	reso	88H00150		H	600	PP
102	72	62	0.40	17	SCI	P 1	TSH	-0.06	TSHTSH	0.0	0.18	W3386	reso	88H00100		H	600	PP
103	92	62	0.45	57	16	P 2	VH2	+0.84	TEHTEC			B2027	prim	88C00093		C	600	UL
104	120	62	0.34	122	12	P 2	VH1	-1.11	TEHTEC			B2027	prim	88C00093		C	600	UL
105			0.25	137	9	P 2	VH1	+0.33	TEHTEC			B2027	prim	88C00093		C	600	UL
106	126	62	0.65	100	24	P 2	10H	-0.96	TEHTEC			L3025	prim	88C00094		C	600	UL
107	23	63	0.46	108	16	P 2	01H	+1.06	TEHTEC			R8278	seco	88C00058		C	600	UL
108	129	63	0.22	143	4	P 2	10H	-0.06	TEHTEC			T4130	seco	88C00093		C	600	UL
109	62	64	0.38	25	SCI	P 1	TSH	-0.10	TSHTSH	0.91	0.21	E7791	reso	88E00041		E	600	PP
110	124	64	0.52	44	17	P 2	10H	-0.92	TEHTEC			T4130	seco	88C00093		C	600	UL
111	27	65	4.41	38	MCI	P 1	TSH	-6.02	TSHTSH	5.38	0.24	E7791	reso	88E00040		E	600	PP
112			0.44	11	SAI	2	TSH	-0.60	TSHTSH	0.80	0.20	E7791	reso	88E00040		E	600	PP
113	75	65	0.29	29	SCI	P 1	TSH	-0.16	TSHTSH	0.79	0.21	W3386	reso	88H00099		E	600	PP
114	93	65	0.29	145	11	P 2	VH2	-0.91	TEHTEC			B2027	prim	88C00093		C	600	UL
115	123	65	0.40	129	18	P 3	DBH	+0.35	TEHTEC			G4841	reso	88C00094		C	600	UL
116	141	65	0.35	140	14	P 2	08C	+0.71	TEHTEC			T5144	seco	88C00150		C	600	UL
117	50	66	0.44	86	17	P 2	08C	+1.68	STHTEC	LAR		M7252	reso	88C00061		C	600	UL
118	60	66	0.19	83	SAI	2	TSH	+1.12	TSHTSH	0.30	0.38	E7791	reso	88H00041		H	600	PP
119	85	67	0.36	76	13	P 2	VH2	-0.48	TEHTEC			B2027	prim	88C00093		C	600	UL
120	123	67	0.31	132	14	P 2	VH1	-0.80	TEHTEC			D2003	prim	88C00096		C	600	UL
121	137	67	0.24	153	11	P 2	VH1	-0.78	TEHTEC			D2003	prim	88C00095		C	600	UL
122	22	68	1.10	66	32	P 2	VSM	+0.84	TEHTEC			D3858	reso	88C00062		C	600	UL
123	40	68	0.65	21	SAI	2	TSH	-0.90	TSHTSH	1.05	0.25	E7791	reso	88E00035		E	600	PP
124	98	68	0.45	49	18	P 2	VH2	-0.71	TEHTEC			E4963	reso	88C00095		C	600	UL
125			0.42	148	17	P 2	VC2	+0.86	TEHTEC			E4963	reso	88C00095		C	600	UL
126	33	69	0.61	22	SAI	2	TSH	-0.26	TSHTSH	0.54	0.12	E7791	reso	88E00036		E	600	PP
127	77	69	0.40	24	SCI	P 1	TSH	-0.07	TSHTSH	0.00	0.19	M7262	reso	88E00095		E	600	PP
128	72	70	0.43	108	18	P 2	VC3	-0.53	TEHTEC			W9658	seco	88C00096		C	600	UL
129	84	70	0.35	26	MCI	P 1	TSH	-0.05	TSHTSH	0.00	0.39	M7252	reso	88E00095		E	600	PP
130	130	70	0.50	127	20	P 2	VH1	-0.80	TEHTEC			D2003	prim	88C00095		C	600	UL
131	33	71	0.38	154	18	P 3	DBC	-1.31	TEHTEC			D3858	reso	88C00062		C	600	UL
132	49	71	0.33	150	13	P 2	VSM	-0.80	TEHTEC			D3858	reso	88C00062		C	600	UL
133	97	71	0.40	20	SCI	P 1	TSH	-0.09	TSHTSH	0.00	0.18	M7262	reso	88E00095		E	600	PP
134	123	71	0.30	128	13	P 2	VH1	-0.70	TEHTEC			L9158	prim	88C00093		C	600	UL
135	34	72	0.53	103	23	P 3	DBC	+1.21	TEHTEC			D3858	reso	88C00062		C	600	UL
136	44	72	0.56	15	SAI	2	TSH	-1.65	TSHTSH	0.42	0.17	C0360	reso	88E00035		H	600	PP
137	48	72	0.25	11	SAI	2	TSH	-4.05	TSHTSH	0.00	0.17	C0360	reso	88H00035		H	600	PP
138	58	72	0.65	18	SAI	2	TSH	-2.42	TSHTSH	0.82	0.13	E7791	reso	88E00034		H	600	PP
139	120	72	0.68	87	23	P 2	09C	-1.07	TEHTEC			P1455	prim	88C00097		C	600	UL
140	142	72	0.58	54	20	P 3	DBC	+1.58	TEHTEC			C4330	prim	88C00130		C	600	UL
141	37	73	0.58	18	SAI	2	TSH	-5.20	TSHTSH	0.51	0.14	C0360	reso	88H00035		H	600	PP
142			1.28	89	38	P 3	DBH	-1.49	TSHTEC			D3858	reso	88C00062		C	600	UL
143	41	73	0.34	130	14	P 2	VSM	+0.87	TEHTEC			D2003	prim	88C00062		C	600	UL
144	45	73	0.32	131	15	P 3	DBC	-1.36	STHTEC			D3858	reso	88C00062		C	600	UL
145	53	73	0.34	11	SAI	2	TSH	-1.01	TSHTSH	0.66	0.13	E7791	reso	88H00034		H	600	PP
146	73	73	0.57	123	21	P 2	VSM	+0.92	TEHTEC			T0854	seco	88C00099		C	600	UL
147	89	73	0.28	76	12	P 2	VC2	-1.18	TEHTEC			T0854	seco	88C00099		C	600	UL

NO

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 4

	ROW	COL	VOLTS	DEG	PCT	CHN	FLAW	LOCATION		EXTENT	UTIL1	UTIL2	NAME	TYPE	CAL	GROUP	LEG	PROBE	SIZE
148	129	73	0.33	148	14	P 2	VH1	-0.76		TEHTEC			B3170	prim	88C00099	C	600UL		
149	133	73	0.34	140	15	P 2	VH1	-0.79		TEHTEC			B3170	prim	88C00099	C	600UL		
150	145	73	0.84	92	27	P 3	DBH	+2.07		TEHTEC			C4330	prim	88C00130	C	600UL		
151	46	74	0.96	112	29	P 2	VSM	-0.69		TEHTEC			M7262	reso	88C00062	C	600UL		
152			0.49	63	18	P 2	VSM	+0.81		TEHTEC			M7262	reso	88C00062	C	600UL		
153	58	74	0.14	128	SCI	P 1	TSH	-0.02		TSHTSH	0	0.12	R5555	reso	88H00034	H	600PP		
154	98	74	0.27	153	12	P 2	VC2	+0.75		TEHTEC			B3170	prim	88C00099	C	600UL		
155	120	74	0.27	120	11	P 2	10H	-1.10		TEHTEC			M7262	reso	88C00097	C	600UL		
156	130	74	0.77	91	26	P 2	10H	-1.02		TEHTEC			B3170	prim	88C00099	C	600UL		
157	136	74	0.55	105	20	P 2	10H	-1.00		TEHTEC			C4330	prim	88C00097	C	600UL		
158	138	74	0.31	54	14	P 2	VH1	-0.75		TEHTEC			B3170	prim	88C00099	C	600UL		
159	41	75	1.47	76	38	P 3	DBC	+1.38		STHTEC			R8278	seco	88C00063	C	600UL		
160	43	75	0.49	124	13	P 2	VSM	+0.89		TEHTEC			B2027	prim	88C00062	C	600UL		
161	45	75	0.91	77	29	P 3	DBH	-1.70		TEHTEC			R8278	seco	88C00063	C	600UL		
162			0.76	138	26	P 3	DBC	+1.01		TEHTEC			E4963	reso	88C00063	C	600UL		
163	49	75	0.36	92	15	P 3	DBH	-1.70		TEHTEC			R8278	seco	88C00063	C	600UL		
164	77	75	0.73	31	SCI	P 1	TSH	-0.09		TSHTSH	1.03	0.26	M7262	reso	88H00096	H	600PP		
165	79	75	0.42	99	16	P 2	VH3	+0.81		TEHTEC			T0854	seco	88C00099	C	600UL		
166	85	75	0.49	78	18	P 2	09C	+1.24		TEHTEC			H1748	reso	88C00097	C	600UL		
167			0.20	101	SAI	2	09C	+1.41		09CDBC	0.19	0.36	W3386	reso	88C00194	C	600PP		
	121	75	0.32	134	12	P 2	VH1	-0.86		TEHTEC			G4841	reso	88C00126	C	600UL		
			0.25	139	11	P 2	VH1	-0.62		TSHTEC			H1748	reso	88C00097	C	600UL		
170	125	75	0.59	120	21	P 2	10H	-0.91		TEHTEC			C4330	prim	88C00097	C	600UL		
71	127	75	0.30	147	13	P 2	VH1	-0.82		TEHTEC			B3170	prim	88C00099	C	600UL		
72			0.31	143	14	P 2	VH1	+0.88		TEHTEC			B3170	prim	88C00099	C	600UL		
173	131	75	0.29	139	13	P 2	VH1	-0.86		TEHTEC			B3170	prim	88C00099	C	600UL		
174	133	75	0.46	104	14	P 3	DBH	+1.98		TEHTEC			M7262	reso	88C00097	C	600UL		
175	145	75	0.61	87	21	P 3	DBH	+2.05		TEHTEC			B8090	reso	88C00130	C	600UL		
176			0.32	148	11	P 2	VH1	-0.84		TEHTEC			C4330	prim	88C00130	C	600UL		
177	46	76	0.83	15	28	P 3	DBH	+1.78		TEHTEC			R8278	seco	88C00063	C	600UL		
178	50	76	0.65	121	24	P 3	DBC	-1.33		TEHTEC			R8278	seco	88C00063	C	600UL		
179	54	76	0.28	137	12	P 3	DBC	-1.24		TEHTEC			R8278	seco	88C00063	C	600UL		
180	64	76	0.25	104	MAI	2	TSH	+0.71		TSHTSH	0.17	0.35	H1748	reso	88H00033	H	600PP		
181	80	76	0.61	26	SCI	P 1	TSH	-0.12		TSHTSH	0.52	0.41	M7262	reso	88H00096	H	600PP		
182	124	76	0.33	129	14	P 2	VH1	-0.78		TEHTEC			X3270	seco	88C00103	C	600UL		
183	51	77	0.56	143	21	P 3	DBC	-1.51		TEHTEC			R8278	seco	88C00063	C	600UL		
184	69	77	0.39	25	SCI	P 1	TSH	-0.01		TSHTSH	0.30	0.25	H1748	reso	88H00032	H	600PP		
185	123	77	0.36	127	14	P 2	VH2	-0.80		TEHTEC			B4014	prim	88C00101	C	600UL		
186	131	77	0.61	29	21	P 3	DBH	+2.00		TEHTEC			V1371	prim	88C00100	C	600UL		
187			0.35	117	15	P 2	VH1	-0.85		TEHTEC			E4963	reso	88C00100	C	600UL		
188	48	78	0.61	18	SCI	P 1	TSH	-0.09		TSHTSH	0.39	0.19	E4963	reso	88H00030	H	600PP		
189	72	78	0.36	20	SCI	P 1	TSH	-0.05		TSHTSH	0.89	0.22	M7262	reso	88H00095	H	600PP		
190	90	78	0.59	98	20	P 2	03H	-1.14		TEHTEC			G7112	seco	88C00104	C	600UL		
191	96	78	0.41	25	SCI	P 1	TSH	-0.04		TSHTSH	0.60	0.19	M7262	reso	88H00094	H	600PP		
192			0.17	82	SVI	2	TSC	-4.59	TO-5.22	TSC01C	0.79	0.53	G4841	reso	88C00194	C	600PP		
193	134	78	0.39	127	14	P 2	VH1	-0.80		TEHTEC			V1371	prim	88C00126	C	600UL		
			0.24	117	9	P 2	VH1	+0.91		TEHTEC			V1371	prim	88C00126	C	600UL		
	138	78	0.43	102	15	P 2	VH1	-0.75		TEHTEC			V1371	prim	88C00126	C	600UL		
196			0.28	90	10	P 2	VH1	-0.97		TEHTEC			V1371	prim	88C00126	C	600UL		

NO

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 5

	ROW	COL	VOLTS	DEG	PCT	CHN	FLAW	LOCATION	EXTENT	UTIL1	UTIL2	NAME	TYPE	CAL	GROUP	LEG	PROBE	SIZE
197	51	79	0.45	90	15	P 3	DBC	+2.00	TEHTEC			B2153	seco	88C00064	C	600UL		
198	63	79	0.19	103	SCI	P 1	TSH	-0.14	TSHTSH	0.47	0.29	S4963	reso	93E00031	H	600PP		
199	89	79	0.38	23	SCI	P 1	TSH	-0.08	TSHTSH	0.00	0.17	M7262	reso	98H00094	H	600PP		
200	91	79	0.46	18	SCI	P 1	TSH	-0.16	TSHTSH	0.36	0.16	M7262	reso	88H00095	H	600PP		
201	119	79	0.46	120	17	P 3	DBH	+1.60	TEHTEC			B8090	reso	88C00105	C	600UL		
202	141	79	0.33	146	13	P 2	VC1	+0.95	TEHTEC			T5144	seco	88C00130	C	600UL		
203			0.87	85	28	P 3	DBC	+1.63	TEHTEC			T5144	seco	88C00130	C	600UL		
204	54	80	1.35	87	36	P 3	DBC	-2.00	TEHTEC			V1371	prim	88C00065	C	600UL		
205	64	80	0.45	111	15	P 3	DBH	+1.83	TEHTEC			L9168	prim	88C00124	C	600UL		
206	80	80	0.32	126	13	P 2	VSM	-0.64	TEHTEC			B2027	prim	88C00104	C	600UL		
207	120	80	0.31	119	10	P 3	DBH	-1.86	TEHTEC			C4330	prim	88C00104	C	600UL		
208	130	80	0.26	94	SAI	2	04H	-0.31	04H04H	0.0	0.38	M0554	reso	88H00243	H	600PP		
209	144	80	0.41	129	16	P 3	DBH	+2.00	TEHTEC			T5144	seco	88C00130	C	600UL		
210	53	81	0.77	96	24	P 3	DBH	-1.26	TEHTEC			W3386	reso	88C00064	C	600UL		
211	135	81	0.34	133	14	P 2	VH1	-0.79	TEHTEC			B5555	reso	88C00104	C	600UL		
212	145	81	0.43	146	16	P 2	VH1	-0.91	TEHTEC			T5144	seco	88C00130	C	600UL		
213			0.80	97	26	P 3	DBC	-1.42	TEHTEC			T5144	seco	88C00130	C	600UL		
214	74	82	0.42	138	19	P 2	VSM	-0.89	TEHTEC			L3025	prim	88C00105	C	600UL		
215			0.74	132	28	P 2	VSM	+0.89	TEHTEC			M0155	seco	88C00105	C	600UL		
216	142	82	0.52	115	18	P 3	DBC	-0.24	TEHTEC			C4330	prim	88C00130	C	600UL		
217	144	82	0.68	107	23	P 3	DBC	-1.62	TEHTEC			T5144	seco	88C00130	C	600UL		
218	55	83	0.17	108	SAI	2	TSH	+0.96	TSHTSH	0.00	0.19	S4963	reso	93E00030	H	600PP		
219			0.28	98	10	P 3	DBH	-1.27	TEHTEC			W3386	reso	88C00064	C	600UL		
220	85	83	0.09	97	SAI	2	09C	+1.49	09C09C	0.00	0.20	M7262	reso	88C00194	C	600PP		
221	125	83	0.85	139	26	P 2	10H	-0.91	TEHTEC			G7112	seco	88C00104	C	600UL		
222			0.63	121	19	P 3	DBH	+2.17	TEHTEC			G7112	seco	88C00104	C	600UL		
223	131	83	0.23	70	10	P 3	DBH	-1.92	TEHTEC			L3025	prim	88C00105	C	600UL		
224	133	83	0.37	94	15	P 2	10H	-0.97	TEHTEC			G4841	reso	88C00104	C	600UL		
225	145	83	0.33	64	13	P 2	VC1	+0.89	TEHTEC			T5144	seco	88C00130	C	600UL		
226	76	84	0.37	132	16	P 2	VH3	-0.83	TEHTEC			L3025	prim	88C00107	C	600UL		
227			0.28	138	12	P 2	VH3	+1.03	TEHTEC			L3025	prim	88C00107	C	600UL		
228	94	84	0.31	130	13	P 2	VH3	+0.83	TEHTEC			G7112	seco	88C00107	C	600UL		
229	114	84	0.23	140	10	P 2	VH2	-0.70	TEHTEC			M7262	reso	88C00107	C	600UL		
230	132	84	0.69	123	22	P 2	09H	-0.94	TEHTEC			G7112	seco	88C00106	C	600UL		
231	134	84	0.47	114	19	P 2	10H	-1.03	TEHTEC			L3025	prim	88C00107	C	600UL		
232	144	84	0.54	97	13	P 3	DBC	+1.49	TEHTEC			C4330	prim	88C00130	C	600UL		
233	67	85	0.68	88	21	P 3	DBC	-1.85	TEHTEC			B2153	seco	88C00064	C	600UL		
234	71	85	0.80	76	27	P 3	DBC	-1.35	TEHTEC			L3025	prim	88C00107	C	600UL		
235	125	85	0.35	123	15	P 2	VH1	-0.65	TEHTEC			L3025	prim	88C00107	C	600UL		
236			0.30	83	13	P 2	VH2	-0.85	TEHTEC			L3025	prim	88C00107	C	600UL		
237	143	85	0.37	131	14	P 2	VC2	-0.90	TEHTEC			R3710	prim	88C00208	C	600UL		
238			0.31	152	11	P 2	VC2	-0.86	TEHTEC			C4330	prim	88C00130	C	600UL		
239			1.40	116	35	P 2	VC1	-0.82	TEHTEC			C4330	prim	88C00130	C	600UL		
240			0.39	95	14	P 2	VC1	+0.83	TEHTEC			R3710	prim	88C00208	C	600UL		
241			0.40	140	14	P 2	VC1	+0.89	TEHTEC			C4330	prim	88C00130	C	600UL		
242	147	85	0.30	115	12	P 3	DBH	-1.75	TEHTEC			T6144	seco	88C00130	C	600UL		
			0.29	127	12	P 2	VH1	+0.86	TEHTEC			T6144	seco	88C00130	C	600UL		
			0.53	150	19	P 2	VC1	-0.84	TEHTEC			T6144	seco	88C00130	C	600UL		
245			0.97	115	29	P 2	VC1	+0.50	TEHTEC			T6144	seco	88C00130	C	600UL		

NO

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 6

	ROW	COL	VOLTS	DEG	PCT	CHN	FLAW	LOCATION		EXTENT	UTIL1	UTIL2	NAME	TYPE	CAL GROUP	LEG	PROBE SIZE
246			0.97	132	29	P 2	VC1	+0.82		TEHTEC			T6144	seco	88C00130	C	600UL
247			0.59	69	20	P 3	DBC	-1.66		TEHTEC			C4330	prim	88C00130	C	600UL
248	52	86	0.90	66	20	P 3	DBH	-1.57		TEHTEC			W9213	seco	88C00208	C	600UL
249			1.95	105	37	P 3	DBH	+1.72		TEHTEC			W9213	seco	88C00208	C	600UL
250	56	86	1.05	79	23	P 3	DBH	-1.71		TEHTEC			R3710	prim	88C00208	C	600UL
251	94	86	0.35	15	SCI	P 1	TSH	-0.10		TSHTSH	0.32	0.22	M7262	reso	88H00093	H	600PP
252	100	86	0.32	80	14	P 2	VH2	-0.69		TEHTEC			L3025	prim	88C00107	C	600UL
253	120	86	0.38	122	16	P 2	10H	+0.85		TEHTEC			L3025	prim	88C00107	C	600UL
254			0.20	167	9	P 3	DBH	-0.70		TEHTEC			L3025	prim	88C00107	C	600UL
255	126	86	0.36	110	12	P 3	DBH	+1.73		TEHTEC			G7112	seco	88C00106	C	600UL
256	134	86	0.53	129	18	P 2	09H	-0.95		TEHTEC			G7112	seco	88C00106	C	600UL
257			0.50	85	17	P 2	10H	-0.95		TEHTEC			G7112	seco	88C00106	C	600UL
258	136	86	0.55	124	19	P 2	10H	-1.02		TEHTEC			G7112	seco	88C00106	C	600UL
259	142	86	0.30	130	12	P 3	DBH	+2.00		TEHTEC			T5144	seco	88C00130	C	600UL
260	144	86	0.24	147	10	P 3	DBH	+2.00		TEHTEC			T6144	seco	88C00130	C	600UL
261	69	87	0.15	106	SAI	4	TSH	+0.69		TSHTSH	0.00	0.31	W3386	reso	88H00216	H	600PP
262	81	87	0.22	140	10	P 2	VC3	-0.68		TEHTEC			L3025	prim	88C00107	C	600UL
263	127	87	0.29	115	11	P 2	09H	-1.02		TEHTEC			G7112	seco	88C00106	C	600UL
264			0.30	47	11	P 2	10H	-1.08		TEHTEC			G7112	seco	88C00106	C	600UL
265	133	87	0.30	127	13	P 2	VH1	-0.88		TEHTEC			L3025	prim	88C00107	C	600UL
	135	87	0.35	50	13	P 2	09H	-0.99		TEHTEC			G7112	seco	88C00106	C	600UL
			0.28	94	11	P 2	10H	-0.94		TEHTEC			G7112	seco	88C00106	C	600UL
268	54	88	0.51	20	SAI	2	TSH	-0.92		TSHTSH	.27	.38	P4578	reso	88H00199	H	600PP
			0.99	81	22	P 3	DBC	-1.76		TEHTEC			W9213	seco	88C00208	C	600UL
	56	88	0.48	98	12	P 3	DBC	-1.80		TEHTEC			W9213	seco	88C00208	C	600UL
271	58	88	0.32	119	8	P 3	DBC	-1.63		TEHTEC			W9213	seco	88C00208	C	600UL
272	72	88	0.54	119	21	P 3	DBC	-1.55		TEHTEC			L3025	prim	88C00107	C	600UL
273	76	88	0.28	136	12	P 2	VSM	-0.90		TEHTEC			L3025	prim	88C00107	C	600UL
274			0.32	94	14	P 2	VC3	-0.90		TEHTEC			L3025	prim	88C00107	C	600UL
275	98	88	0.36	110	15	P 2	VH2	-0.76		TEHTEC			L3025	prim	88C00107	C	600UL
276	118	88	0.31	70	14	P 2	VH1	-0.68		TEHTEC			E4963	reso	88C00107	C	600UL
277			0.35	109	15	P 2	VH1	+0.83		TEHTEC			W3386	reso	88C00107	C	600UL
278	128	88	0.55	122	19	P 2	10H	-0.98		TEHTEC			G7112	seco	88C00106	C	600UL
279	132	88	0.49	145	17	P 2	09H	-0.96		TEHTEC			G7112	seco	88C00106	C	600UL
280	136	88	0.65	136	21	P 2	09H	-0.98		TEHTEC			G7112	seco	88C00106	C	600UL
281	140	88	0.22	137	8	P 3	DBH	+1.88		TEHTEC			G7112	seco	88C00106	C	600UL
282	144	88	0.77	70	25	P 3	DBC	+1.66		TEHTEC			C4330	prim	88C00130	C	600UL
283	123	89	0.72	96	23	P 2	10H	-0.89		TEHTEC			G7112	seco	88C00106	C	600UL
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
291	143	89	0.26	40	11	P 3	DBH	-1.75		TEHTEC			B8090	reso	88C00130	C	600UL
	145	89	0.35	123	12	P 2	VC1	+0.80		TEHTEC			C4330	prim	88C00130	C	600UL
	147	89	0.86	130	27	P 2	VC1	+0.84		TEHTEC			C4330	prim	88C00130	C	600UL
294	52	90	0.95	86	21	P 3	DBH	-2.07		STHTEC			R3710	prim	88C00208	C	600UL

NO

SG88 MAI, MCI, MMI, MVI, SAI, SCI, SVI, 0-100%TWD

UTILITY: Southern California Edison,
PLANT: San Onofre
UNIT: 2
SG: 88
DATABASE: SONGS_U2_1000_SG88_FINAL

NOV. 8,2000 8:44

	ROW	COL	VOLTS	DEG	PCT	CHN	FLAW	LOCATION		EXTENT	UTIL1	UTIL2	NAME	TYPE	CAL	GROUP	LEG	PROBE	SIZE
295	54	90	0.36	17	SCI	P 1	TSH		+0.08	TSHTSH	0.00	0.20	M7262	reso	88H00199		H	600PP	
296			1.18	63	25	P 3	DBH		-1.99	TEHTEC			R3710	prim	88C00208		C	600UL	
297			0.58	143	14	P 3	DBH		+1.15	TEHTEC			W9213	seco	88C00208		C	600UL	
298	66	90	0.27	23	SCI	P 1	TSH		-0.10	TSHTSH	0	.14	P4578	reso	88H00199		H	600PP	
299	72	90	0.60	132	24	P 2	VSM		+0.97	TEHTEC			L8038	prim	88C00109		C	600UL	
300	76	90	0.50	61	21	P 2	VSM		-0.00	TEHTEC			L8038	prim	88C00109		C	600UL	
301	80	90	0.19	93	SAI	2	02H		+9.60	02H02H	0.00	0.23	W3386	reso	88H00240		H	600PP	
302			0.26	100	SAI	2	02H		-9.96	02H02H	0.00	0.26	W3386	reso	88H00240		H	600PP	
303	126	90	0.42	121	17	P 3	DBH		+2.00	TEHTEC			L8038	prim	88C00109		C	600UL	
304	128	90	0.37	99	13	P 2	10H		+0.94	TEHTEC			P1465	prim	88C00108		C	600UL	
305	142	90	0.26	129	11	P 3	DBH		+2.00	TEHTEC			T5144	seco	88C00130		C	600UL	
306	144	90	0.64	40	22	P 3	DBC		+1.70	TEHTEC			T5144	seco	88C00130		C	600UL	
307	146	90	1.14	64	33	P 3	DBC		+1.60	TEHTEC			C4330	prim	88C00130		C	600UL	
308	85	91	0.41	82	15	P 2	09H		-0.15	TEHTEC			W9213	seco	88C00132		C	600UL	
309	99	91	0.41	11	SCI	P 1	TSH		-0.14	TSHTSH	0.37	0.16	R5555	reso	88H00091		H	600PP	
310	125	91	0.30	140	13	P 3	DBH		+1.96	TEHTEC			L8038	prim	88C00109		C	600UL	
311	137	91	0.43	140	19	P 2	10H		-1.08	TEHTEC			L8038	prim	88C00109		C	600UL	
312	145	91	0.30	151	10	P 2	VH2		+0.75	TEHTEC			C4330	prim	88C00130		C	600UL	
313	147	91	0.39	152	14	P 2	VC1		-0.82	TEHTEC			C4330	prim	88C00130		C	600UL	
314	72	92	0.18	104	SAI	2	TSH		+1.53	TSHTSH	0	0.40	M7262	reso	88H00091		H	600PP	
			0.10	119	SAI	2	TSH		+2.38	TSHTSH	0.00	0.20	M7262	reso	88H00091		H	600PP	
	112	92	0.37	62	13	P 2	VH2		-0.61	TEHTEC			P1465	prim	88C00108		C	600UL	
317	120	92	0.37	85	13	P 3	DBH		-1.89	TEHTEC			R5278	seco	88C00108		C	600UL	
	126	92	0.25	119	12	P 2	VH1		-0.94	TEHTEC			B3170	prim	88C00109		C	600UL	
	138	92	0.28	148	13	P 2	VH1		-0.73	TEHTEC			B3170	prim	88C00109		C	600UL	
320	53	93	1.49	64	34	P 3	DBH		-1.84	07HTEC			B4165	prim	88C00207		C	600UL	
321	55	93	0.81	17	SAI	2	TSH		-1.45	TSHTSH	1.36	.75	P4578	reso	88H00199		H	600PP	
322	135	93	0.29	118	11	P 2	10H		+0.94	TEHTEC			P1465	prim	88C00108		C	600UL	
323	147	93	0.26	76	8	P 2	VC1		-0.47	TEHTEC			C4330	prim	88C00130		C	600UL	
324			0.78	112	25	P 2	VC1		+0.97	TEHTEC			C4330	prim	88C00130		C	600UL	
325			0.22	52	10	P 3	DBC		-1.90	TEHTEC			G4841	reso	88C00130		C	600UL	
326	52	94	0.35	134	11	P 3	DBC		-1.80	TEHTEC			R5555	reso	88C00207		C	600UL	
327	84	94	0.31	22	SCI	P 1	TSH		-0.12	TSHTSH	0.29	0.21	M7262	reso	88H00090		H	600PP	
328	122	94	0.25	80	9	P 3	DBH		+1.99	TEHTEC			R8278	seco	88C00108		C	600UL	
329	130	94	0.42	129	15	P 2	10H		-0.95	TEHTEC			G4841	reso	88C00108		C	600UL	
330	132	94	0.66	64	25	P 2	10H		+0.90	TEHTEC			B3170	prim	88C00109		C	600UL	
331	119	95	0.43	115	14	P 3	DBH		-1.82	TEHTEC			R8278	seco	88C00110		C	600UL	
332	127	95	0.25	156	10	P 2	VH1		-0.85	TEHTEC			R8278	seco	88C00110		C	600UL	
333	129	95	0.43	91	17	P 3	DBH		+2.04	TEHTEC			L3025	prim	88C00111		C	600UL	
334	48	96	1.18	116	30	P 3	DBH		-1.75	TEHTEC			R5555	reso	88C00207		C	600UL	
335	50	96	3.12	19	49	P 3	DBH		+0.00	TEHTEC	LAR		M7262	reso	88C00207		C	600UL	
336			0.86	110	24	P 3	DBC		-1.98	TEHTEC			R5555	reso	88C00207		C	600UL	
337	54	96	0.38	33	SCI	P 1	TSH		-2.14	TSHTSH	0.66	0.28	M7262	reso	88H00199		H	600PP	
338			0.41	62	13	P 3	DBH		-1.75	TEHTEC			R5555	reso	88C00207		C	600UL	
339	114	96	0.29	152	12	P 2	VH3		-0.87	TEHTEC			R8278	seco	88C00110		C	600UL	
340	122	96	0.41	120	13	P 3	DBH		+2.01	TEHTEC			L9168	prim	88C00110		C	600UL	
	134	96	0.37	121	15	P 2	VH1		-0.72	TEHTEC			L9168	prim	88C00110		C	600UL	
	144	96	0.39	125	13	P 3	DBH		+2.11	TEHTEC			C4330	prim	88C00130		C	600UL	
343	69	97	0.15	98	SAI	2	TSH		+1.45	TSHTSH	0	0.26	R5555	reso	88H00091		H	600PP	

NO

SG88 MAI, MCI, MMI, MVI, SAI, SCI, SVI, 0-100%TWD

UTILITY: Southern California Edison.
PLANT: San Onofre
UNIT: 2
SG: 88
DATABASE: SONGS_U2_1000_SG88_FINAL

NOV. 8,2000 8:44

	ROW	COL	VOLTS	DEG	PCT	CHN	FLAW	LOCATION	EXTENT	UTIL1	UTIL2	NAME	TYPE	CAL	GROUP	LEG	PROBE	SIZE
344	125	97	0.38	136	14	P 2	VH1	-0.90	TEHTEC			B8589	seco	88C00111	C	600	UL	
345	135	97	0.21	146	10	P 2	10H	-0.94	TEHTEC			L9168	prim	88C00110	C	600	UL	
346			0.26	130	12	P 2	10H	-0.97	TEHTEC			L9168	prim	88C00110	C	600	UL	
347	50	98	0.36	34	14	P 2	VSM	-0.76	TEHTEC			W3386	reso	88C00207	C	600	UL	
348	54	98	0.44	18	SCI	P 1	TSH	-0.01	TSHTSH	.57	.27	P4578	reso	88H00199	H	600	PP	
349	62	98	0.54	84	MCI	P 1	TSH	+0.12	TSHTSH	.56	.94	P4578	reso	88H00199	H	600	PP	
350	66	98	0.22	97	SAI	2	TSH	+0.19	TSHTSH	0	.16	P4578	reso	88H00199	H	600	PP	
351			0.19	103	MAI	2	TSH	+0.93	TSHTSH	0	.22	P4578	reso	88H00199	H	600	PP	
352	74	98	0.23	103	SCI	P 1	TSH	+0.00	TSHTSH	0	0.38	R5555	reso	88H00091	H	500	PP	
353	47	99	0.90	136	25	P 3	DBH	-1.87	TEHTEC			R5555	reso	88C00207	C	600	UL	
354			0.52	48	16	P 3	DBC	-1.95	TEHTEC			R5555	reso	88C00207	C	500	UL	
355	51	99	0.60	77	18	P 3	DBH	-1.92	TEHTEC			B4165	prim	88C00207	C	600	UL	
356	85	99	0.56	122	19	P 2	09C	+1.28	TEHTEC	LAR		M7262	reso	88C00111	C	500	UL	
357			0.19	103	SAI	2	09C	+1.50	09C09C	0.00	0.30	R1748	reso	88C00192	C	600	PP	
358	113	99	0.32	91	14	P 2	VH2	-0.75	TEHTEC			R1748	reso	88C00110	C	600	UL	
359	133	99	0.22	60	10	P 2	VH1	-0.78	TEHTEC			V1371	prim	88C00110	C	600	UL	
360	44	100	0.52	83	16	P 3	DBC	-1.98	TEHTEC			R5555	reso	88C00207	C	600	UL	
361			0.77	95	22	P 3	DBC	+1.90	TEHTEC			G4841	reso	88C00207	C	600	UL	
362	134	100	0.36	105	15	P 2	10H	+1.11	TEHTEC			V1371	prim	88C00110	C	600	UL	
363	146	100	0.71	130	24	P 3	DBH	-1.98	TEHTEC			C4330	prim	88C00130	C	600	UL	
	39	101	0.83	50	23	P 3	DBC	-1.98	TEHTEC			B4165	prim	88C00207	C	600	UL	
	42	101	0.30	114	12	P 2	VSM	-0.73	TEHTEC			B4165	prim	88C00207	C	600	UL	
366	43	101	0.40	73	13	P 3	DBC	-2.11	TEHTEC			B4165	prim	88C00207	C	500	UL	
	65	101	0.16	108	SAI	2	TSH	+1.01	TSHTSH	0	.39	P4578	reso	88H00199	H	600	PP	
	73	101	0.25	29	SCI	P 1	TSH	-0.11	TSHTSH	0.00	0.19	G4841	reso	88H00090	H	600	PP	
369	79	101	0.45	27	SCI	P 1	TSH	-0.03	TSHTSH	.24	.27	P4578	reso	88H00088	H	600	PP	
370	111	101	0.22	92	8	P 3	DBH	-0.86	TEHTEC			W9213	seco	88C00132	C	600	UL	
371	119	101	0.43	136	13	P 3	DBH	-1.62	TEHTEC			P4578	reso	88C00110	C	600	UL	
372	127	101	0.34	122	14	P 2	VH1	-0.78	TEHTEC			V1371	prim	88C00110	C	600	UL	
373			0.23	91	10	P 2	VH3	+0.82	TEHTEC			V1371	prim	88C00110	C	600	UL	
374	36	102	1.00	49	28	P 3	DBC	+2.07	TEHTEC			W9213	seco	88C00205	C	600	UL	
375	42	102	0.49	20	MCI	P 1	TSH	-6.43	TSHTSH	.33	.31	P4578	reso	88S00199	H	600	PP	
376	46	102	0.85	14	SAI	2	TSH	-0.52	TSHTSH	.85	.16	P4578	reso	88H00199	H	500	PP	
377	70	102	0.56	23	SCI	P 1	TSH	-0.06	TSHTSH	.86	.14	P4578	reso	88H00199	H	600	PP	
378	80	102	0.34	25	SCI	P 1	TSH	+0.00	TSHTSH	.31	.14	P4578	reso	88H00089	H	600	PP	
379	116	102	0.31	118	13	P 3	DBH	-1.04	TEHTEC			B5926	seco	88C00113	C	600	UL	
380	35	103	1.44	79	35	P 3	DBH	-1.43	TEHTEC			P0037	prim	88C00205	C	600	UL	
381			0.42	43	16	P 2	VSM	-0.60	TEHTEC			W9213	seco	88C00205	C	600	UL	
382	39	103	1.93	24	SAI	2	TSH	-5.68	TSHTSH	2.40	0.19	R5555	reso	88H00200	H	500	PP	
383	87	103	0.35	116	SAI	2	07H	-0.37	07H07H	0.00	0.40	M7262	reso	88H00138	H	600	PP	
384	36	104	0.74	108	23	P 3	DBH	-1.74	STHTEC			W3386	reso	88C00205	C	600	UL	
385	84	104	0.49	89	14	P 2	09H	-1.31	TEHTEC	LAR		M7262	reso	88C00112	C	600	UL	
386	41	105	0.67	20	SAI	2	TSH	-0.69	TSHTSH	.87	.18	P4578	reso	88H00211	H	600	PP	
387	139	105	0.49	61	16	P 2	10H	+0.86	TEHTEC			P0037	prim	88C00112	C	600	UL	
388	42	106	0.63	128	21	P 2	VSM	-0.72	TEHTEC			B3170	prim	88C00203	C	600	UL	
389	76	106	0.14	65	SAI	2	02H	-7.79	02H02H	0.11	0.19	E4963	reso	88H00242	H	600	PP	
	128	106	0.29	147	9	P 2	10H	-0.83	TEHTEC			B3170	prim	88C00113	C	600	UL	
391	130	106	0.43	64	14	P 2	VH1	-0.77	TEHTEC			P0037	prim	88C00112	C	600	UL	
392	144	106	1.08	97	24	P 3	DBC	+1.70	TEHTEC			R3710	prim	88C00208	C	600	UL	

NO

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 9

	ROW	COL	VOLTS	DEG	PCT	CHN	FLAW	LOCATION		EXTENT	UTIL1	UTIL2	NAME	TYPE	CAL	GROUP	LEG	PROBE	SIZE
393	63	107	0.11	99	SAI	2	TSH	+2.32		TSHTSH	.16	.16	B8090	reso	88H00201	H	600PP		
394	127	107	0.40	157	17	P 2	VH1	-0.75		TEHTEC			V1371	prim	88C00114	C	600UL		
395	24	108	0.15	109	SCI	P 1	TSH	+0.01		TSHTSH	0.11	0.31	W3386	reso	88H00201	H	600PP		
396	48	108	0.62	113	21	P 2	VSM	-0.12		TEHTEC			M7262	reso	88C00203	C	600UL		
397	106	108	0.65	17	SAI	2	VC2	+1.07		VC2VC2	0.67	0.43	W3386	reso	88C00249	C	560PP		
398	128	108	0.33	145	11	P 2	VH1	-0.87		TEHTEC			T9924	seco	88C00114	C	600UL		
399	23	109	0.54	131	19	P 2	VSM	+1.06		TEHTEC			W9213	seco	88C00203	C	600UL		
400	37	109	0.61	14	SAI	2	TSH	-5.25		TSHTSH	.44	.13	P4578	reso	88H00211	H	600PP		
401			0.75	20	SAI	2	TSH	-3.79		TSHTSH	.73	.18	P4578	reso	88H00211	H	600PP		
402	39	109	0.19	80	SAI	2	TSH	+1.05		TSHTSH	.14	.13	B8090	reso	88H00201	H	600PP		
403	43	109	0.20	98	SAI	2	01H	+0.71		01H01H	0.00	0.20	E4963	reso	88H00265	H	600PP		
404			0.50	100	17	P 2	01H	+0.82		TEHTEC			M7262	reso	88C00203	C	600UL		
405	47	109	1.07	18	SAI	2	TSH	-1.36	TO-0.99	TSHTSH	.81	.36	P4578	reso	88H00211	H	600PP		
406			0.37	22	SCI	P 1	TSH	-0.15		TSHTSH	.21	.13	P4578	reso	88H00211	H	600PP		
407			0.27	123	11	P 2	VSM	+0.94		TEHTEC			W9213	seco	88C00203	C	600UL		
408	79	109	0.39	19	SCI	P 1	TSH	-0.07		TSHTSH	0.43	0.19	W3386	reso	88H00084	H	600PP		
409	111	109	0.24	50	11	P 2	VH3	+1.14		TEHTEC			V1371	prim	88C00114	C	600UL		
410	123	109	0.47	144	16	P 2	VH1	-0.95		TEHTEC			T9924	seco	88C00114	C	600UL		
411	143	109	0.22	131	9	P 3	DBH	-1.54		TEHTEC			V1371	prim	88C00131	C	600UL		
412	78	110	0.36	125	12	P 2	VH3	-0.74		TEHTEC			T9924	seco	88C00114	C	600UL		
			0.39	138	13	P 2	VC3	-0.74		TEHTEC			T9924	seco	88C00114	C	600UL		
	86	110	0.41	67	18	P 2	VC2	-0.66		TEHTEC			B2265	prim	88C00115	C	600UL		
415	114	110	0.32	108	16	P 3	DBH	-1.59		TEHTEC			B2265	prim	88C00115	C	600UL		
16	142	110	0.51	55	18	P 3	DBH	+1.86		TEHTEC			V1371	prim	88C00131	C	600UL		
417	39	111	0.65	19	SAI	2	TSH	-0.01		TSHTSH	0.53	0.18	W3386	reso	88H00201	H	600PP		
418	43	111	0.55	11	SAI	2	TSH	-4.34		TSHTSH	0.83	0.21	M7262	reso	88H00201	H	600PP		
419			0.76	20	SAI	2	TSH	-3.05		TSHTSH	2.25	0.34	M7262	reso	88H00201	H	600PP		
420			0.43	15	SCI	P 1	TSH	-2.66		TSHTSH	0.68	0.14	M7262	reso	88H00201	H	600PP		
421			1.14	13	SAI	2	TSH	-0.44		TSHTSH	1.67	0.15	M7262	reso	88H00201	H	600PP		
422	49	111	0.28	80	SAI	2	TSH	+0.13		TSHTSH	.27	.18	P4578	reso	88H00211	H	600PP		
423	59	111	0.80	21	SCI	P 1	TSH	-3.64		TSHTSH	.67	.20	P4578	reso	88H00211	H	600PP		
424			0.43	108	15	P 2	01H	+1.25		TEHTEC			M7262	reso	88C00203	C	600UL		
425	123	111	0.58	32	19	P 3	DBH	+1.99		TEHTEC			R8278	seco	88C00134	C	600UL		
426	122	112	0.29	34	11	P 2	10H	-0.86		TEHTEC			B2027	prim	88C00133	C	600UL		
427	126	112	0.46	23	14	P 3	DBH	+1.78		TEHTEC			B2027	prim	88C00133	C	600UL		
428	57	113	0.58	10	SAI	2	07H	-0.23		07H07H	0	.11	P4578	reso	88H00223	H	600PP		
429	34	114	3.25	30	SCI	P 1	TSH	-6.03		TSHTSH	5.29	0.51	W3386	reso	88H00201	H	600PP		
430			1.00	20	MCI	P 1	TSH	-5.54		TSHTSH	1.15	0.28	W3386	reso	88H00201	H	600PP		
431			0.38	17	SCI	P 1	TSH	-5.10		TSHTSH	0.76	0.14	W3386	reso	88H00201	H	600PP		
432			1.11	21	SCI	P 1	TSH	-4.58		TSHTSH	2.50	0.29	W3386	reso	88H00201	H	600PP		
433			0.38	14	SAI	2	TSH	-1.75	TO-6.20	TSHTSH	1.0	4.45	W3386	reso	88H00201	H	600PP		
434	122	114	0.31	55	15	P 2	10H	-0.92		TEHTEC			B3170	prim	88C00117	C	600UL		
435	65	115	0.90	18	SAI	2	TSH	-5.30		TSHTSH	1.42	1.57	P4578	reso	88H00211	H	600PP		
436			0.91	18	SAI	2	TSH	-2.80		TSHTSH	1.21	.15	P4578	reso	88H00211	H	600PP		
437	107	115	0.43	51	16	P 2	VH2	+0.72		TECTEH			J9815	prim	88H00260	C	580SF		
438			0.33	121	12	P 2	VH2	+0.85		TEHTEC			G4841	reso	88C00133	C	600UL		
	133	115	0.41	69	19	P 2	10H	-0.92		TEHTEC			B3170	prim	88C00117	C	600UL		
	18	116	0.35	28	SCI	P 1	TSH	-0.10		TSHTSH	0	0.16	R5555	reso	88H00204	H	600PP		
441	46	116	0.83	50	28	P 2	VSM	-0.67		TEHTEC			L8038	prim	88C00230	C	500UL		

NO

SG88 MAI, MCI, MMI, MVI, SAI, SCI, SVI, 0-100%TWD

UTILITY: Southern California Edison,
PLANT: San Onofre
UNIT: 2
SG: 88
DATABASE: SONGS_U2_1000_SG88_FINAL

NOV. 8,2000 8:44

	ROW	COL	VOLTS	DEG	PCT	CHN	FLAW	LOCATION	EXTENT	UTIL1	UTIL2	NAME	TYPE	CAL	GROUP	LEG	PROBE	SIZE
442	112	116	0.20	72	11	P 2	VH3	-0.77	TEHTEC			B3170	prim	88C00117	C	600	UL	
443	85	119	0.49	84	18	P 2	09H	+1.71	TEHTEC	LAR		G4841	reso	88C00132	C	600	UL	
444	129	119	0.35	126	13	P 2	VH1	-0.78	TEHTEC			B8090	reso	88C00132	C	600	UL	
445	14	120	0.48	38	15	P 2	05H	+0.51	TEHTEC			M0554	reso	88C00199	C	600	UL	
446			0.35	124	SAI	2	05H	+0.63	05H05H	0.00	0.63	H8259	reso	88H00267	H	600	PP	
447	46	120	0.19	100	SCI	P 1	TSH	+0.12	TSHTSH	0.30	0.23	B4260	reso	88H00205	H	600	PP	
448	49	121	0.85	21	SCI	P 1	TSH	-2.87	TSHTSH	1.85	0.37	W3386	reso	88H00205	H	600	PP	
449	75	121	0.19	19	SCI	P 1	TSH	-0.07	TSHTSH	0.08	0.16	C0360	reso	88H00078	H	600	PP	
450	123	121	0.47	124	17	P 2	VH1	-0.86	TEHTEC			W9213	seco	88C00132	C	600	UL	
451	113	121	0.55	156	27	P 2	VH1	-0.74	TEHTEC			T6144	seco	88C00118	C	600	UL	
452	64	122	1.73	96	36	P 2	VH3	-0.90	TEHTEC			L9168	prim	88C00198	C	600	UL	
453	100	122	0.32	104	17	P 2	VH3	-0.77	TEHTEC			P1465	prim	88C00118	C	600	UL	
454	89	123	0.46	137	17	P 2	VH2	-1.04	TSHTEC			L3025	prim	88C00121	C	600	UL	
455			0.33	119	13	P 2	VH2	-0.81	TEHTEC			M7262	reso	88C00132	C	600	UL	
456	99	123	0.37	115	13	P 2	VC2	+0.84	TEHTEC			M7262	reso	88C00120	C	600	UL	
457	42	124	0.11	66	SCI	P 1	TSH	+0.10	TSHTSH	0.00	0.17	W3386	reso	88H00205	H	600	PP	
458	100	124	0.31	83	11	P 2	VSM	-0.71	TEHTEC			B2027	prim	88C00120	C	600	UL	
459	122	124	0.50	137	15	P 3	DBH	+1.79	TEHTEC			J0927	seco	88C00120	C	600	UL	
460	25	125	0.60	18	MCI	P 1	TSH	-0.12	TSHTSH	1.25	0.25	B4260	reso	88H00206	H	600	PP	
461	41	125	0.42	16	SCI	P 1	TSH	-0.20	TSHTSH	0.26	0.20	B4260	reso	88H00205	H	600	PP	
	43	125	0.40	136	14	P 2	VSM	-0.80	TEHTEC			V1371	prim	88C00198	C	600	UL	
	85	125	0.65	118	21	P 2	09C	+1.35	TEHTEC	LAR		M7262	reso	88C00120	C	600	UL	
464			0.32	117	SAI	2	09C	+1.52	09C09C	0.00	0.32	E1748	reso	88C00192	C	600	PP	
5	87	125	0.38	118	13	P 2	VH2	-0.71	TEHTEC			B2027	prim	88C00120	C	600	UL	
6	89	125	0.40	73	14	P 2	VH2	-0.62	TEHTEC			B2027	prim	88C00120	C	600	UL	
467	107	125	0.17	98	4	P 3	DBH	-1.44	TEHTEC			J0927	seco	88C00120	C	600	UL	
468	121	125	0.32	87	11	P 2	10H	+0.60	TEHTEC			B2027	prim	88C00120	C	600	UL	
469	125	125	0.36	127	13	P 2	VH1	-0.73	TEHTEC			B2027	prim	88C00120	C	600	UL	
470	127	125	0.36	93	13	P 2	VH1	-0.64	TEHTEC			B2027	prim	88C00120	C	600	UL	
471	16	126	0.19	21	SCI	P 1	TSH	-0.08	TSHTSH	.24	.14	P4578	reso	88H00075	H	600	PP	
472	39	127	0.36	83	13	P 2	VSM	-0.69	TEHTEC			B2265	prim	88C00047	C	600	UL	
473	89	127	0.37	148	15	P 2	VH2	-0.72	TEHTEC			T6144	seco	88C00032	C	600	UL	
474			0.20	160	8	P 2	VSM	-0.72	TEHTEC			B2265	prim	88C00032	C	600	UL	
475	95	127	0.23	19	SCI	P 1	TSH	-0.08	TSHTSH	0.21	0.16	H7791	reso	88H00054	H	600	PP	
476	131	127	0.50	130	19	P 2	03C	+0.82	TEHTEC			T6144	seco	88C00032	C	600	UL	
477	90	128	0.29	106	12	P 2	VH2	-0.85	TEHTEC			T0854	seco	88C00034	C	600	UL	
478	130	128	0.32	65	13	P 2	VH2	-0.51	TEHTEC			T6144	seco	88C00032	C	600	UL	
479	51	129	0.53	19	SCI	P 1	TSH	-0.08	TSHTSH	0.19	0.16	R5555	reso	88H00074	H	600	PP	
480	83	129	0.39	133	16	P 2	VC2	-0.82	TEHTEC			G4841	reso	88C00033	C	600	UL	
481	85	129	0.22	102	9	P 2	VH2	-0.63	TEHTEC			T6144	seco	88C00032	C	600	UL	
482	24	130	0.54	22	SCI	P 1	TSH	-5.65	TSHTSH	0.48	0.16	R5555	reso	88H00074	H	600	PP	
483	44	130	0.21	20	SCI	P 1	TSH	-0.10	TSHTSH	0	0.19	R5555	reso	88H00074	H	600	PP	
484	60	130	0.37	24	SCI	P 1	TSH	-0.11	TSHTSH	0.38	0.16	R5555	reso	88H00074	H	600	PP	
485	86	130	0.37	122	14	P 2	VC2	-0.87	TEHTEC			B4014	prim	88C00033	C	600	UL	
486	90	130	0.45	147	17	P 2	VH2	-0.85	TEHTEC			T0854	seco	88C00033	C	600	UL	
487	14	132	0.58	18	SCI	P 1	TSH	-5.42	TSHTSH	.64	.14	P4578	reso	88H00072	H	600	PP	
	26	132	0.61	12	SAI	2	TSH	-5.25	TSHTSH	.46	.14	P4578	reso	88H00072	H	600	PP	
			0.85	14	SAI	2	TSH	-3.78	TSHTSH	.77	.17	P4578	reso	88H00072	H	600	PP	
490	40	132	0.40	21	SCI	P 1	TSH	-0.10	TSHTSH	.27	.14	P4578	reso	88H00071	H	600	PP	

NO

SG88 MAI, MCI, MMI, MVI, SAI, SCI, SVI, 0-100%TWD

UTILITY: Southern California Edison,
PLANT: San Onofre
UNIT: 2
SG: 88
DATABASE: SONGS_U2_1000_SG88_FINAL

NOV. 8,2000 8:44

	ROW	COL	VOLTS	DEG	PCT	CHN	FLAW	LOCATION	EXTENT	UTIL1	UTIL2	NAME	TYPE	CAL GROUP	LEG	PROBE SIZE
491	47	133	0.34	143	12	P 2	VSM	-0.74	TEHTEC			R8278	seco	88C00045	C	600UL
492	73	133	0.42	96	16	P 2	VH3	+1.00	TEHTEC			G4841	reso	88C00030	C	600UL
493	72	134	0.32	119	13	P 2	VH3	-1.08	TEHTEC			F0037	prim	88C00031	C	600UL
494	76	134	0.42	142	16	P 2	VH3	+0.65	TEHTEC			F0037	prim	88C00031	C	600UL
495	23	135	0.23	14	SCI	P 1	TSH	-0.13	TSHTSH	.37	.11	P4578	reso	88H00071	H	600PP
496	59	135	0.48	28	18	P 2	VC3	-0.83	TEHTEC			V1371	prim	88C00046	C	600UL
497	89	135	0.42	115	16	P 2	VH2	-0.72	TEHTEC			B3170	prim	88C00030	C	600UL
498			0.26	62	10	P 2	VSM	+0.89	TEHTEC			B3170	prim	88C00030	C	600UL
499	26	136	1.36	31	SCI	P 1	TSH	-5.19	TSHTSH	2.46	.41	P4578	reso	88H00072	H	600PP
500			1.22	22	SAI	2	TSH	-4.87	TSHTSH	.93	.14	P4578	reso	88H00072	H	600PP
501			0.80	15	SAI	2	TSH	-4.49	TSHTSH	1.03	.09	P4578	reso	88H00072	H	600PP
502			0.44	14	SCI	P 1	TSH	-4.48	TSHTSH	0.0	0.15	M7262	reso	88H00072	H	600PP
503			0.48	13	SAI	2	TSH	-4.12	TSHTSH	.64	.09	P4578	reso	88H00072	H	600PP
504	78	136	0.51	60	17	P 3	DBH	-2.10	TEHTEC			G4841	reso	88C00030	C	600UL
505	94	138	0.28	114	11	P 2	VSM	-0.76	TEHTEC			T6144	seco	88C00028	C	600UL
506	110	138	0.45	139	17	P 2	VC3	-0.84	TEHTEC			B4014	prim	88C00029	C	600UL
507	120	138	0.48	73	16	P 3	DBH	-1.62	TEHTEC			R8278	seco	88C00029	C	600UL
508	75	139	0.34	158	13	P 2	VH3	+0.87	TEHTEC			B4014	prim	88C00029	C	600UL
509			0.61	108	21	P 2	VSM	-0.39	TEHTEC			B4014	prim	88C00029	C	600UL
510	93	139	0.31	148	12	P 2	VH2	-0.61	TEHTEC			R8278	seco	88C00028	C	600UL
	85	141	0.43	141	16	P 2	09H	+1.18	TEHTEC	LAR		M7252	reso	88C00028	C	600UL
	89	141	0.37	102	14	P 2	VH2	+0.73	TEHTEC			R8279	seco	88C00029	C	600UL
513			0.28	148	11	P 2	VC2	+1.01	TEHTEC			R8278	seco	88C00029	C	600UL
	97	141	0.28	135	11	P 2	VH2	+0.86	TEHTEC			C4330	prim	88C00028	C	600UL
	78	142	0.43	127	17	P 2	VH3	+0.85	TEHTEC			L9168	prim	88C00027	C	600UL
516	79	143	0.20	134	8	P 3	DBC	-1.33	TEHTEC			L9168	prim	88C00027	C	600UL
517	95	143	0.40	119	16	P 2	VH2	-0.62	TEHTEC			D2003	prim	88C00026	C	600UL
518	54	144	0.35	133	12	P 2	VH3	+0.70	TEHTEC			P4578	reso	88C00019	C	600UL
519	112	144	0.70	165	21	P 3	DBH	+2.23	TEHTEC			W3386	reso	88C00026	C	600UL
520	7	145	2.44	34	SCI	P 1	TSH	-4.32	TSHTSH	3.33	.44	P4578	reso	88H00069	H	600PP
521	68	146	0.53	119	19	P 2	VC3	-0.73	TEHTEC			B2027	prim	88C00042	C	600UL
522	74	146	0.63	136	22	P 2	VH3	-0.82	TEHTEC			L9168	prim	88C00027	C	600UL
523			0.86	140	27	P 2	VC3	-0.89	TEHTEC			L9168	prim	88C00027	C	600UL
524			0.61	51	22	P 2	VC3	+0.91	TEHTEC			L9168	prim	88C00027	C	600UL
525	101	147	0.40	150	15	P 2	VSM	-0.65	TEHTEC			G7112	seco	88C00024	C	600UL
526	74	148	0.23	126	10	P 2	VH3	-0.83	TEHTEC			G7112	seco	88C00024	C	600UL
527	78	148	0.47	144	18	P 2	08C	-0.94	TEHTEC			G7112	seco	88C00024	C	600UL
528	90	148	0.43	50	17	P 2	VH2	+0.83	VH2TSC			W9658	seco	88C00022	C	600UL
529			0.46	57	16	P 2	VH2	+0.88	TEHTEC			G4841	reso	88C00122	C	600UL
530	65	149	0.38	125	15	P 2	04H	+0.49	TEHTEC			H7791	reso	88C00042	C	600UL
531	14	150	0.89	23	SCI	P 1	TSH	-0.06	TSHTSH	0.45	0.19	M7262	reso	88H00007	H	600PP
532	86	150	0.27	149	11	P 2	VH2	+0.84	TEHTEC			W9658	seco	88C00022	C	600UL
533	96	150	0.40	129	16	P 2	VH2	-0.85	TEHTEC			B3170	prim	88C00023	C	600UL
534	81	151	0.25	137	11	P 2	VH3	+0.87	TEHTEC			W9658	seco	88C00022	C	600UL
535	85	151	0.37	109	15	P 2	VH2	+0.85	TEHTEC			W9658	seco	88C00022	C	600UL
536	99	151	0.38	149	15	P 2	VH2	-0.69	TEHTEC			B3170	prim	88C00023	C	600UL
	93	153	0.53	39	19	P 2	05C	-1.01	TEHTEC			B3170	prim	88C00021	C	600UL
			0.44	73	16	P 2	03C	+0.89	TEHTEC			B3170	prim	88C00021	C	600UL
539	78	154	0.39	136	15	P 2	VC3	-0.88	TEHTEC			W4786	seco	88C00020	C	600UL

NO

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 12

	ROW	COL	VOLTS	DEG	PCT	CHN	FLAW	LOCATION	EXTENT	UTIL1	UTIL2	NAME	TYPE	CAL GROUP	L2G	PROBE SIZE
540	10	156	0.63	22	MCI	P 1	TSH	-0.05	TSHTSH	0.28	0.31	M7262	reso	88H00013	H	600PP
541	74	156	0.45	42	16	P 2	VH3	+0.99	TEHTEC			B3170	prim	88C00021	C	600UL
542	21	159	0.46	130	18	P 2	06H	+0.88	TEHTEC			M7262	reso	88C00038	C	600UL
543	18	160	0.47	117	18	P 2	06H	-0.24	TEHTEC			B8090	reso	88C00038	C	600UL
544			0.48	107	19	P 2	06H	+0.95	TEHTEC			B8090	reso	88C00038	C	600UL
545	40	160	0.30	145	13	P 2	VSM	-0.66	TEHTEC			T4180	seco	88C00038	C	600UL
546	13	151	0.14	98	MAI	4	06H	+14.00	07H06H	0.33	0.88	E1748	reso	88H00276	H	600PP
547	17	161	0.34	157	12	P 2	06H	+0.86	TEHTEC			R8278	seco	88C00037	C	600UL
548	64	162	0.30	115	13	P 2	VH3	-0.66	TEHTEC			L3025	prim	88C00038	C	500UL
549			0.29	48	13	P 2	VH3	+0.81	TEHTEC			E1748	reso	88C00038	C	600UL
550	51	163	0.46	57	18	P 2	VH3	+0.84	TEHTEC			L3025	prim	88C00038	C	500UL
551	50	164	0.39	89	14	P 2	VSM	+0.95	TEHTEC			R8278	seco	88C00037	C	600UL
552	15	165	0.55	145	19	P 2	07H	-0.30	TEHTEC			M7262	reso	88C00035	C	600UL
553	67	165	0.71	116	24	P 2	VH3	-0.75	TEHTEC			L9168	prim	88C00035	C	600UL
554	57	167	0.47	150	17	P 2	02C	+0.81	TEHTEC			L9168	prim	88C00035	C	600UL
555	3	169	0.50	63	18	P 2	05H	-0.26	DBHTEH			M7262	reso	88E00119	E	500UL

QUERY REPORT SUMMARY:

QUERY PARAMETER	ENTRIES	TUBES
0 to 100 Percent	411	348
MAI Indication Code	4	4
MCI Indication Code	7	7
MMI Indication Code	0	0
MVI Indication Code	0	0
SAI Indication Code	64	54
SCI Indication Code	68	65
SVI Indication Code	1	1

TOTAL ENTRIES: 555
TOTAL TUBES: 456

NO

Appendix 4

Inspection Summary

Steam Generator E-089

NO

SG89 MAI, MCI, MMI, MVI, SAI, SCI, SVI, 0-100%TWD

UTILITY: Southern California Edison, NOV. 7,2000 17:23
PLANT: San Onofre
UNIT: 2
SG: 89
DATABASE: SONGS_U2_1000_SG89_FINAL PAGE 1

	ROW	COL	VOLTS	DEG	PCT	CHN	FLAW	LOCATION		EXTENT	UTIL1	UTIL2	NAME	TYPE	CAL	GROUP	LEG	PROBE	SIZE
1	1	1	0.21	64	11	P 2	DBH	+1.01		07HTSC			M7262	reso	89C00110	C	1	S60SF	
2	22	2	0.49	146	19	P 2	VSM	-0.94		TSHTSC			B2255	prim	89C00001	C	0	600UL	
3	38	4	0.35	93	15	P 2	02C	-0.92		TSHTSC			B4260	reso	89C00001	C	0	600UL	
4			0.35	45	15	P 2	01C	+0.18		TSHTSC			B4260	reso	89C00001	C	0	600UL	
5	48	6	0.50	85	19	P 2	08C	-1.84		TSHTSC	LAR		M7262	reso	89C00001	C	0	600UL	
6	32	10	0.34	89	14	P 2	03H	+0.97		TSHTSC			R8278	seco	89C00001	C	0	600UL	
7	36	10	0.25	150	11	P 2	VSM	+0.93		TSHTSC			R8278	seco	89C00001	C	0	600UL	
8	64	10	0.54	114	20	P 2	03C	-1.04		TSHTSC			R8278	seco	89C00001	C	0	600UL	
9	73	13	0.35	48	14	P 2	VH3	+0.95		TSHTSC			V1371	prim	89C00085	C	0	600UL	
10	25	17	0.18	80	SAI	2	05H	+9.67		05H05H	0.00	0.34	W3386	reso	89H00206	H	2	600PP	
11	44	18	0.32	141	12	P 2	VSM	-0.84		TSHTSC			B2027	prim	89C00005	C	0	600UL	
12	93	23	0.81	94	28	P 2	02C	+0.87		TSHTSC			B3170	prim	89C00086	C	0	600UL	
13	16	24	0.58	19	SCI	P 1	TSH	+0.01		TSHTSH	0.42	0.22	E4953	reso	89E00147	E	0	600PP	
14	90	24	0.36	123	14	P 2	VH2	-0.84		TSHTSC			T5144	seco	89C00085	C	0	600UL	
15			0.37	79	14	P 2	VSM	-0.83		TSHTSC			T5144	seco	89C00085	C	0	600UL	
16	59	25	0.37	69	16	P 2	VH3	-0.62		TSHTSC			B2027	prim	89C00075	C	0	600UL	
17	72	26	0.43	97	18	P 2	VC3	+0.85		TSHTSC			B3170	prim	89C00086	C	0	600UL	
18	90	26	0.39	74	15	P 2	VH2	-0.68		TSHTSC			V1371	prim	89C00085	C	0	600UL	
19	92	26	0.31	138	13	P 2	VH2	+0.00		TSHTSC			B3170	prim	89C00086	C	0	600UL	
20	94	26	0.34	87	14	P 2	VH2	+0.98		TSHTSC			V1371	prim	89C00085	C	0	600UL	
21	96	26	0.22	31	10	P 2	VH2	-0.70		TSHTSC			B3170	prim	89C00086	C	0	600UL	
22	30	28	0.13	108	SAI	2	02H	+17.15		02H02H	0.25	0.44	W3386	reso	89H00206	H	2	600PP	
23	82	28	0.18	151	9	P 2	VH3	-0.43		TSHTSC			D5695	seco	89C00086	C	0	600UL	
	9	29	0.55	16	SCI	P 1	TSH	-0.07		TSHTSH	0.52	0.46	E4953	reso	89E00147	E	0	600PP	
25	99	29	0.32	80	12	P 2	VH2	+0.85		TSHTSC			T5144	seco	89C00085	C	0	600UL	
26	2	30	0.50	87	18	P 2	04H	+0.74		DBHTSH			J9815	prim	89E00233	E	1	500UL	
27	88	30	0.43	60	17	P 2	VH2	-0.68		TSHTSC			L9168	prim	89C00085	C	0	600UL	
28	94	30	0.29	126	13	P 2	VH2	-1.00		TSHTSC			R4578	reso	89C00086	C	0	600UL	
29	97	31	0.36	95	14	P 2	VH2	-0.78		TSHTSC			L9168	prim	89C00085	C	0	600UL	
30	72	32	0.29	133	13	P 2	08C	-0.95		TSHTSC			M7252	reso	89C00086	C	0	600UL	
31	47	33	0.44	64	24	P 3	DBH	+1.83		TSHTSC			M7252	reso	89C00074	C	0	600UL	
32	106	34	0.34	101	SAI	2	06H	+2.29	TO+3.75	06H07H	0.21	0.37	M0554	reso	89E00212	E	2	600PP	
33	110	34	0.32	132	12	P 2	VH2	+1.04		TSHTSC			R8278	seco	89C00087	C	0	600UL	
34	63	35	0.25	98	12	P 2	VH3	-0.54		TSHTSC			G7212	seco	89C00074	C	0	600UL	
35	97	35	0.31	155	16	P 2	VH2	-0.67		TSHTSC			P1465	prim	89C00088	C	0	600UL	
36	101	35	0.33	71	16	P 2	VH3	-0.61		TSHTSC			P1465	prim	89C00088	C	0	600UL	
37	107	35	0.35	82	13	P 3	DBC	+1.39		TSHTSC			R8278	seco	89C00087	C	0	600UL	
38	89	37	0.13	59	7	P 2	VC3	+0.79		TSHTSC			D2003	prim	89C00087	C	0	600UL	
39	97	37	0.42	142	19	P 2	VC3	+0.89		TSHTSC			P1465	prim	89C00088	C	0	600UL	
40	70	38	0.31	146	12	P 2	VC3	+1.20		TSHTSC			B2027	prim	89C00075	C	0	600UL	
41	82	38	0.21	128	11	P 2	01H	+0.92		TSHTSC			T4130	seco	89C00088	C	0	600UL	
42	94	38	0.37	67	17	P 2	06H	+0.60		TSHTSC			M7252	reso	89C00083	C	0	600UL	
43			0.22	83	SAI	2	06H	+0.61		06H06H	0.00	0.25	M7252	reso	89H00213	H	2	600PP	
44	98	38	0.29	101	SAI	2	06H	+0.52		06H06H	0.64	0.32	M7252	reso	89H00213	H	2	600PP	
45			0.45	136	20	P 2	06H	+0.77		TSHTSC			M7252	reso	89C00088	C	0	600UL	
46	108	38	0.31	108	11	P 2	VH2	+0.92		TSHTSC			R8278	seco	89C00087	C	0	600UL	
47	9	39	0.32	89	13	P 2	03H	+0.93		TSHTSC			W3386	reso	89C00075	C	0	600UL	
48	121	39	0.30	95	12	P 2	10H	-1.79		TSHTSC	LAR		M7252	reso	89C00087	C	0	600UL	
49	12	40	1.01	11	SAI	2	TSH	-2.53		TSHTSH	0.90	0.20	H1748	reso	89H00149	H	0	600PP	

NO

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 2

	ROW	COL	VOLTS	DEG	PCT	CHN	FLAW	LOCATION	EXTENT	UTIL1	UTIL2	NAME	TYPE	CAL GROUP	LEG	PROBE SIZE
50	34	40	0.34	114	12	P 2	02H	-1.17	TEHTEC			R8278	seco	89C00077	C 0	600UL
51	114	40	0.51	87	18	P 3	DBH	+1.95	TEHTEC			D2003	prim	89C00087	C 0	600UL
52	122	40	0.18	44	7	P 2	02C	-0.20	TEHTEC			D2003	prim	89C00087	C 0	600UL
53	103	41	0.27	144	13	P 2	09H	-1.06	TEHTEC			T4130	seco	89C00090	C 0	600UL
54	107	41	0.31	48	15	P 2	09H	-1.10	TEHTEC			T4130	seco	89C00090	C 0	600UL
55	123	41	0.14	115	SVI	2	TSH	+7.55	TSH01H	0.27	0.33	M0554	reso	89H00212	H 2	600PP
56	36	42	0.26	88	13	P 2	VSM	-0.67	TEHTEC			B5926	seco	89C00078	C 0	600UL
57	40	42	0.21	119	10	P 2	VSM	-0.75	TEHTEC			B5926	seco	89C00078	C 0	600UL
58	76	42	0.32	129	19	P 3	DBC	-1.76	TEHTEC			D2003	prim	89C00090	C 0	600UL
59	94	42	0.41	62	16	P 2	VH2	-0.74	TEHTEC			L9168	prim	89C00089	C 0	600UL
60	108	42	0.40	127	16	P 3	DBH	-2.00	TEHTEC			C0360	reso	89C00089	C 0	600UL
61			0.39	123	16	P 3	DBH	+2.00	TEHTEC			C0360	reso	89C00089	C 0	600UL
62	122	42	0.39	129	22	P 3	DBC	-2.19	TEHTEC			E4963	reso	89C00090	C 0	600UL
63	77	43	0.23	143	12	P 2	VH3	+0.74	TEHTEC			D2003	prim	89C00090	C 0	600UL
64	81	43	0.59	129	25	P 2	VSM	-0.82	TEHTEC			T4130	seco	89C00090	C 0	600UL
65	8	44	0.33	94	SAI	2	05H	-0.77	05H05H	0.0	0.35	M7252	reso	89H00136	H 0	600PP
66	50	44	0.26	149	9	P 2	VSM	-0.70	TEHTEC			T5144	seco	89C00077	C 0	600UL
67	56	44	0.25	60	12	P 2	VH3	+0.09	TEHTEC			R1748	reso	89C00078	C 0	600UL
68	74	44	0.56	134	20	P 2	VH3	-0.74	TEHTEC			L9168	prim	89C00089	C 0	600UL
69	88	44	0.35	153	17	P 2	VH2	-0.67	TEHTEC			E4963	reso	89C00090	C 0	600UL
70	121	45	0.59	91	21	P 2	VC2	+0.50	TEHTEC			L9168	prim	89C00089	C 0	600UL
71	88	46	0.24	96	12	P 2	VH2	-0.59	TEHTEC			D2003	prim	89C00090	C 0	600UL
72	126	46	0.23	105	11	P 2	VH1	-1.06	TEHTEC			D2003	prim	89C00090	C 0	600UL
73	97	47	0.25	91	12	P 2	VH2	+0.89	TEHTEC			T4130	seco	89C00090	C 0	600UL
74	101	47	0.17	64	9	P 2	VC2	+0.82	TEHTEC			D2003	prim	89C00090	C 0	600UL
75	103	47	0.32	53	13	P 2	VH2	-0.78	TEHTEC			L9168	prim	89C00089	C 0	600UL
76	109	47	0.23	144	12	P 2	VSM	-0.93	TEHTEC			D2003	prim	89C00090	C 0	600UL
77			0.22	98	11	P 2	VC3	+0.82	TEHTEC			D2003	prim	89C00090	C 0	600UL
78	121	47	0.35	90	17	P 2	10H	+0.79	TEHTEC			M7252	reso	89C00099	C 0	600UL
79	60	48	0.85	17	SCI	P 1	TSH	-0.06	TSHTSH	0.40	0.19	H7791	reso	89H00151	H 0	600PP
80	124	48	0.41	122	19	P 2	VH1	-0.83	TEHTEC			D2003	prim	89C00090	C 0	600UL
81	49	49	0.30	94	13	P 2	08H	+1.80	TEHTEC	LAR		M7252	reso	89C00084	C 0	600UL
82	65	49	0.42	117	18	P 2	VH3	+1.00	TEHTEC			B4014	prim	89C00084	C 0	600UL
83	73	49	0.30	76	12	P 2	02H	+0.89	TEHTEC			L9168	prim	89C00089	C 0	600UL
84	83	49	0.41	17	SCI	P 1	TSH	-0.14	TSHTSH	0.91	0.19	W3386	reso	89H00160	H 0	600PP
85	87	49	0.16	97	8	P 2	VH2	+0.73	TEHTEC			D2003	prim	89C00090	C 0	600UL
86	107	49	0.23	97	12	P 2	VC3	-0.76	TEHTEC			D2003	prim	89C00090	C 0	600UL
87	125	49	0.19	139	10	P 2	VH1	-0.83	TEHTEC			D2003	prim	89C00090	C 0	600UL
88	129	49	0.19	146	10	P 2	VH1	-0.85	TEHTEC			D2003	prim	89C00090	C 0	600UL
89			0.21	130	11	P 2	VH1	+0.63	TEHTEC			D2003	prim	89C00090	C 0	600UL
90	94	50	0.25	119	12	P 2	05C	-0.17	TEHTEC			D2003	prim	89C00092	C 0	600UL
91	126	50	0.23	86	11	P 2	VH1	-0.97	TEHTEC			D2003	prim	89C00092	C 0	600UL
92	128	50	0.22	128	9	P 2	VH1	-0.93	TEHTEC			B2027	prim	89C00092	C 0	600UL
93	75	51	0.16	108	9	P 3	DBH	-1.63	TEHTEC			D2003	prim	89C00092	C 0	600UL
94	8	52	0.68	19	SCI	P 1	TSH	-3.14	TSHTSH	0.96	0.19	C0360	reso	89H00051	H 0	600PP
95	10	52	0.32	102	11	P 2	01C	+0.07	TEHTEC			B3858	reso	89C00032	C 0	600UL
96	28	52	0.20	120	SCI	P 1	TSH	+0.18	TSHTSH	0.32	0.17	H7791	reso	89H00051	H 0	600PP
97	130	52	0.23	155	11	P 2	VH1	-0.83	TEHTEC			D2003	prim	89C00092	C 0	600UL
98	47	53	0.22	86	9	P 2	VSM	-0.65	TEHTEC			G4841	reso	89C00034	C 0	600UL

NO

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

NOV. 7,2000 17:13

	ROW	COL	VOLTS	DEG	PCT	CHN	FLAW LOCATION		EXTENT	UTIL1	UTIL2	NAME	TYPE	CAL GROUP	LEG	PROBE	SIZE
99	49	53	0.43	129	19	P 2	08C	-1.31	TEHTEC	LAR		M7262	reso	89C00035	C 0	600	UL
100	125	53	0.37	131	14	P 2	VH1	-0.79	TEHTEC			B2027	prim	89C00091	C 0	600	UL
101	74	54	0.14	144	7	P 3	DBH	-2.03	TEHTEC			H1748	reso	89C00091	C 0	600	UL
102	84	54	0.37	18	SCI	P 1	TSH	-0.04	TSHTSH	0.41	0.21	W3386	reso	89H00091	H 0	600	PP
103	88	54	0.25	130	10	P 2	VH2	-0.74	TEHTEC			B2027	prim	89C00091	C 0	600	UL
104			0.25	133	10	P 2	VH2	+0.85	TEHTEC			B2027	prim	89C00091	C 0	600	UL
105	120	54	0.35	148	14	P 2	VH1	-0.68	TEHTEC			B2027	prim	89C00091	C 0	600	UL
106			0.38	104	15	P 2	VH1	+0.70	TEHTEC			B2027	prim	89C00091	C 0	600	UL
107	130	54	0.34	116	16	P 2	VH1	-0.74	TEHTEC			B2027	prim	89C00091	C 0	600	UL
108	47	55	1.08	14	SAI	2	07H	-0.16	07H07H	0.0	0.15	D2003	prim	89C00092	C 0	600	UL
109	49	55	0.45	88	20	P 2	08C	-1.11	08HTEC			M7262	reso	89H00049	H 5	600	PP
110	109	55	0.32	118	13	P 2	VH2	-0.94	TEHTEC			B3170	prim	89C00035	C 0	600	UL
111	74	56	0.27	81	16	P 3	DBH	+1.18	TEHTEC			B2027	prim	89C00091	C 0	600	UL
112	126	56	0.38	116	14	P 2	VH1	-1.02	TEHTEC			P1465	prim	89C00094	C 0	600	UL
113	65	57	0.13	94	SAI	2	TSH	+2.12	TSHTSH	0.00	0.19	B2027	prim	89C00091	C 0	600	UL
114	131	57	0.35	14	SAI	2	TSH	-5.66	TSHTSH	1.08	0.15	W3386	reso	89H00045	H 0	600	PP
115			1.35	20	SAI	2	TSH	-5.16	TSHTSH	2.21	0.26	G4841	reso	89H00124	H 0	600	PP
116	16	58	0.31	119	14	P 2	07H	-0.11	TEHTEC			G4841	reso	89H00124	H 0	600	PP
117	20	58	0.39	126	18	P 2	01H	+0.86	TEHTEC			B4260	reso	89C00035	C 0	600	UL
118	50	58	0.42	111	16	P 2	02H	-1.21	TEHTEC			H7791	reso	89C00035	C 0	600	UL
119	62	58	1.34	18	SAI	2	TSH	-6.37	TSHTSH	1.29	0.12	M7262	reso	89C00034	C 0	500	UL
120	102	58	0.22	109	9	P 2	VC3	-1.10	TEHTEC			H7791	reso	89H00046	H 0	600	PP
121	124	58	0.39	122	15	P 2	VH1	-0.75	TEHTEC			B4260	reso	89C00093	C 0	500	UL
	2	60	0.17	92	SAI	2	02H	+0.46	02H02H	0.00	0.31	B2153	seco	89C00093	C 0	600	UL
	6	60	0.31	48	13	P 2	02H	-1.23	TEHTEC			H1748	reso	89H00134	H 2	600	PP
124	26	60	0.47	16	SAI	2	TSH	-2.29	TSHTSH	0.99	0.10	W9213	seco	89C00037	C 0	600	UL
125	51	61	0.35	82	15	P 2	08C	-0.73	TEHTEC			H7791	reso	89H00041	H 0	600	PP
126	139	61	0.20	98	10	P 2	09C	-1.08	TEHTEC			W9213	seco	89C00037	C 0	600	UL
127	74	62	0.23	37	13	P 3	DBC	-2.00	TEHTEC			C4330	prim	89C00094	C 0	600	UL
128	106	62	0.28	56	11	P 2	VC2	-0.85	TEHTEC			T6144	seco	89C00096	C 0	600	UL
129	114	62	0.35	127	12	P 3	DBH	-1.79	TEHTEC			T3513	prim	89C00138	C 0	600	UL
130	11	63	0.47	13	SAI	2	TSH	-0.74	TEHTEC			R8278	seco	89C00138	C 0	600	UL
131			0.17	115	SCI	P 1	TSH	+0.11	TSHTSH	0.0	0.22	H1748	reso	89H00035	H 0	600	PP
132	47	63	0.70	15	SAI	2	07H	-0.12	TSHTSH	0.0	0.22	H1748	reso	89H00035	H 0	600	PP
133	34	64	0.12	97	SAI	2	TSH	+1.31	07H07H	0.0	0.14	M7262	reso	89H00036	H 5	600	PP
134	56	64	0.22	124	10	P 2	VH3	-0.66	TSHTSH	0.0	0.20	H1748	reso	89H00035	H 0	600	PP
135	134	64	0.27	124	12	P 2	VH3	-0.86	TEHTEC			D2003	prim	89C00039	C 0	500	UL
136			0.31	146	12	P 2	VC3	-0.82	TEHTEC			T6144	seco	89C00096	C 0	600	UL
137	15	65	0.07	123	SAI	2	02H	+10.12	TEHTEC			B4014	prim	89C00096	C 0	600	UL
138			0.20	87	SAI	2	02H	-11.44	02H03H	0.00	0.17	H1748	reso	89H00134	H 0	600	PP
139	49	65	0.23	122	11	P 2	VSM	-0.62	02H03H	0.30	0.40	H1748	reso	89H00134	H 2	600	PP
140	26	66	0.34	14	SAI	2	TSH	-3.63	TEHTEC			D2003	prim	89C00039	C 0	500	UL
141	48	66	0.58	155	23	P 2	VSM	-0.66	TSHTSH	0.18	0.13	P4578	reso	89H00031	H 0	600	PP
142	57	67	0.21	92	SAI	2	TSH	+3.38	TEHTEC			D3858	reso	89C00039	C 0	600	UL
143			0.17	110	SAI	2	TSH	+3.51	TSHTSH	0.11	0.15	P4578	reso	89H00031	H 0	600	PP
144	63	67	0.52	29	SCI	P 1	TSH	-0.14	TSHTSH	0.08	0.13	P4578	reso	89H00031	H 0	600	PP
145	141	67	0.34	101	13	P 2	09C	-1.07	TSHTSH	0.27	0.19	P4578	reso	89H00032	H 0	600	PP
146	44	68	0.19	82	MAI	2	TSH	+0.55	TEHTEC			W3386	reso	89C00141	C 0	600	UL
147	78	68	0.32	54	13	P 2	VH3	+0.86	TSHTSH	0.0	0.53	M7262	reso	89H00029	H 0	600	PP
								TO+1.08	TEHTEC			B4014	prim	89C00098	C 0	600	UL

NO

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

NOV. 7,2000 17:13

	ROW	COL	VOLTS	DEG	PCT	CHN	FLAW	LOCATION		EXTENT	UTIL1	UTIL2	NAME	TYPE	CAL	GROUP	LEG	PROBE	SIZE
148	82	68	0.59	135	21	P 2	VH3	-0.86		TEHTEC			B4014	prim	89C00098	C	0	600UL	
149			0.31	255	12	P 2	VH3	+0.84		TEHTEC			B4014	prim	89C00098	C	0	600UL	
150	132	68	0.26	134	12	P 2	VH1	-0.76		TEHTEC			T6144	seco	89C00096	C	0	600UL	
151	136	68	0.42	122	17	P 2	VH1	-0.74		TEHTEC			B4014	prim	89C00096	C	0	600UL	
152	137	69	0.26	80	10	P 2	VH1	+0.65		TEHTEC			B4014	prim	89C00098	C	0	600UL	
153	58	70	0.14	93	SAI	2	TSH	+2.53		TSHTSH	0.0	0.29	M7262	reso	89H00030	H	0	600PP	
154	64	70	0.14	111	SAI	2	TSH	+3.84		TSHTSH	0.22	0.29	H7791	reso	89H00029	H	0	600PP	
155	128	70	0.26	75	11	P 2	VH3	+0.80		TEHTEC			T6144	seco	89C00098	C	0	600UL	
156	138	70	0.54	99	SVI	2	DBH	+0.30	TO+1.00	DBHDBH	0.42	0.35	G4841	reso	89H00217	H10	560PP		
157			0.42	74	16	P 3	DBH	+0.71		TEHTEC			T3513	prim	89C00138	C	0	600UL	
158	31	71	0.32	65	15	P 3	DBH	+1.73		TEHTEC			M7262	reso	89C00041	C	0	600UL	
159			0.25	146	10	P 3	DBC	-1.76		TEHTEC			M7262	reso	89C00041	C	0	600UL	
160	41	71	0.44	123	19	P 2	VSM	-0.82		TEHTEC			T3513	prim	89C00041	C	0	600UL	
161			0.61	129	24	P 2	VSM	-0.66		TEHTEC			T3513	prim	89C00041	C	0	600UL	
162			0.86	123	30	P 2	VSM	-0.11		TEHTEC			T3513	prim	89C00041	C	0	600UL	
163	133	71	0.33	87	13	P 2	VH1	-0.80		TEHTEC			B4014	prim	89C00098	C	0	600UL	
164			0.29	56	11	P 2	VH1	+0.95		TEHTEC			B4014	prim	89C00098	C	0	600UL	
165	137	71	0.28	81	15	P 3	DBH	-1.62		TEHTEC			B4014	prim	89C00098	C	0	600UL	
166	143	71	0.39	139	16	P 3	DBH	+1.98		TEHTEC			B5926	seco	89C00141	C	0	600UL	
167			0.47	96	16	P 2	VH1	-0.80		TEHTEC			B5926	seco	89C00141	C	0	600UL	
168			0.27	46	10	P 2	VH1	+0.84		TEHTEC			B5926	seco	89C00141	C	0	600UL	
169	112	72	0.31	80	12	P 2	VH3	+0.90		TEHTEC			B4014	prim	89C00098	C	0	600UL	
170	120	72	0.31	250	13	P 2	10H	-1.00		TEHTEC			T6144	seco	89C00098	C	0	600UL	
	128	72	0.34	98	14	P 2	10H	+0.90		TEHTEC			B4014	prim	89C00098	C	0	600UL	
	39	73	0.45	134	22	P 3	DBC	-1.59		TEHTEC			M7262	reso	89C00041	C	0	600UL	
173	71	73	0.79	19	SAI	2	07H	+0.43		07H07H	1.58	0.30	W3386	reso	89E00213	H	2	600PP	
174			0.58	23	SAI	2	07H	+0.76		07H07H	0.00	0.15	M7262	reso	89H00213	H	2	500PP	
175	129	73	0.18	107	11	P 3	DBH	+1.83		TEHTEC			T6144	seco	89C00098	C	0	600UL	
176	143	73	0.34	144	15	P 3	DBC	-1.33		TEHTEC			B4014	prim	89C00141	C	0	600UL	
177			0.26	116	12	P 3	DBC	-1.72		TEHTEC			B4014	prim	89C00141	C	0	600UL	
178	145	73	1.60	111	36	P 2	VC1	-0.84		TEHTEC			B4014	prim	89C00141	C	0	600UL	
179			0.62	114	23	P 3	DBC	-1.42		TEHTEC			B4014	prim	89C00141	C	0	600UL	
180	50	74	0.25	129	12	P 3	DBC	-2.19		TEHTEC			B5926	seco	89C00040	C	0	600UL	
181			0.39	87	17	P 3	DBC	+1.74		TEHTEC			B5926	seco	89C00040	C	0	600UL	
182	120	74	0.44	129	17	P 2	10H	+0.33		TEHTEC			R5555	reso	89C00098	C	0	600UL	
183	130	74	0.25	76	7	P 2	10H	+0.94		TEHTEC			B4014	prim	89C00097	C	0	600UL	
184	144	74	0.66	96	22	P 2	VC1	+1.01		TEHTEC			B4014	prim	89C00141	C	0	600UL	
185	81	75	0.34	111	11	P 2	VC3	+0.78		TEHTEC			V1371	prim	89C00099	C	0	600UL	
186	145	75	0.47	81	19	P 3	DBH	+2.06		TEHTEC			B4014	prim	89C00141	C	0	600UL	
187	44	76	1.03	117	32	P 3	DBC	-1.50		TEHTEC			B3170	prim	89C00040	C	0	600UL	
188	50	76	0.27	131	12	P 3	DBC	-1.61		TEHTEC			B3170	prim	89C00040	C	0	600UL	
189	52	76	0.24	94	10	P 3	DBC	-1.51		TEHTEC			D3858	reso	89C00041	C	0	600UL	
190	138	76	0.31	99	10	P 2	VH1	-0.79		TEHTEC			V1371	prim	89C00099	C	0	600UL	
191	53	77	0.31	74	14	P 3	DBC	-1.98		TEHTEC			B3170	prim	89C00040	C	0	600UL	
192	125	77	0.31	127	13	P 2	VH1	-0.85		TEHTEC			M6664	prim	89C00100	C	0	600UL	
193	72	78	0.43	117	17	P 2	VH3	-0.77		TEHTEC			D5695	seco	89C00100	C	0	600UL	
194			0.20	152	9	P 2	VC3	+1.05		TEHTEC			D5695	seco	89C00100	C	0	600UL	
195	76	78	0.50	106	15	P 2	VC3	-1.07		TEHTEC			L9168	prim	89C00099	C	0	600UL	
196			0.29	131	9	P 2	VC3	+1.03		TEHTEC			L9168	prim	89C00099	C	0	600UL	

NO

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

NOV. 7,2000 17:13

	ROW	COL	VOLTS	DEG	PCT	CHN	FLAW	LOCATION		EXTENT	UTIL1	UTIL2	NAME	TYPE	CAL	GROUP	LEG	PROBE	SIZE
197	130	78	0.26	129	11	P 2	10H	-1.04		TSHTSC			M6664	prim	89C00100	C	0	600	UL
198	146	78	0.50	115	20	P 3	DBH	-0.12		TSHTSC			B4014	prim	89C00141	C	0	600	UL
199	47	79	1.12	119	38	P 3	DBC	+1.40		TSHTSC			K3270	seco	89C00041	C	0	600	UL
200	63	79	0.71	53	26	P 3	DBC	-1.38		TSHTSC			G7112	seco	89C00040	C	0	600	UL
201	65	79	0.27	149	12	P 3	DBC	-1.39		TSHTSC			K3270	seco	89C00041	C	0	600	UL
202	72	79	0.41	140	18	P 3	DBC	-1.85		TSHTSC			M6664	prim	89C00100	C	0	600	UL
203	75	79	0.38	131	17	P 3	DBC	-2.05		TSHTSC			M6664	prim	89C00100	C	0	600	UL
204	81	79	0.59	70	17	P 2	VH3	-0.89		TSHTSC			L9158	prim	89C00099	C	0	600	UL
205	119	79	0.61	140	18	P 2	VH3	+0.89		TSHTSC			L9158	prim	89C00099	C	0	600	UL
206	52	80	0.40	83	17	P 3	DBC	-1.70		TSHTSC			B4260	reso	89C00040	C	0	600	UL
207	66	80	0.30	104	13	P 3	DBC	+1.60		TSHTSC			B3170	prim	89C00040	C	0	600	UL
208	72	80	0.28	150	13	P 2	VC3	+0.92		TSHTSC			D2003	prim	89C00102	C	0	600	UL
209	55	81	0.53	84	21	P 3	DBC	-1.81		TSHTSC			B3170	prim	89C00040	C	0	600	UL
210	121	81	0.17	35	8	P 2	VH3	-0.76		TSHTSC			W9213	seco	89C00102	C	0	600	UL
211	133	81	0.41	131	18	P 2	VH1	+0.92		TSHTSC			D2003	prim	89C00102	C	0	600	UL
212	143	81	0.32	55	12	P 2	VC1	-0.86		TSHTSC			B4014	prim	89C00141	C	0	600	UL
213	145	81	0.73	111	23	P 2	VH1	+0.92		TSHTSC			B4014	prim	89C00141	C	0	600	UL
214	147	81	0.59	93	22	P 3	DBC	+1.86		TSHTSC			W3386	reso	89C00141	C	0	600	UL
215	48	82	1.23	131	39	P 3	DBH	-1.75		TSHTSC			G4841	reso	89C00041	C	0	600	UL
216			0.85	71	33	P 3	DBH	+2.00		TSHTSC			G4841	reso	89C00041	C	0	600	UL
217			0.96	103	35	P 3	DBC	-1.85		TSHTSC			G4841	reso	89C00041	C	0	600	UL
218			0.66	127	29	P 3	DBC	-1.75		TSHTSC			G4841	reso	89C00041	C	0	600	UL
219	54	82	0.57	80	26	P 3	DBC	+1.23		TSHTSC			D3858	reso	89C00041	C	0	600	UL
220	56	82	0.67	103	23	P 2	VH3	-0.84		TSHTSC			B3170	prim	89C00040	C	0	600	UL
221			0.27	119	11	P 2	VH3	+0.99		TSHTSC			B3170	prim	89C00040	C	0	600	UL
222	64	82	0.38	103	18	P 3	DBC	+1.29		TSHTSC			D3858	reso	89C00041	C	0	600	UL
223	78	82	0.95	18	SAI	2	TSH	-6.23		TSHTSH	.75	.17	P4578	reso	89H00084	H	0	600	PP
224	126	82	0.24	77	10	P 2	VH2	+0.93		TSHTSC			D2003	prim	89C00140	C	0	600	UL
225	53	83	0.26	125	11	P 3	DBH	+1.72		TSHTSC			K3270	seco	89C00041	C	0	600	UL
226			0.45	119	21	P 3	DBC	-1.33		TSHTSC			K3270	seco	89C00041	C	0	600	UL
227	55	83	0.67	82	25	P 3	DBC	-1.72		TSHTSC			B3170	prim	89C00040	C	0	600	UL
228	57	83	0.48	74	22	P 3	DBC	-1.53		TSHTSC			D3858	reso	89C00041	C	0	600	UL
229	59	83	1.14	102	34	P 3	DBC	-1.64		TSHTSC			G7112	seco	89C00040	C	0	600	UL
230	63	83	0.51	137	27	P 3	DBC	+1.76		TSHTSC			D2003	prim	89C00043	C	0	600	UL
231	67	83	0.28	55	18	P 3	DBH	-1.59		TSHTSC			B8589	seco	89C00043	C	0	600	UL
232			0.47	95	26	P 3	DBC	-1.57		TSHTSC			B8589	seco	89C00043	C	0	600	UL
233	121	83	0.39	137	18	P 2	VC3	-0.84		TSHTSC			D2003	prim	89C00102	C	0	600	UL
234	133	83	0.27	64	11	P 2	VH2	-0.73		TSHTSC			D2003	prim	89C00140	C	0	600	UL
235	147	83	0.34	71	13	P 2	09H	-1.03		TSHTSC			B4014	prim	89C00141	C	0	600	UL
236			0.30	123	11	P 2	10H	-0.19		TSHTSC			B4014	prim	89C00141	C	0	600	UL
237			1.12	104	32	P 3	DBH	+1.75		TSHTSC			B4014	prim	89C00141	C	0	600	UL
238			0.52	52	18	P 2	VH1	+0.88		TSHTSC			B4014	prim	89C00141	C	0	600	UL
239	56	84	0.23	98	SCI	P 1	TSH	+0.04		TSHTSH	0.0	0.40	B4260	reso	89R00024	R	0	600	PP
240			0.22	101	11	P 3	DBH	+1.89		TSHTSC			D2003	prim	89C00043	C	0	600	UL
241			0.27	154	13	P 3	DBC	-1.85		TSHTSC			B8589	seco	89C00043	C	0	600	UL
242	58	84	0.35	120	16	P 3	DBH	+1.78		TSHTSC			L3025	prim	89C00042	C	0	600	UL
243			0.78	114	27	P 3	DBC	-1.90		TSHTSC			G4841	reso	89C00042	C	0	600	UL
244			1.20	128	34	P 3	DBC	+1.80		TSHTSC			G4841	reso	89C00042	C	0	600	UL
245	62	84	0.60	101	24	P 3	DBH	-1.64		TSHTSC			L3025	prim	89C00042	C	0	600	UL

NO

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

NOV. 7,2000 17:13

	ROW	COL	VOLTS	DEG	PCT	CHN	FLAW	LOCATION	EXTENT	UTIL1	UTIL2	NAME	TYPE	CAL GROUP	LEG	PROBE	SIZE
246	64	84	0.26	72	14	P 3	DBH	+1.61	TEHTEC			D2003	prim	89C00043	C 0	600	UL
247	68	84	0.21	35	11	P 2	VSM	-0.78	TEHTEC			B8589	seco	89C00043	C 0	500	UL
248	72	84	0.23	132	11	P 2	VH3	-0.88	TEHTEC			D2003	prim	89C00102	C 0	600	UL
249			0.19	49	10	P 2	VC3	-0.85	TEHTEC			D2003	prim	89C00102	C 0	600	UL
250			0.36	136	20	P 3	DBC	-2.00	TEHTEC			D2003	prim	89C00102	C 0	600	UL
251	106	84	0.32	88	13	P 2	VH3	+0.80	TEHTEC			D2003	prim	89C00140	C 0	600	UL
252	118	84	0.35	95	14	P 2	VC2	+0.57	TEHTEC			B4014	prim	89C00140	C 0	600	UL
253	120	84	0.25	58	SCI	P 1	TSH	+0.02	TSHTSH	0.00	0.40	M7262	reso	89H00083	H 0	600	PP
254	57	85	0.48	88	20	P 3	DBH	-1.78	TEHTEC			L3025	prim	89C00042	C 0	600	UL
255			1.17	96	34	P 3	DBH	+1.76	TEHTEC			L3025	prim	89C00042	C 0	600	UL
256	75	85	0.23	72	14	P 3	DBC	+1.30	TEHTEC			E4963	reso	89C00102	C 0	600	UL
257	81	85	0.25	60	12	P 2	VH3	+0.87	TEHTEC			D2003	prim	89C00102	C 0	600	UL
258	89	85	0.32	105	15	P 2	VH2	-0.79	TEHTEC			W9213	seco	89C00102	C 0	500	UL
259	145	85	1.14	111	32	P 3	DBC	+1.70	TEHTEC			B4014	prim	89C00141	C 0	500	UL
260	56	86	0.97	98	33	P 3	DBC	+2.11	TEHTEC			C4330	prim	89C00184	C 0	600	UL
261	132	86	0.30	128	12	P 2	VH1	-0.85	TEHTEC			L3025	prim	89C00066	C 0	500	UL
262	59	87	0.96	90	33	P 3	DBH	+1.70	STHTEC			W3386	reso	89C00184	C 0	600	UL
263	63	87	0.52	110	24	P 3	DBH	-1.54	STHTEC			C4330	prim	89C00184	C 0	600	UL
264	75	87	0.29	146	12	P 3	DBC	-1.98	TEHTEC			B4155	prim	89C00066	C 0	600	UL
265	143	87	0.53	85	20	P 3	DBC	+1.66	TEHTEC			B5926	seco	89C00141	C 0	500	UL
266			0.31	136	12	P 2	10C	+0.76	TEHTEC			B4014	prim	89C00141	C 0	500	UL
267	147	87	0.42	139	15	P 2	09H	-1.07	TEHTEC			B4014	prim	89C00141	C 0	500	UL
268			0.60	145	20	P 2	10H	+0.66	TEHTEC			B4014	prim	89C00141	C 0	500	UL
			1.38	89	35	P 3	DBC	+1.84	TEHTEC			B4014	prim	89C00141	C 0	600	UL
	54	88	0.87	99	32	P 3	DBH	+1.64	TEHTEC			C4330	prim	89C00184	C 0	600	UL
271			0.48	116	27	P 3	DBH	+2.00	TEHTEC			T6144	seco	89C00184	C 0	600	UL
272			0.35	37	14	P 2	VSM	-0.79	TEHTEC			C4330	prim	89C00184	C 0	600	UL
273			0.55	146	25	P 3	DBC	-1.89	TEHTEC			W3386	reso	89C00184	C 0	600	UL
274	56	88	0.94	117	29	P 3	DBH	+1.42	TEHTEC			B3170	prim	89C00183	C 0	600	UL
275	58	88	0.71	110	29	P 3	DBH	+2.19	TEHTEC			W3386	reso	89C00184	C 0	500	UL
276	60	88	0.49	127	19	P 3	DBH	+1.80	TEHTEC			P4578	reso	89C00183	C 0	500	UL
277	70	88	0.94	111	30	P 3	DBC	+1.44	TEHTEC			B3170	prim	89C00183	C 0	500	UL
278	134	88	0.35	96	15	P 2	VH1	+0.80	TEHTEC			L3158	prim	89C00067	C 0	500	UL
279	146	88	0.64	64	23	P 3	DBC	+1.72	TEHTEC			B4014	prim	89C00141	C 0	600	UL
280	57	89	1.04	91	35	P 3	DBC	+1.39	TEHTEC			W3386	reso	89C00184	C 0	500	UL
281	65	89	0.49	154	23	P 3	DBH	+1.83	TEHTEC			W3386	reso	89C00184	C 0	500	UL
282	83	89	0.43	23	SCI	P 1	TSH	-0.11	TSHTSH	0.45	0.21	E4963	reso	89H00083	H 0	600	PP
283	107	89	0.21	99	SCI	P 1	TSH	+0.07	TSHTSH	0.00	0.40	M7252	reso	89H00082	H 0	600	PP
284	145	89	0.39	99	14	P 2	VC2	-0.87	TEHTEC			B4014	prim	89C00141	C 0	600	UL
285	56	90	0.71	91	29	P 3	DBH	-1.29	TEHTEC			W3386	reso	89C00184	C 0	600	UL
286	58	90	0.58	107	22	P 3	DBH	-1.86	TEHTEC			B3170	prim	89C00183	C 0	600	UL
287	68	90	0.68	71	28	P 3	DBC	-1.98	TEHTEC			C4330	prim	89C00184	C 0	600	UL
288	72	90	0.26	83	16	P 3	DBC	-2.01	TEHTEC			M7252	reso	89C00065	C 0	600	UL
289	51	91	2.47	80	46	P 3	DBH	+1.66	TEHTEC			C4330	prim	89C00184	C 0	600	UL
290			0.37	126	13	P 3	DBC	-2.13	TEHTEC			C4330	prim	89C00184	C 0	600	UL
291	71	91	0.23	148	15	P 3	DBC	-2.11	TEHTEC			M7252	reso	89C00065	C 0	600	UL
292	145	91	0.82	45	27	P 3	DBC	+1.64	TEHTEC			B4014	prim	89C00141	C 0	600	UL
293	52	92	0.43	85	16	P 2	02H	+0.86	TEHTEC			P4578	reso	89C00184	C 0	600	UL
294			0.55	70	25	P 3	DBH	-1.72	TEHTEC			C4330	prim	89C00184	C 0	600	UL

NO

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

NOV. 7,2000 17:13

	ROW	COL	VOLTS	DEG	PCT	CHN	FLAW	LOCATION	EXTENT	UTIL1	UTIL2	NAME	TYPE	CAL	GROUP	LEG	PROBE	SIZE
295			0.55	79	25	P 3	DBH	+1.91	TEHTEC			C4330	prim	89C00184	C 0	600UL		
296	54	92	0.87	101	28	P 3	DBH	-1.65	TEHTEC			B3170	prim	89C00183	C 0	600UL		
297			0.74	138	26	P 3	DBC	+2.03	TEHTEC			M7262	reso	89C00183	C 0	600UL		
298	64	92	0.14	102	SAI	2	TSH	+1.77	TSHTSH	0.12	0.25	H7791	reso	89H00159	H 0	600PP		
299	142	92	0.35	93	13	P 2	VH1	-0.92	TEHTEC			B4014	prim	89C00141	C 0	600UL		
300	146	92	0.57	92	21	P 3	DBC	-1.53	TEHTEC			B4014	prim	89C00141	C 0	600UL		
301	55	93	1.58	120	40	P 3	DBH	-1.76	TEHTEC			W3386	reso	89C00184	C 0	600UL		
302	57	93	8.22	22	SAI	4	SBH	-0.27	STHSBH	N/A	0.25	HL748	prim	89H00235	H16	500SP		
303			0.68	17	SAI	2	TSH	-5.73	TSHTSH	0.71	0.19	H7791	reso	89H00159	H 0	600PP		
304			0.46	14	SAI	2	TSH	-1.26	TSHTSH	0.50	0.17	H7791	reso	89H00159	H 0	600PP		
305	63	93	0.15	89	SAI	2	TSH	+1.32	TSHTSH	0	0.25	H7791	reso	89H00159	H 0	600PP		
306	54	94	0.56	104	25	P 3	DBH	-1.60	TEHTEC			C4330	prim	89C00184	C 0	600UL		
307	56	94	0.46	53	26	P 3	DBH	-1.75	TEHTEC			T6144	seco	89C00184	C 0	600UL		
308	60	94	0.42	148	21	P 3	DBC	-2.02	TEHTEC			C4330	prim	89C00184	C 0	600UL		
309	62	94	0.42	110	17	P 3	DBC	+2.00	TEHTEC			T6144	seco	89C00183	C 0	600UL		
310	66	94	0.25	77	11	P 2	VSM	-0.76	TEHTEC			B3170	prim	89C00183	C 0	600UL		
311			0.48	99	19	P 3	DBC	+1.75	TEHTEC			T6144	seco	89C00183	C 0	600UL		
312	72	94	0.32	96	14	P 2	VH3	-0.92	TEHTEC			B2153	seco	89C00065	C 0	600UL		
313			0.57	99	22	P 2	VH3	+0.88	TEHTEC			B2153	seco	89C00063	C 0	600UL		
314			0.64	83	23	P 2	VSM	-0.66	TEHTEC			B2153	seco	89C00065	C 0	600UL		
315			0.18	104	8	P 2	VSM	+0.94	TEHTEC			B2153	seco	89C00065	C 0	600UL		
316			0.65	119	24	P 2	VC3	-0.81	TEHTEC			B2153	seco	89C00065	C 0	600UL		
317			1.08	109	32	P 2	VC3	+0.90	TEHTEC			B2153	seco	89C00065	C 0	600UL		
	90	94	0.29	140	12	P 2	VSM	-0.96	TEHTEC			T6144	seco	89C00064	C 0	600UL		
	104	94	0.45	123	18	P 2	VSM	+0.77	TEHTEC			B8090	reso	89C00065	C 0	600UL		
320	146	94	0.44	85	18	P 3	DBH	+1.90	TEHTEC			B4014	prim	89C00141	C 0	600UL		
321			0.75	65	26	P 3	DBC	-1.81	TEHTEC			B4014	prim	89C00141	C 0	600UL		
322	55	95	1.03	112	25	P 3	DBC	+1.90	TEHTEC			C4330	prim	89C00209	C 0	600UL		
323	57	95	1.09	72	30	P 3	DBH	-1.52	TEHTEC			C4330	prim	89C00181	C 0	600UL		
324			0.69	81	22	P 3	DBC	+1.89	TEHTEC			C4330	prim	89C00181	C 0	600UL		
325	109	95	0.27	86	12	P 2	VSM	+0.91	TEHTEC			B2153	seco	89C00065	C 0	600UL		
326	117	95	0.46	128	24	P 3	DBC	+0.60	TEHTEC			B3170	prim	89C00065	C 0	600UL		
327	64	96	0.48	14	SAI	2	TSH	-0.92	TSHTSH	0.43	0.23	W3386	reso	89H00150	H 0	600PP		
328	74	96	0.42	63	16	P 2	02H	-1.22	TEHTEC			M0554	reso	89C00062	C 0	600UL		
329	51	97	0.89	124	22	P 3	DBC	-2.00	TEHTEC			W4786	seco	89C00209	C 0	600UL		
330	71	97	0.70	61	25	P 2	VSM	-0.02	TEHTEC			C4330	prim	89C00063	C 0	600UL		
331	75	97	0.29	83	13	P 2	VC3	-0.77	TEHTEC			C4330	prim	89C00063	C 0	600UL		
332	95	97	0.29	62	13	P 2	VH3	-0.79	TEHTEC			C4330	prim	89C00063	C 0	600UL		
333	64	98	0.15	122	SAI	2	TSH	+0.63	TSHTSH	0.00	0.20	M7262	reso	89H00160	H 0	600PP		
334	78	98	0.96	13	SAI	2	TSH	-6.09	TSHTSH	1.19	0.13	W3386	reso	89H00079	H 0	600PP		
335	45	99	0.66	51	18	P 3	DBH	-1.90	TEHTEC			G4841	reso	89C00209	C 0	600UL		
336			0.86	71	22	P 3	DBC	-1.90	TEHTEC			G4841	reso	89C00209	C 0	600UL		
337	49	99	0.48	59	14	P 3	DBH	-1.66	TEHTEC			C4330	prim	89C00209	C 0	600UL		
338			0.51	57	15	P 3	DBC	-2.25	TEHTEC			G4841	reso	89C00209	C 0	600UL		
339	51	99	0.29	50	10	P 2	VH3	+0.86	TEHTEC			C4330	prim	89C00181	C 0	600UL		
340			0.59	122	19	P 2	VSM	+0.91	TEHTEC			C4330	prim	89C00181	C 0	600UL		
341			0.46	42	16	P 2	VC3	+0.84	TEHTEC			C4330	prim	89C00181	C 0	600UL		
342			0.89	116	26	P 3	DBC	-2.11	TEHTEC			C4330	prim	89C00181	C 0	600UL		
343	79	99	0.27	117	12	P 2	VSM	+0.93	TEHTEC			B5926	seco	89C00063	C 0	600UL		

NO

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

NOV. 7,2000 17:13

	ROW	COL	VOLTS	DEG	PCT	CHN	FLAW	LOCATION	EXTENT	UTIL1	UTIL2	NAME	TYPE	CAL	GROUP	LEG	PROBE	SIZE
344	111	99	0.41	70	16	P 2	09C	+0.46	TEHTEC			M7262	reso	89C00062	C	0	600	UL
345	42	100	2.32	85	40	P 3	DBC	+1.93	TEHTEC			C4330	prim	89C00209	C	0	600	UL
346	38	102	0.86	120	26	P 3	DBH	-1.82	TEHTEC			M0554	reso	89C00181	C	0	600	UL
347	50	102	0.35	133	12	P 2	08H	-1.20	TEHTEC			C4330	prim	89C00181	C	0	600	UL
348	54	102	0.76	16	SAI	2	TSH	-5.96	TSHTSH	0.46	0.12	M0554	reso	89H00164	H	0	600	PP
349	78	102	5.35	29	SAI	2	TSH	+14.73	TEHTSH	6.75	1.24	M7262	reso	89H00214	H	0	600	PP
350	80	102	0.19	141	8	P 2	VH3	-0.59	TEHTEC			B5926	seco	89C00061	C	0	600	UL
351			0.23	65	10	P 2	VSM	-0.73	TEHTEC			B5926	seco	89C00061	C	0	600	UL
352			0.28	46	12	P 2	VC3	+0.84	TEHTEC			B5926	seco	89C00061	C	0	600	UL
353	144	102	0.30	96	13	P 3	DBH	-1.69	TEHTEC			B4014	prim	89C00141	C	0	600	UL
354	41	103	0.30	116	11	P 2	VSM	+0.92	TEHTEC			V1371	prim	89C00182	C	0	600	UL
355	73	103	0.39	95	15	P 2	02H	-1.18	TEHTEC			L8038	prim	89C00108	C	0	600	UL
356	107	103	0.32	37	14	P 2	VH2	-1.09	TEHTEC			B5926	seco	89C00061	C	0	600	UL
357	115	103	0.23	37	10	P 2	VH2	-0.83	TEHTEC			B4963	reso	89C00061	C	0	600	UL
358	119	103	0.27	63	12	P 2	VH2	-0.69	TEHTEC			B5926	seco	89C00061	C	0	600	UL
359	139	103	0.51	119	20	P 2	VH2	+0.94	TSHTEC			B2265	prim	89C00061	C	0	600	UL
360	141	103	0.30	65	12	P 2	VH3	-0.88	TEHTEC			B4014	prim	89C00141	C	0	600	UL
361	143	103	0.75	138	25	P 3	DBH	+1.94	TEHTEC			B4014	prim	89C00141	C	0	600	UL
362	145	103	0.75	122	26	P 3	DBH	+2.40	TEHTEC			B4014	prim	89C00141	C	0	600	UL
363	46	104	0.54	91	18	P 2	VSM	-1.05	TEHTEC	LAR		G4841	reso	89C00181	C	0	600	UL
364			0.55	89	18	P 2	VSM	-0.75	TEHTEC			M0554	reso	89C00181	C	0	600	UL
365	70	104	0.24	121	9	P 2	08C	+0.09	TEHTEC			M7262	reso	89C00181	C	0	600	UL
366	138	104	0.31	51	13	P 2	VH1	-0.58	TEHTEC			B5926	seco	89C00061	C	0	600	UL
7			0.24	45	11	P 2	VH1	+0.75	TEHTEC			B5926	seco	89C00061	C	0	600	UL
368	37	105	0.31	74	11	P 2	VSM	+0.75	TEHTEC			B5926	seco	89C00181	C	0	600	UL
369	41	105	0.59	14	SAI	2	TSH	-3.24	TSHTSH	0.84	0.14	B8090	reso	89H00163	H	0	600	PP
370	55	105	0.58	101	19	P 2	08H	+1.00	TEHTEC			V1371	prim	89C00182	C	0	600	UL
371	69	105	0.45	107	16	P 2	02H	-1.17	TEHTEC			M0554	reso	89C00181	C	0	600	UL
372	73	105	0.44	148	18	P 2	VH3	-0.88	TEHTEC			B2265	prim	89C00061	C	0	600	UL
373			0.42	70	18	P 2	VSM	-0.83	TSHTEC			B2265	prim	89C00061	C	0	600	UL
374			0.64	140	23	P 2	VC3	-0.66	TEHTEC			B5926	seco	89C00061	C	0	600	UL
375	75	105	0.40	125	16	P 2	VH3	-0.61	TEHTEC			T0854	seco	89C00060	C	0	600	UL
376			0.46	121	17	P 2	VSM	-0.11	TEHTEC			T0854	seco	89C00060	C	0	600	UL
377	81	105	0.44	137	18	P 2	VH3	+0.93	TEHTEC			B2265	prim	89C00061	C	0	600	UL
378			0.20	73	9	P 2	VSM	+0.93	TEHTEC			B2265	prim	89C00061	C	0	600	UL
379	34	106	1.42	19	SAI	2	TSH	-4.71	TSHTSH	2.19	0.30	M0554	reso	89H00164	H	0	600	PP
380	38	106	0.50	15	SAI	2	TSH	-0.61	TSHTSH	0.43	0.21	M0554	reso	89H00164	H	0	600	PP
381	56	106	0.22	93	SAI	2	TSH	+0.82	TSHTSH	0.00	0.25	M7262	reso	89H00164	H	0	600	PP
382	80	106	0.28	40	13	P 2	VH3	+0.87	TEHTEC			X3270	seco	89C00061	C	0	600	UL
383	126	106	0.27	30	12	P 2	VH2	+0.97	TEHTEC			B2265	prim	89C00061	C	0	600	UL
384	132	106	0.20	36	8	P 2	10H	+1.02	TEHTEC			T0854	seco	89C00060	C	0	600	UL
385	143	107	0.19	22	7	P 2	VC1	+0.93	TSHTEC			B4014	prim	89C00144	C	0	600	UL
386	30	108	0.36	48	13	P 2	06C	-0.95	TEHTEC			M0155	seco	89C00182	C	0	600	UL
387	36	108	0.67	10	SAI	2	TSH	+1.16	TSHTSH	1.19	0.29	M0554	reso	89H00164	H	0	600	PP
388	56	108	0.39	43	14	P 2	VSM	+0.38	TEHTEC			M0155	seco	89C00182	C	0	600	UL
389	132	108	0.39	100	16	P 2	VH1	-0.91	TEHTEC			B2265	prim	89C00061	C	0	600	UL
390	37	109	0.16	93	SAI	2	TSH	+1.30	TSHTSH	0.18	0.26	M0554	reso	89H00164	H	0	600	PP
391	121	109	0.56	82	23	P 2	10H	-1.48	TEHTEC	LAR		M7262	reso	89C00059	C	0	600	UL
392	129	109	0.29	139	14	P 2	10H	-0.94	TSHTEC			B4165	prim	89C00059	C	0	600	UL

NO

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

NOV. 7,2000 17:13

	ROW	COL	VOLTS	DEG	PCT	CHN	FLAW	LOCATION	EXTENT	UTIL1	UTIL2	NAME	TYPE	CAL GROUP	LEG	PROBE SIZE
393	141	109	0.51	88	18	P 2	VH3	+0.00	TEHTEC			B4014	prim	89C00144	C 0	600UL
394	143	109	0.60	100	21	P 3	DBC	-1.78	TEHTSC			B4014	prim	89C00144	C 0	600UL
395	36	110	0.63	15	SAI	2	TSH	-3.46	TSHTSH	0.0	0.20	M0554	reso	89H00164	H 0	600PP
396			1.21	18	SAI	2	TSH	-1.34	TSHTSH	1.62	0.23	M0554	reso	89H00164	H 0	600PP
397			0.66	8	SAI	2	TSH	-0.65	TSHTSH	0.0	0.17	M0554	reso	89H00164	H 0	600PP
398	38	110	0.27	108	SAI	2	TSH	+1.01	TSHTSH	0.21	0.37	W3386	reso	89H00163	H 0	600PP
399	40	110	0.12	103	SAI	2	TSH	-2.13	TSHTSH	0.05	0.17	M0554	reso	89H00164	H 0	600PP
400	42	110	0.64	68	20	P 2	VSM	-0.17	TEHTEC			D1279	prim	89C00179	C 0	600UL
401	116	110	0.27	59	13	P 2	VH1	+0.84	TEHTEC			B8589	seco	89C00059	C 0	600UL
402			0.22	42	10	P 2	VH2	+0.99	TEHTEC			B8589	seco	89C00059	C 0	600UL
403	130	110	0.30	143	14	P 2	VH1	-0.95	TEHTEC			B8589	seco	89C00059	C 0	600UL
404			0.28	103	13	P 2	VH2	-0.80	TEHTEC			B4165	prim	89C00059	C 0	600UL
405	29	111	0.21	90	SCI	P 1	TSH	+0.02	TSHTSH	0.0	0.30	W3386	reso	89H00163	H 0	600PP
406	75	111	0.43	124	19	P 2	VH3	+0.04	TEHTEC			L3025	prim	89C00059	C 0	600UL
407			0.63	124	25	P 2	VC3	+1.01	TEHTEC			W3386	reso	89C00059	C 0	600UL
408	91	111	0.23	76	11	P 2	VH2	+0.87	TEHTSC			B8589	seco	89C00059	C 0	600UL
409	44	112	0.54	137	19	P 2	VSM	-0.78	TEHTEC			T6144	seco	89C00180	C 0	600UL
410	70	112	0.61	141	19	P 2	03C	-0.15	TEHTSC			M7262	reso	89C00179	C 0	600UL
411	5	113	0.15	110	SAI	2	02H	-1.31	02H02H	0	0.32	G4841	reso	89H00138	H 2	600PP
412	21	113	0.51	72	SCI	P 1	TSH	+0.03	TSHTSH	0.00	0.43	M7262	reso	89H00164	H 0	600PP
413	37	113	0.97	15	SAI	2	TSH	-1.94	TSHTSH	1.13	0.20	M0554	reso	89H00164	H 0	600PP
414	49	113	0.11	107	SAI	2	TSH	+1.71	TSHTSH	0.15	0.23	M0554	reso	89H00164	H 0	600PP
415	59	113	2.80	20	SAI	2	TSH	-5.68	TSHTSH	3.61	0.27	M0554	reso	89H00164	H 0	600PP
416			1.25	17	SAI	2	TSH	-5.27	TSHTSH	0.70	0.30	M0554	reso	89H00164	H 0	600PP
417	77	113	0.21	92	10	P 2	VH3	-1.05	TEHTEC			L3025	prim	89C00059	C 0	600UL
418			0.14	28	7	P 2	VH3	+0.81	TEHTEC			L3025	prim	89C00059	C 0	600UL
419	125	113	0.27	111	10	P 2	09H	-1.07	TEHTEC			B4260	reso	89C00058	C 0	600UL
420	48	114	0.48	21	SAI	2	TSH	-5.03	TSHTSH	0.92	0.14	M7262	reso	89H00163	H 0	600PP
421	68	114	0.16	121	SAI	2	01H	+16.36	01H01H	0	1.20	P4578	reso	89H00187	H 2	600PP
422	72	114	0.24	54	11	P 2	VC3	+0.81	TEHTEC			B2027	prim	89C00057	C 0	600UL
423	76	114	0.33	43	15	P 2	VH3	-0.89	TEHTEC			B5926	seco	89C00057	C 0	600UL
424	92	114	0.29	38	14	P 2	VH2	-0.66	TEHTEC			B5926	seco	89C00057	C 0	600UL
425	130	114	0.32	62	15	P 2	VH1	-0.86	TEHTEC			L3025	prim	89C00059	C 0	600UL
426			0.31	55	14	P 2	VH1	+0.80	TEHTEC			L3025	prim	89C00059	C 0	600UL
427	132	114	0.31	39	11	P 2	VH1	-0.48	TEHTEC			J0927	seco	89C00058	C 0	600UL
428			0.27	141	10	P 2	VH1	+1.01	TEHTEC			J0927	seco	89C00058	C 0	600UL
429	140	114	0.24	135	10	P 2	VH2	+0.81	TEHTEC			P1465	prim	89C00058	C 0	600UL
430	81	115	0.17	86	9	P 2	VH3	+0.86	TEHTEC			B5926	seco	89C00057	C 0	600UL
431	105	115	0.26	60	13	P 2	VH2	-1.14	TEHTEC			B5926	seco	89C00057	C 0	600UL
432	109	115	0.18	32	9	P 2	VH2	-0.77	TEHTEC			B5926	seco	89C00057	C 0	600UL
433			0.20	35	10	P 2	VH2	+0.81	TEHTEC			B5926	seco	89C00057	C 0	600UL
434	131	115	0.25	119	12	P 2	VH1	-0.69	TEHTEC			B5926	seco	89C00057	C 0	600UL
435			0.23	49	11	P 2	VH1	+1.06	TEHTEC			B5926	seco	89C00057	C 0	600UL
436			0.22	53	11	P 2	VH2	-0.73	TEHTEC			B5926	seco	89C00057	C 0	600UL
437			0.18	130	9	P 2	VH2	+0.95	TEHTEC			B5926	seco	89C00057	C 0	600UL
438	14	116	0.57	90	20	P 2	07H	-0.15	TEHTEC			M7262	reso	89C00180	C 0	600UL
439	62	116	1.20	21	SAI	2	TSH	-6.31	TSHTSH	1.72	0.24	M0554	reso	89H00166	H 0	600PP
440			1.02	21	SAI	2	TSH	-5.80	TSHTSH	0.68	1.01	M0554	reso	89H00166	H 0	600PP
441	80	116	0.24	26	12	P 2	VH3	-0.62	TEHTEC			B5926	seco	89C00057	C 0	600UL

NO

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

NOV. 7,2000 17:13

	ROW	COL	VOLTS	DEG	PCT	CHN	FLAW	LOCATION	EXTENT	UTIL1	UTIL2	NAME	TYPE	CAL	GROUP	LEG	PROBE	SIZE
442			0.18	81	9	P	2	VH3	+0.79	TEHTEC			B5926	seco	89C00057	C	0	600UL
443			0.20	37	19	P	2	VC3	-0.86	TEHTEC			B5926	seco	89C00057	C	0	600UL
444	126	116	0.21	65	10	P	2	VH2	-0.67	TEHTEC			B5926	seco	89C00057	C	0	600UL
445			0.24	124	12	P	2	VH2	+0.84	TEHTEC			B5926	seco	89C00057	C	0	600UL
446	130	116	0.38	58	17	P	2	VH1	-0.78	TEHTEC			B5926	seco	89C00057	C	0	600UL
447			0.23	58	11	P	2	VH1	+0.84	TEHTEC			B5926	seco	89C00057	C	0	600UL
448			0.21	110	10	P	2	VH2	-0.86	TEHTEC			B5926	seco	89C00057	C	0	600UL
449	138	116	0.24	48	11	P	2	VH1	-0.68	TEHTEC			B5926	seco	89C00057	C	0	600UL
450			0.19	112	9	P	2	VH1	+0.75	TEHTEC			B5926	seco	89C00057	C	0	600UL
451	31	117	0.37	133	12	P	2	07C	+0.40	TEHTEC			T6144	seco	89C00178	C	0	600UL
452	123	117	0.17	97	9	P	2	VH1	-0.62	TEHTEC			B5926	seco	89C00057	C	0	600UL
453			0.19	91	9	P	2	VH2	-0.78	TEHTEC			B5926	seco	89C00057	C	0	600UL
454			0.19	54	9	P	2	VH3	+0.84	TEHTEC			B5926	seco	89C00057	C	0	600UL
455			0.15	81	8	P	2	VSM	-0.71	TEHTEC			B5926	seco	89C00057	C	0	600UL
456	68	118	0.52	17	SAI	2	TSH		-5.18	TSHTSH	0.59	0.21	M0554	reso	89H00158	H	0	600PP
457	119	119	0.66	42	23	P	2	09H	-1.00	TEHTEC			G7112	seco	89C00056	C	0	600UL
458			0.47	44	18	P	2	10H	-1.01	TEHTEC	LAR		M7262	reso	89C00056	C	0	600UL
459	133	119	0.37	88	15	P	2	VH1	+0.79	TEHTEC			D3858	reso	89C00056	C	0	600UL
460	20	120	1.55	24	SCI	P	1	TSH	-6.87	TSHTSH	0.68	0.22	M7252	reso	89E00158	E	0	600PP
461	62	120	0.57	42	19	P	2	02H	-1.17	TEHTEC			P1465	prim	89C00177	C	0	600UL
462	47	121	0.29	147	11	P	2	VSM	-0.84	TSHTSC			P1465	prim	89C00177	C	0	600UL
463	79	121	0.33	84	13	P	2	02H	+1.00	TEHTEC			J0927	seco	89C00054	C	0	600UL
464			0.59	115	21	P	2	VH3	-1.12	TEHTEC			D2003	prim	89C00054	C	0	600UL
	91	121	3.18	28	SAI	2	TSH		+5.09	TSHTSH	3.42	0.31	S4963	reso	89H00214	H	2	600PP
	119	121	0.52	113	19	P	2	10H	-2.08	TEHTEC	LAR		M7262	reso	89C00054	C	0	600UL
467	123	121	0.28	126	11	P	2	VH1	-0.68	TSHTSC			D2003	prim	89C00054	C	0	600UL
468	36	122	0.37	81	14	P	2	03H	-1.03	TEHTEC			W3386	reso	89C00177	C	0	600UL
469	78	122	0.26	132	11	P	2	08H	+0.82	TEHTEC			D2003	prim	89C00054	C	0	600UL
470	82	122	0.49	18	SCI	P	1	TSH	-0.09	TSHTSH	.16	.13	P4578	reso	89H00073	H	0	600PP
471	102	122	0.32	84	13	P	2	VC2	-0.79	TEHTEC			D2003	prim	89C00054	C	0	600UL
472	118	122	0.34	63	14	P	2	09H	-1.13	TEHTEC			D2003	prim	89C00054	C	0	600UL
473	15	123	0.45	49	16	P	2	03H	+0.86	TEHTEC			P1465	prim	89C00177	C	0	600UL
474	19	123	0.44	82	16	P	2	01H	+0.88	TEHTEC			P1465	prim	89C00177	C	0	600UL
475	127	123	0.31	137	13	P	2	09C	-1.24	TEHTEC			M7262	reso	89C00054	C	0	600UL
476	8	124	3.49	36	SCI	P	1	TSH	-5.14	TSHTSH	4.38	0.80	M0554	reso	89H00159	H	0	600PP
477	28	124	0.31	96	SAI	2	02H		+8.05	02H03H	0.79	0.52	M7262	reso	89H00190	H	2	600PP
478	134	124	0.20	139	9	P	2	VC3	+0.64	TEHTEC			B2153	seco	89C00109	C	0	580SP
479	9	125	0.30	23	SCI	P	1	TSH	-6.44	TSHTSH	0.71	0.26	M0554	reso	89H00170	H	0	600PP
480			0.42	23	SCI	P	1	TSH	-4.95	TSHTSH	0.29	0.19	M0554	reso	89H00170	H	0	600PP
481	67	125	0.32	45	12	P	2	VH3	+0.76	TEHTEC			P1465	prim	89C00177	C	0	600UL
482	77	125	0.37	120	17	P	2	VH3	-0.73	TEHTEC			G7112	seco	89C00053	C	0	600UL
483			0.40	145	18	P	2	VSM	-0.77	TEHTEC			G7112	seco	89C00053	C	0	600UL
484			0.34	124	16	P	2	VSM	+0.85	TEHTEC			G7112	seco	89C00053	C	0	600UL
485			0.89	114	30	P	2	VC3	-0.82	TEHTEC			G7112	seco	89C00053	C	0	600UL
486			0.98	96	31	P	2	VC3	-0.77	TEHTEC			G7112	seco	89C00053	C	0	600UL
487			0.68	92	26	P	2	VC3	+0.00	TEHTEC			G7112	seco	89C00053	C	0	600UL
488	46	126	0.28	19	SCI	P	1	TSH	-0.10	TSHTSH	0.00	0.14	M7262	reso	89H00072	H	0	600PP
489	72	126	0.38	119	17	P	2	VSM	-0.74	TEHTEC			W9658	seco	89C00027	C	0	600UL
490	1	127	0.44	9	SCI	P	1	TSH	-6.11	TSHTSH	.58	.19	P4578	reso	89H00073	H	0	600PP

NO

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

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	ROW	COL	VOLTS	DEG	PCT	CHN	FLAW	LOCATION		EXTENT	UTIL1	UTIL2	NAME	TYPE	CAL	GROUP	LEG	PROBE	SIZE
491	5	127	1.42	34	SCI	P 1	TSH		-5.86	TSHTSH	1.65	0.21	M7262	reso	89H00073	H	0	600PP	
492	66	128	0.20	79	8	P 2	VSM		-0.66	TEHTEC			W9213	seco	89C00050	C	0	600UL	
493	68	128	0.29	49	14	P 2	VH3		-0.73	TEHTEC			L3025	prim	89C00051	C	0	600UL	
494	112	128	0.23	128	11	P 2	VH2		+0.19	TEHTEC			D3858	reso	89C00025	C	0	600UL	
495	118	128	0.25	52	10	P 2	05H		+0.67	TEHTEC			L8038	prim	89C00024	C	0	600UL	
496	11	129	0.89	24	MCI	P 1	TSH		-3.94	TSHTSH	1.91	.19	P4578	reso	89H00070	H	0	600PP	
497	78	130	0.31	96	13	P 2	VSM		-1.11	TEHTEC			L8038	prim	89C00024	C	0	600UL	
498	74	132	0.26	111	11	P 2	VC3		-0.70	TEHTEC			H7791	reso	89C00024	C	0	600UL	
499	7	133	0.81	30	SCI	P 1	TSH		-7.46	TSHTSH	.62	.15	P4578	reso	89H00070	H	0	600PP	
500	13	133	0.42	126	18	P 3	DBH		+2.23	TEHTEC			B3170	prim	89C00050	C	0	600UL	
501	103	133	0.21	104	SAI	2	02H		+0.39	02H02H	0.00	0.38	M7262	reso	89H00127	H	2	600PP	
502	58	134	0.31	31	15	P 2	VSM		+1.04	TEHTSC			B2265	prim	89C00049	C	0	600UL	
503	77	135	0.39	132	15	P 3	DBC		+2.16	TEHTEC			M0554	reso	89C00022	C	0	600UL	
504	81	135	0.33	139	14	P 2	VH3		+0.70	TEHTEC			P1465	prim	89C00022	C	0	600UL	
505	117	135	0.27	117	12	P 2	VH2		+0.71	TEHTEC			P1465	prim	89C00022	C	0	600UL	
506	10	136	2.62	32	MCI	P 1	TSH		-4.70	TSHTSH	3.24	0.72	W3386	reso	89H00069	H	0	600PP	
507	32	136	0.40	61	15	P 2	VSM		+0.96	TEHTEC			W9658	seco	89C00048	C	0	600UL	
508	78	136	3.15	31	SAI	2	TSH		-7.48	TSHTSH	5.05	0.72	W3386	reso	89H00060	H	0	600PP	
509			1.05	20	SAI	2	TSH		-6.86	TSHTSH	1.03	0.22	W3386	reso	89H00060	H	0	600PP	
510			0.26	150	11	P 2	VC3		-0.96	TEHTEC			P1465	prim	89C00022	C	0	600UL	
511	106	136	0.28	118	12	P 2	VH2		-0.71	TEHTEC			P1465	prim	89C00022	C	0	600UL	
512	114	136	0.35	151	15	P 2	VC3		+0.82	TEHTEC			P1465	prim	89C00022	C	0	600UL	
513	77	137	0.63	114	21	P 2	VSM		-0.95	TEHTEC			L3025	prim	89C00020	C	0	600UL	
514	79	137	0.29	133	14	P 2	VSM		-0.87	TEHTEC			D2003	prim	89C00021	C	0	600UL	
515	113	137	0.25	59	11	P 2	VH2		-0.68	TEHTEC			P1465	prim	89C00022	C	0	600UL	
516	66	138	0.31	104	13	P 2	08C		-0.94	TEHTEC			R1748	reso	89C00048	C	0	600UL	
517	19	139	1.11	28	SCI	P 1	TSH		-5.04	TSHTSH	1.61	0.25	R5555	reso	89H00003	H	0	600PP	
518	77	139	0.32	100	12	P 2	VH3		-0.88	TEHTEC			L3025	prim	89C00020	C	0	600UL	
519			0.67	144	22	P 2	VC3		+1.18	TEHTEC			L3025	prim	89C00020	C	0	600UL	
520	32	140	0.24	65	12	P 2	VSM		-0.56	TEHTEC			B5925	seco	89C00047	C	0	600UL	
521	40	140	0.23	33	12	P 2	VSM		-0.69	TEHTEC			B5926	seco	89C00047	C	0	600UL	
522	60	140	0.41	40	19	P 2	VSM		+0.84	TEHTEC			B5926	seco	89C00047	C	0	600UL	
523	88	140	0.37	116	14	P 2	VH2		-0.79	TEHTEC			H7791	reso	89C00020	C	0	600UL	
524			0.42	104	15	P 2	VH2		+0.92	TEHTEC			H7791	reso	89C00020	C	0	600UL	
525	9	141	0.14	114	MAI	2	02H		-1.72	02H02H	0.00	0.47	M7262	reso	89H00122	H	0	600PP	
526	49	141	0.53	33	22	P 2	08C		+1.80	TEHTEC	LAR		M7262	reso	89C00047	C	0	600UL	
527	76	142	0.21	124	10	P 2	08C		-0.58	TEHTEC			D2003	prim	89C00021	C	0	600UL	
528	59	143	0.25	134	13	P 2	VH3		-0.54	TEHTEC			B5926	seco	89C00047	C	0	600UL	
529	71	143	0.24	108	12	P 2	VH3		-0.73	TEHTEC			G7112	seco	89C00021	C	0	600UL	
530			0.24	109	11	P 2	04C		-0.17	TEHTEC			D3858	reso	89C00021	C	0	600UL	
531	66	144	0.34	58	16	P 2	VH3		-0.73	TEHTEC			B4014	prim	89C00047	C	0	600UL	
532			0.46	81	20	P 2	VSM		-0.80	TEHTEC			B4014	prim	89C00047	C	0	600UL	
533	70	144	0.35	96	13	P 2	VC3		-0.53	TEHTEC			B3170	prim	89C00046	C	0	600UL	
534	112	144	0.61	124	18	P 3	DBC		+2.15	TEHTEC			R5555	reso	89C00020	C	0	600UL	
535	45	145	0.22	68	12	P 2	VSM		-0.86	TEHTEC			B5926	seco	89C00047	C	0	600UL	
536	49	145	0.52	99	22	P 2	08H		-1.19	TEHTEC			M7262	reso	89C00047	C	0	600UL	
537	57	145	0.26	60	12	P 2	VC3		-0.69	TEHTEC			C4330	prim	89C00045	C	0	600UL	
538	63	145	0.40	110	15	P 2	VH3		+0.85	TEHTEC			B5926	seco	89C00044	C	0	600UL	
539	67	145	0.27	37	13	P 2	VH3		-0.64	TEHTEC			G4841	reso	89C00045	C	0	600UL	

NO

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

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	ROW	COL	VOLTS	DEG	PCT	CHN	FLAW	LOCATION	EXTENT	UTIL1	UTIL2	NAME	TYPE	CAL	GROUP	LEG	PROBE	SIZE
540	8	146	0.59	15	SAI	2	TSH	-6.46	TSHTSH	0.00	0.43	G4841	reso	89H00006	H	0	600PP	
541	56	146	0.44	106	16	P	2	VH3	-0.75	TEHTEC			B4165	prim	89C00044	C	0	600UL
542	58	146	0.33	32	15	P	2	VH3	-0.45	TEHTEC			C4330	prim	89C00045	C	0	600UL
543	74	146	0.37	70	19	P	2	VH3	+0.86	TEHTEC			L9168	prim	89C00019	C	0	600UL
544	94	146	0.25	131	14	P	2	VH3	-0.87	TEHTEC			L9168	prim	89C00019	C	0	600UL
545	35	147	0.22	41	11	P	2	VSM	+0.58	TEHTEC			C4330	prim	89C00045	C	0	600UL
546	45	147	0.24	150	9	P	2	VSM	-0.86	TEHTEC			B5926	seco	89C00044	C	0	600UL
547	57	147	0.31	105	12	P	2	VH3	+0.68	TEHTEC			B5926	seco	89C00044	C	0	600UL
548	59	147	0.29	73	14	P	2	VH3	+0.75	TEHTEC			K3270	seco	89C00045	C	0	600UL
549	71	147	0.51	115	24	P	2	VH3	-0.91	TEHTEC			L9168	prim	89C00019	C	0	600UL
550			0.41	124	20	P	2	VC3	-0.82	TEHTEC			L9168	prim	89C00019	C	0	600UL
551	79	147	0.24	121	13	P	2	VH3	+0.93	TEHTEC			T4180	seco	89C00019	C	0	600UL
552	103	147	0.16	67	SAI	2	04H		-1.87	04H04H	0	.23	P4578	reso	89H00127	H	2	600PP
553	74	148	0.46	85	15	P	2	VH3	-0.86	TEHTEC			B4165	prim	89C00018	C	0	600UL
554	82	148	0.67	131	21	P	2	VH3	+0.72	TEHTEC			B4165	prim	89C00018	C	0	600UL
555	84	148	0.32	60	17	P	2	VH2	+0.87	TEHTEC			L9168	prim	89C00019	C	0	600UL
556	88	148	0.26	114	14	P	2	VC3	-0.76	TEHTEC			G4841	reso	89C00019	C	0	600UL
557	31	149	0.31	131	12	P	2	VSM	+0.90	TEHTEC			B4165	prim	89C00044	C	0	600UL
558	35	149	0.36	107	14	P	2	VSM	+0.83	TEHTEC			B4165	prim	89C00044	C	0	600UL
559	79	149	0.26	69	15	P	2	VSM	+1.01	TEHTEC			L9168	prim	89C00019	C	0	600UL
560	52	150	0.23	72	11	P	2	VC3	-0.96	TEHTEC			C4330	prim	89C00045	C	0	600UL
561	78	150	0.45	55	15	P	2	VH3	-0.64	TEHTEC			B4165	prim	89C00018	C	0	600UL
562	91	151	0.31	54	17	P	2	VH2	-0.66	TEHTEC			L9168	prim	89C00019	C	0	600UL
	56	152	0.27	54	17	P	3	DBH	+1.07	TEHTEC			C4330	prim	89C00045	C	0	600UL
564	66	152	0.32	131	12	P	2	VH3	-0.70	TEHTEC			B4165	prim	89C00044	C	0	600UL
565	80	152	0.56	137	25	P	2	VSM	-0.69	TEHTEC			V1371	prim	89C00019	C	0	600UL
566			0.40	134	20	P	2	VSM	+0.94	TEHTEC			V1371	prim	89C00019	C	0	600UL
567			0.66	103	28	P	2	VC3	-0.56	TEHTEC			V1371	prim	89C00019	C	0	600UL
568			0.63	97	27	P	2	VC3	+0.97	TEHTEC			V1371	prim	89C00019	C	0	600UL
569	69	153	0.37	112	14	P	2	VH3	-0.94	TEHTEC			B4165	prim	89C00042	C	0	600UL
570	73	153	0.30	100	11	P	2	VH3	+0.88	TEHTEC			B4165	prim	89C00018	C	0	600UL
571	71	155	0.28	105	15	P	2	VH3	-0.88	TEHTEC			M7262	reso	89C00019	C	0	600UL
572			0.28	140	15	P	2	VH3	+0.65	TEHTEC			B2153	seco	89C00019	C	0	600UL
573	75	155	0.26	152	14	P	2	VH3	-0.83	TEHTEC			B2153	seco	89C00019	C	0	600UL
574	36	156	0.29	61	14	P	2	VSM	-0.35	TEHTEC			B8589	seco	89C00043	C	0	600UL
575	46	156	0.27	119	11	P	2	VSM	-0.92	TEHTEC			B4165	prim	89C00042	C	0	600UL
576	54	156	0.29	106	14	P	2	VH3	-0.67	TEHTEC			B8589	seco	89C00043	C	0	600UL
577	58	156	0.31	76	15	P	2	VH3	-0.84	TEHTEC			B8090	reso	89C00043	C	0	600UL
578	66	156	0.33	106	16	P	2	VH3	-0.58	TEHTEC			B8589	seco	89C00043	C	0	600UL
579	72	156	0.22	112	12	P	2	VC3	-0.90	TEHTEC			B2153	seco	89C00019	C	0	600UL
580	74	156	0.45	107	15	P	2	VH3	-0.90	TEHTEC			B4165	prim	89C00018	C	0	600UL
581			0.45	79	15	P	2	VSM	-0.90	TEHTEC			B4165	prim	89C00018	C	0	600UL
582			0.61	70	19	P	2	VC3	-0.64	TEHTEC			B4165	prim	89C00018	C	0	600UL
583	71	157	0.25	93	14	P	2	VH3	-0.88	TEHTEC			B2153	seco	89C00019	C	0	600UL
584			0.29	96	15	P	2	VH3	+1.08	TEHTEC			B2153	seco	89C00019	C	0	600UL
585	56	158	0.42	107	20	P	2	VH3	-0.66	TEHTEC			T0854	seco	89C00029	C	0	600UL
586	41	159	0.29	87	12	P	2	01H	+1.19	TEHTEC			D3858	reso	89C00028	C	0	600UL
587	79	159	0.40	69	20	P	2	VH3	+0.85	TEHTEC			V1371	prim	89C00019	C	0	600UL
588			0.33	76	17	P	2	VC3	-0.62	TEHTEC			V1371	prim	89C00019	C	0	600UL

NO

SG89 MAI, MCI, MMI, MVI, SAI, SCI, SVI, 0-100%TWD

UTILITY: Southern California Edison,
PLANT: San Onofre
UNIT: 2
SG: 89
DATABASE: SONGS_02_1000_SG89_FINAL

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	ROW	COL	VOLTS	DEG	PCT	CHN	FLAW	LOCATION	EXTENT	UTIL1	UTIL2	NAME	TYPE	CAL GROUP	LEG	PROBE SIZE
589	74	160	0.86	114	25	P 2	VH3	-0.79	TEHTEC			B4165	prim	89C00018	C 0	600UL
590			0.51	136	18	P 2	VC3	-0.77	TEHTEC			B8589	seco	89C00018	C 0	600UL
591	46	162	0.29	109	12	P 2	VSM	+1.08	TEHTEC			D3858	reso	89C00028	C 0	600UL
592	12	167	0.37	49	18	P 2	03H	+1.03	TEHTEC			B4260	reso	89C00017	C 0	600UL
593	45	167	0.36	98	17	P 2	VSM	-0.91	TEHTEC			K3270	seco	89C00017	C 0	600UL
594	42	168	0.56	150	20	P 2	VSM	+0.96	TEHTEC			B4165	prim	89C00026	C 0	600UL
595	42	170	0.61	101	21	P 2	VSM	-0.30	TEHTEC			F0037	prim	89C00026	C 0	600UL
596	39	171	0.26	63	10	P 2	03H	+0.13	TEHTEC			B4260	reso	89C00026	C 0	600UL
597	19	173	0.24	136	10	P 2	VSM	+1.01	TEHTEC			K3270	seco	89C00026	C 0	600UL
598	7	175	0.29	80	11	P 2	02C	+0.82	TEHTEC			P1465	prim	89C00026	C 0	600UL

QUERY REPORT SUMMARY:

QUERY PARAMETER	ENTRIES	TUBES
0 to 100 Percent	502	396
MAI Indication Code	2	2
MCI Indication Code	2	2
MMI Indication Code	0	0
MVI Indication Code	0	0
SAI Indication Code	65	54
SCI Indication Code	25	24
SVI Indication Code	2	2

TOTAL ENTRIES: 598
TOTAL TUBES: 474

NO

9 ATTACHMENT- 1

LIST OF COMPLETED ISI NDE EXAMINATIONS AND SYSTEM PRESSURE TESTS

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

UNIT 2 CYCLE 11 ISI CLASS 1, 2 and IWE COMPLETED EXAMINATIONS

ISI ID NO.	Area Description	Cat	Item	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	200-11IUT-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	VT-3	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-I	Y-STOP W/INTEGRALLY WELDED LUGS	B-K	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	B-K	B10.20	PT	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	200-11IVT-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
02-036-037	REACTOR COOLANT PUMP NUT	BG1	B6.200	VT-1	10/24/00	200-11IVT-012	ACCEPT
02-036-038	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

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

UNIT 2 CYCLE 11 ISI CLASS 1, 2 and IWE COMPLETED EXAMINATIONS

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
02-039-058-F	GUIDE & Y-STOP	F-A	F1.10B	VT-3	10/28/00	200-11IVT-021	ACCEPT
02-039-059-F	GUIDE & Y-STOP	F-A	F1.10B	VT-3	11/1/00	200-11IVT-029	ACCEPT
02-039-059-I	GUIDE & Y-STOP W/INTEGRALLY WELDED LUGS	B-K	B10.20	PT	11/1/00	200-11IPT-012	ACCEPT
02-044-043-F	SNUBBER	F-A	F1.20C	VT-3	10/27/00	200-11IVT-017	ACCEPT
02-044-043-I	SNUBBERS W/WELDED SUPPORT	C-C	C3.20	MT	10/27/00	200-11IMT-008	ACCEPT
02-045-032	20" SCH 100 PENETRATION-TO-PIPE	CF2	C.5.51	MT	10/24/00	200-11IMT-006	ACCEPT

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ISI ID NO.	Area Description	Cat	Item	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	MT	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	UT	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-I	SWAY STRUT W/INTEG WELDED ATTACH (SNUBBER REPL DCP 2/3-6783.00BP)	C-C	C3.20	MT	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	MT	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	MT	10/19/00	200-11IMT-004	ACCEPT
02-047-035	6" SCH 120 TEE-TO-PIPE	CF2	C5.51	UT	10/23/00	200-11IUT-011	ACCEPT
02-047-036	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
02-048-039	6" SCH 80 ELBOW-TO-ELBOW	CF2	C5.51	UT	10/14/00	200-11IUT-003	ACCEPT
02-048-040	6" SCH 80 ELBOW-TO-PIPE	CF2	C5.51	UT	10/14/00	200-11IUT-003	ACCEPT
02-048-079-F	3-WAY STOP	F-A	F1.20B	VT-3	10/19/00	200-11IVT-005	ACCEPT
02-048-079-I	3-WAY STOP W/WELDED LUGS	C-C	C3.20	MT	10/19/00	200-11IMT-005	ACCEPT

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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-I	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	MT	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	UT	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
02-052-112-F	Y-STOP	F-A	F1.20A	VT-3	10/19/00	200-11IVT-006	ACCEPT
02-053-004	REDUCING TEE-TO-34" ELBOW	CF2	C5.51	UT	10/20/00	200-11IUT-009	ACCEPT
02-053-005A-SG	34" ELBOW BODY WELD - OUTSIDE RADIUS	CF2	C5.52	UT	10/20/00	200-11IUT-009	ACCEPT
02-053-005A-SV	34" ELBOW BODY WELD - OUTSIDE RADIUS	CF2	C5.52	UT	10/20/00	200-11IUT-009	ACCEPT
02-053-005B-SG	34" ELBOW BODY WELD - INSIDE RADIUS	CF2	C5.52	UT	10/20/00	200-11IUT-009	ACCEPT

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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	MT	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	UT	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	UT	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
02-053-037	HEADER EXTRUSION-TO-6" SCH. 80 PIPE	CF2	C5.51	MT	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
02-053-038	6" SCH 80 PIPE-TO-ELBOW	CF2	C5.51	UT	10/14/00	200-11IUT-002	ACCEPT

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ISI ID NO.	Area Description	Cat	Item	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	MT	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	MT	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	VT-3	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	VT-3	10/16/00	200-11IVT-003	ACCEPT
02-068-1060	GUIDE	F-A	F1.20A	VT-3	10/16/00	200-11IVT-002	ACCEPT
02-068-1070-F	GUIDE & Y-STOP	F-A	F1.20B	VT-3	10/16/00	200-11IVT-002	ACCEPT
02-068-920-F	GUIDE & Y-STOP	F-A	F1.20B	VT-3	10/16/00	200-11IVT-002	ACCEPT

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ISI ID NO.	Area Description	Cat	Item	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	VT-3	10/16/00	200-11IVT-002	ACCEPT
02-068-950-I	GUIDE & Y-STOP W/4 INTEGRALLY WELDED LUGS	C-C	C3.20	PT	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-I	GUIDE & Y-STOP W/4 INTEGRALLY WELDED LUGS	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-I	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	VT-3	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-I	SWAY STRUTS W/WELDED DUMMY STUB (SNUBBERS REPL DCP 2-6683.1SM)	C-C	C3.20	PT	10/21/00	200-11IPT-001	ACCEPT
02-069-3650	SPRING HANGER	F-A	F1.20C	VT-3	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
02-069-3800	GUIDE	F-A	F1.20A	VT-3	10/21/00	200-11IVT-009	ACCEPT
02-069-3880	SPRING HANGER	F-A	F1.20C	VT-3	10/21/00	200-11IVT-009	ACCEPT
02-069-4240	SPRING HANGER	F-A	F1.20C	VT-3	10/21/00	200-11IVT-009	ACCEPT
02-070-2370-F	WELDED ANCHOR STRAP	F-A	F1.20B	VT-3	10/30/00	200-11IVT-024	ACCEPT
02-070-2370-I	INTEGRALLY WELDED ANCHOR STRAP	C-C	C3.20	PT	10/30/00	200-11IPT-009	ACCEPT
02-070-2430	SPRING HANGERS W/CLAMP	F-A	F1.20C	VT-3	10/30/00	200-11IVT-024	ACCEPT
02-070-2460-F	STRUT	F-A	F1.20A	VT-3	10/30/00	200/11IVT-024	ACCEPT

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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-I	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-I	GUIDE & Y-STOP W/INTEGRALLY WELDED LUGS	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-I	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-I	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	C-B	C2.31	PT	10/24/00	200-11IPT-006	ACCEPT
02-075-043	REINFORCING RING-TO-SHELL WELD	C-B	C2.31	MT	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	VT-3	10/10/00	200-11IVT-008	ACCEPT
02-530-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

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

UNIT 2 CYCLE 11 ISI CLASS 1, 2 and IWE COMPLETED EXAMINATIONS

ISI ID NO.	Area Description	Cat	Item	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

System	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

TYPES B AND C LEAKAGE RATES
11 November 2000

Unit 2

Pen #	Valve/Seal	Admin Limit SCCM	Date	Measured Leakage AF	Date	Measured Leakage AL	Min Path Leakage AF	Min Path Leakage AL	Max Path Leakage AL
1	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
2	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
4 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	1000	10/8/00 (U2C11)	20	10/11/00 (U2C11)	20			
	S2(3)1204MU099	1000	10/8/00 (U2C11)	20	10/8/00 (U2C11)	20	20	20	20
7	HV9217	1000	10/10/00 (U2C11)	20	10/10/00 (U2C11)	20			
	HV9218	1000	10/10/00 (U2C11)	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	1000	10/17/00 (U2C11)	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.

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

Unit 2

Pen #	Valve/Seal	Admin Limit SCCM	Date	Measured Leakage AF	Date	Measured Leakage AL	Min Path Leakage AF	Min Path Leakage AL	Max Path 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)	8			
	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	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

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

Unit 2

Pen #	Valve/Seal	Admin Limit SCCM	Date	Measured Leakage AF	Date	Measured Leakage AL	Min Path Leakage AF	Min Path Leakage AL	Max Path 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
23B	S2(3)1220MX023B 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

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

Unit 2

Pen #	Valve/Seal	Admin Limit SCCM	Date	Measured Leakage AF	Date	Measured Leakage AL	Min Path Leakage AF	Min Path Leakage AL	Max Path Leakage AL
30C NOTE	HV0516	1000	8/23/00(Mode 1)	216	8/23/00(Mode 1)	216			
	HV0514	1000	8/23/00(Mode 1)	150	8/23/00(Mode 1)	150			
	HV0515	1000	8/23/00(Mode 1)	30	8/23/00(Mode 1)	30	30	30	366
31	HV9946	1000	10/18/00 (U2C11)	20	10/25/00 (U2C11)	20			
	HCV9945	1000	10/18/00 (U2C11)	125	10/18/00 (U2C11)	125	20	20	125
34	S2(3)1220MX034 ILRT CONNECTION FLANGES	1000	9/26/00 (Mode 1)	80	11/11/00 (U2C11)	20	40	10	20
42	HV6223	3000	10/9/00 (U2C11)	0	10/20/00 (U2C11)	0			
	HV6211	3000	1/5/99 (U2C10)	213	2/5/99 (U2C10)	0	0	0	0
43	HV6236	3000	10/9/00 (U2C11)	0	10/17/00 (U2C11)	8			
	HV6216	3000	10/9/00 (U2C11)	58	10/9/00 (U2C11)	58	0	8	58
45	HV9900 & HV9920	3000	10/14/00 (U2C11)	683	10/21/00 (U2C11)	305	342	153	305
46	HV9971 & HV9921	3000	1/13/99 (U2C10)	1125	1/28/99 (U2C10)	182	563	91	182
47	HV7258	2000	10/9/00 (U2C11)	75	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)	71	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.

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

Unit 2

Pen #	Valve/Seal	Admin Limit SCCM	Date	Measured Leakage AF	Date	Measured Leakage AL	Min Path Leakage AF	Min Path Leakage AL	Max Path Leakage AL
77	S2(3)2418MU108	2000	10/13/00 (U2C11)	1945	10/31/00 (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)	0	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 PANEL	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)							14368	5547	14988
						% of La	6.6	2.6	6.9

Acceptance Criteria < 130,287 sccm (0.6 La)

PERFORMED BY: _____ Signature 11/11/00 Date

APPROVED BY: _____ Supervisor or Designee 11/11/00 Date

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.

Note: Actual Mode 4 entry on 11/12/00 @ 1813.
11/13/00

WATER COLLECTION TEST RESULTS
Date: 11 November 2000

UNIT 2

Pen Number	SPECIAL TYPE C LEAK RATE TEST FOR THOSE VALVES WATER-COVERED FOR 30 DAYS POST-ACCIDENT 10 CFR 50, APPENDIX J III	Admin Limit SCCM	Date	AF Liquid Leakage	Date	AL Liquid 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	3000	10/17/00(U2C11)	0	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)	0	2/12/99(U2C10)	0
57	HV6372	3000	12/22/98(Mode 1)	0	1/14/99(U2C10)	0
58	HV6368	3000	12/22/98(Mode 1)	590	2/16/99(U2C10)	379
59	HV6370	3000	12/29/98(Mode 1)	68	2/12/99(U2C10)	2
60	HV6369	3000	12/22/98(Mode 1)	38	2/16/99(U2C10)	68
61	HV6371	3000	12/29/98(Mode 1)	2	2/3/99(U2C10)	0
62	HV6367	3000	12/29/98(Mode 1)	4	2/9/99(U2C10)	4
63	HV6373	3000	12/22/98(Mode 1)	0	1/14/99(U2C10)	0

PERFORMED BY: _____ 11/14/00 GMA 11/21/00
Signature Date

APPROVED BY: _____ 11/22/00
Supervisor or Designee Date

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

10 ATTACHMENT- 2

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
Rosemead, California 91770

Unit: 2
MO: 00011025000
Rspec: GEN-106 R2
PID: 40111A
N5: S2-1201-3

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Reactor Coolant

5. (a) Applicable Construction Code: ASME Section III, Class 1, 1971 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: 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
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. 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.

(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** (repair or 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: 11/28/00
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 **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 01/26/00 to 11/29/00, 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 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date Nov. 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
Rosemead, California 91770

Unit: 2
CWO: 00011242000
FCN: F20914M
Rspec: 006-00
PID: N/A
N5: S2-1301-1

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Main Steam

5. (a) Applicable Construction Code: ASME Section III, NF, 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 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: 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.

(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** repair or 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: 10/17/00
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 **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 03/30/00 to 10/17/00, 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 1862 California
Inspector's Signature
National Board, State, Province, and Endorsements

Date Oct. 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
2244 Walnut Grove Avenue
Rosemead, California 91770

Unit: 2
MO: 00020734000
FCN: F20891M
Rspec: 013-00

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

PID: 40130 (C4)
N5: S2-1201-6

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Reactor Coolant

5. (a) Applicable Construction Code ASME Section III, NF, Class 2, 1974 Edition, S'74 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
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.

(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** repair or 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: 11/6/00

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 **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 6/13/00 to 11/6/00, 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 1862 California

Inspector's Signature National Board, State, Province, and Endorsements

Date Nov. 6, 2000

MO: 00020734000

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, California 91770

Unit: N
MO: 00021582000 (SOG-00-001)
Rspec: 007-00
PID: N/A
N5: N/A

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: N/A - Spare

5. (a) Applicable Construction Code ASME Section III, Class 2 (NC), 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
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: N/A 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 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.

(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: Robert G. Sears 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 **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 3/28/00 to 9/13/00, 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.

[signature] Commissions 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date Sept. 13, 2000

MO: 00021582000

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, California 91770

Unit: 2
MO: 00022123000
FCN: F21036M
Rspec: 014-00

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

PID: 40111 (D1)
N5: S2-1201-3-1

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Reactor Coolant

5. (a) Applicable Construction Code ASME Section III, NF, Class 1, 1974 Edition, S'74 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
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: 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.

(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** repair or 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: 11/6/00
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 **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 6/13/00 to 11/6/00, 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 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date Nov. 6, 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
Rosemead, California 91770

Unit: 2
MO: 00022516000
FCN: F15530M
Rspec: 177-98 R1

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

PID: 40114D (F7)
N5: S2-1204-10

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Safety Injection and Shutdown Cooling

5. (a) Applicable Construction Code ASME Section III, Class 1, 1971 Edition, S'73 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
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 Pressure: N/A Temp: N/A

See: AR 960600529-05

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.

(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:- [signature] Supervising ASME Codes Engineer Date: 12/18/00
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 **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 3/17/00 to 12/19/00, 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.

[signature] Commissions 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date Dec. 19, 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
Rosemead, California 91770

Unit: N
MO: 00040182000
Rspec: ASME SECTION XI DATA-0460
PID: N/A
N5: N/A

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: N/A - Spare

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 1/2" x 2" Nozzle Type Relief Valve	Crosby Valve & Gage	N59380-00-0012	N/A	025-83508-N59380-00-0012	1985	—	Yes
Disc	Crosby Valve & Gage	N91241-44-0067, Ht.# 18100187	N/A	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: 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.

(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: 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 **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 05/19/00 to 07/24/00, 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 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date July 24, 2000

MO: 00040182000

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, California 91770

Unit: 2
MO: 00061061000
FCN: F22586M
Rspec: 026-00

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

PID: 40112D (C7)
N5: S2-1201-4

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Reactor Coolant

5. (a) Applicable Construction Code ASME Section III, Class, NF, 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 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

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.

(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. 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: 10/30/00
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 **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 9/28/00 to 10/30/00, 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 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date Oct. 30, 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
Rosemead, California 91770

Unit: 2
MO: 00061208000
FCN: F22587M
Rspec: 027-00
PID: 40112D (C7)
N5: S2-1201-4

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Reactor Coolant

5. (a) Applicable Construction Code ASME Section III, NF, Class 2, 1974 Edition, S'74 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
1/4-4" Mechanical Snubber	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

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.

(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** repair or 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: 11/6/00
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 **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 9/25/00 to 11/6/00, 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 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date Nov 6, 2000

MO: 00061208000

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, California 91770

Unit: A
MO: 00071187000
Rspec: GEN-139 R1
PID: N/A
N5: N/A

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Safety Injection and Shutdown Cooling

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.

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: 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** (repair or 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: 9/26/00
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 **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 07/27/00 to 09/26/00, 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 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date Sept. 26, 2000

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

1. Owner: **Southern California Edison Company**
2244 Walnut Grove Avenue, Rosemead, CA 91770

2. Plant: **San Onofre Nuclear Generating Station**
San Clemente, CA 92674-0128

3. Work Performed by: **Southern California Edison**
P.O. Box 128
San Clemente, CA 92674-0128

4. Identification of System: **Reactor Coolant (1201)**

Unit: 2
CWO: 00090209000
FCN: F23530G
Repair Spec: 028-00 Rev. 0
P&ID: 40111B (E6)
N-5: S2-1201-2

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

5. (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

7. Description of Work:
A replacement pressurizer heater was installed in plant location S21201ME613 (at pressurizer sleeve G3) in accordance with Repair Specification 028-00 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.

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: [signature] Supervising ASME Codes Engineer Date: 11/21/00
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 **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 10/10/00 to 11/22/00, 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.

[signature] Commissions 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date NOV. 22, 2000

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

1. Owner: **Southern California Edison Company**
2244 Walnut Grove Avenue, Rosemead, CA 91770

2. Plant: **San Onofre Nuclear Generating Station**
San Clemente, CA 92674-0128

3. Work Performed by: **Southern California Edison**
P.O. Box 128
San Clemente, CA 92674-0128

4. Identification of System: **Reactor Coolant (1201)**

Unit: 2
CWO: 00090615000
FCN: F23559G
Repair Spec: 029-00 Rev. 0
P&ID: 40111B (E6)
N-5: S2-1201-2

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

5. (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:
A replacement pressurizer heater 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.

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.

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: _____ Supervising ASME Codes Engineer Date: 11/29/00
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 **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 10/10/00 to 11/29/00, 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 1862 California
Inspector's Signature
National Board, State, Province, and Endorsements

Date NOV. 29, 2000

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

1. Owner: **Southern California Edison Company**
2244 Walnut Grove Avenue, Rosemead, CA 91770

2. Plant: **San Onofre Nuclear Generating Station**
San Clemente, CA 92674-0128

3. Work Performed by: **Southern California Edison**
P.O. Box 128
San Clemente, CA 92674-0128

4. Identification of System: **Reactor Coolant (1201)**

Unit: 2
CWO: 00090616000
FCN: F23560G
Repair Spec: 030-00 Rev. 0
P&ID: 40111B (E6)
N-5: S2-1201-2

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

5. (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.	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. 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.

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: [signature] Supervising ASME Codes Engineer Date: 11/28/00
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 **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 10/10/00 to 11/29/00, 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.

[signature] Commissions 1862 California
Inspector's Signature
National Board, State, Province, and Endorsements

Date Nov. 29, 2000

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

1. Owner: **Southern California Edison Company**
2244 Walnut Grove Avenue, Rosemead, CA 91770

Unit: 2
CWO: 00090617000
FCN: F23561G
Repair Spec: 031-00 Rev. 0
P&ID: 40111B (E6)
N-5: S2-1201-2

2. Plant: **San Onofre Nuclear Generating Station**
San Clemente, CA 92674-0128

3. Work Performed by: **Southern California Edison**
P.O. Box 128
San Clemente, CA 92674-0128

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: **Reactor Coolant (1201)**

5. (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:
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)

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.

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: [signature] Supervising ASME Codes Engineer Date: 11/28/00
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 **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 10/10/00 to 11/29/00, 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.

[signature] Commissions 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date Nov. 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, Rosemead, CA 91770

2. Plant: **San Onofre Nuclear Generating Station**
San Clemente, CA 92674-0128

3. Work Performed by: **Southern California Edison**
P.O. Box 128
San Clemente, CA 92674-0128

4. Identification of System: **Reactor Coolant (1201)**

Unit: 2
CWO: 00090618000
FCN: F23562G
Repair Spec: 032-00 Rev. 0
P&ID: 40111B (E6)
N-5: S2-1201-2

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

5. (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

7. 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. 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.

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: _____ Supervising ASME Codes Engineer Date: 11/29/00
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 **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 10/10/00 to 11/29/00, 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 1862 California
Inspector's Signature
National Board, State, Province, and Endorsements

Date Nov. 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
Rosemead, California 91770

Unit: 2
MO: 00101151000
Rspec: ASME SECTION XI DATA-0125
PID: 4011A
N5: S2-1201-3

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Reactor Coolant

5. (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 Control Valve	Paul Munroe Hydraulics	Original	N/A	—	N/A	Replaced	No
Snubber Control Valve	Paul Munroe Hydraulics	I43	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: 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.

(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: 11/28/00
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 **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 10/18/00 to 11/29/00, 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 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date NOV. 29, 2000

WO: 00101151000

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, California 91770

Unit: 2
MO: 00101229000
Rspec: GEN-150
PID: 40123A (F6)
N5: S2-1208-1

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Chemical and Volume Control

5. (a) Applicable Construction Code: ASME Section III, Class 2, NF, 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
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: 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: 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** (repair or 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: [signature] 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 **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 10/19/00 to 11/29/00, 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.

[signature] Commissions 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date NOV. 29, 2000

WO: 00101229000

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, California 91770

Unit: 2
MO: 00101517000
Rspec: 001001895-06
PID: 40111B (G7)
N5: S2-1201-2

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Reactor Coolant

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: 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" 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.

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 **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

Signed: _____ Supervising ASME Codes Engineer Date: 11/13/00
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 **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 10/25/00 to 11/14/00, 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 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date Nov. 14, 2000

MO: 00101517000

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, California 91770

Unit: 2
MO: 00101518000
Rspec: 001001895-06
PID: 40111B (G5)
N5: S2-1201-2

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Reactor Coolant

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: 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" Piping	Pullman Inc.	S2-RC-033-001	N/A	S2-1201-ML-033	1978	Repaired	Yes

7. Description of Work:

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: 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.

(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 Authorizaton No: N/A Expiration Date: N/A

Signed: [signature] Supervising ASME Codes Engineer Date: 11/13/00
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 **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 10/25/00 to 11/14/00, 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.

[signature] Commissions 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date NOV. 14, 2000

MO: 00101518000

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, California 91770

Unit: 2
MO: 00110826000
Rspec: GEN-107b
PID: 40111A
N5: S2-1201-3

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Reactor Coolant

5. (a) Applicable Construction Code: ASME Section III, Class 1, 1971 Edition, W'73 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
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: N/A

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 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 **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

Signed: _____ Supervising ASME Codes Engineer Date: 11/30/00
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 **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 11/1/00 to 12/04/00, 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 1862 California
Inspector's Signature
National Board, State, Province, and Endorsements

Date Dec. 4, 2000

WO: 00110826000

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, California 91770

Unit: 2
MO: 00121178000
Rspec: ASME SECTION XI DATA-0272
PID: 40123C (C2)
N5: S2-1208-11

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Chemical and Volume Control

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: System Functional Pressure Test Pressure: NOP Temp: N/A

See: AR 001201054-02

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.

FORM NIS-2 (back)

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 **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: 01/08/01
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 **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 12/21/00 to 01/08/01, 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 Jan 8, 2001

WO: 00121178000

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, California 91770

Unit: 2
MO: 96030149001
Rspec: ASME SECTION XI DATA-0059, GEN-139 R1
PID: 40112A (B6)
N5: N/A

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Safety Injection and Shutdown Cooling

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: 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
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
1 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: System Functional Pressure Test Pressure: NOP Temp: NOT

See: AR 991001300-04

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: 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: [signature] Supervising ASME Codes Engineer Date: 11/28/00
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 **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 10/17/00 to 11/29/00, 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.

[signature] Commissions 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date NOV. 29, 2000

WO: 96030149001

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

2. Plant: San Onofre Nuclear Generating Station
   San Clemente, California 92674-0128

3. Work Performed by: Southern California Edison Company

4. Identification of System: Feedwater

Unit: 2
MO: 96070175001
FCN: F12746M, F12750M
Rspec: 119-98
P&ID: 40156B (B2)
N-5: S2-1305-7

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

5. (a) Applicable Construction Code: ASME Section III, Class 2, 1974 Ed., S.'74 Add. (material, design, and fabrication); Section III, NC-5000, 1992 Ed., No Add. (NDE); Code Case: None
   (b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Edition, No Addenda; 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: System Leakage Pressure Test Pres: NOP Temp: NOT
   See: AR 960200294-08

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.

FORM NIS-2 (back)

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 **repair and 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 **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 11/23/99 to 01/08/01, 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 signi: 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 Jan. 8, 2001

WO: 96070175001

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, California 91770

Unit: 2
MO: 97011254001
Rspec: ASME SECTION XI DATA-0123
PID: 40156B (B1)
N5: S2-1305-7

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Feedwater

5. (a) Applicable Construction Code: ASME Section III, Class 2, 1974 Edition, S.'75 Addenda; Code Case: 1781

(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
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: System Leakage Pressure Test Pressure: NOP Temp: NOT

See: AR 960200294-08

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.

(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 **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 10/05/00 to 01/08/01, 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 Jan. 8, 2001

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

2. Plant: San Onofre Nuclear Generating Station
   San Clemente, California 92674-0128

3. Work Performed by: Southern California Edison Company

4. Identification of System: N/A - Spare

Unit: N
MO: 97061153000
FCN: F13553M
Rspec: 078-97 R1
P&ID: N/A
N-5: N/A

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration 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: 1989 Edition, No Addenda; 1992 Edition, No 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: N/A Pres: 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.

(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 Authorization No: N/A Expiration Date: N/A

Signed: _____ Supervising ASME Codes Engineer Date: 6/9/00
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 **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 01/04/97 to 06/09/00, 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 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date June 9, 2000

MO : 97061153000

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

Unit: N
MO: 97061274000
Rspec: 080-97 R1
P&ID: N/A
N-5: N/A

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: N/A - Spare

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: 1989 Edition, No Addenda; 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-G; RSO-0639-97, Ht. Code FAL, SA479-316L	N/A	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 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.

(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 Authorization No: N/A Expiration Date: N/A

Signed: [signature] Supervising ASME Codes Engineer Date: 6/9/00
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 **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 07/04/97 to 06/09/00, 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.

[signature] Commissions 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date June 9, 2000

MO : 97061274000

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

1. Owner: **Southern California Edison Company**
2244 Walnut Grove Avenue, Rosemead, CA 91770

2. Plant: **San Onofre Nuclear Generating Station**
San Clemente, CA 92674-0128

3. Work Performed by: **Bechtel Construction Company**
P.O. Box 450
San Clemente, CA 92674-0128

4. Identification of System: **REACTOR COOLANT (1201)**

Unit: **2**
CWO: **97101708000**
FCN: **F13904M, F13908M**
Repair Spec: **217-97, REV.0**
P&ID: **40111A**
N-5: **S2-1201-3**

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: 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	Manufacturer 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 Nozzle	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).

8. 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: 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.

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 Authorization No: N/A Expiration Date: N/A

Signed: _____ Supervising ASME Codes Engineer Date: 1/20/00
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 **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 01/09/99 to 01/21/00, 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 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date Jan. 21, 2000

MO : 97101708000

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

1. Owner: **Southern California Edison Company**
2244 Walnut Grove Avenue, Rosemead, CA 91770

2. Plant: **San Onofre Nuclear Generating Station**
San Clemente, CA 92674-0128

3. Work Performed by: **Southern California Edison**

4. Identification of System: **REACTOR COOLANT (1201)**

Unit: **2**
CWO: **97110883000, 97101713000**
FCN(S): **F14192M, F13900M**
Repair Spec: **215-97 REV. 0, 216-97 REV. 0**
P&ID: **40111A**
N-5: **S2-1201-3**

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

5. (a) Applicable Construction Code: **ASME Section III, Class 1, 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).

8. 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.

FORM NIS-2 (back)

9. Remarks : The replacement valve 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 Authorization No: N/A Expiration Date: N/A

Signed: [signature] Supervising ASME Codes Engineer Date: 1/18/00
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 **California**, and employed by **Arkwright Mutual Insurance Company** of **Waltham, Massachusetts** have inspected the components described in this Owner's Report during the period 12/29/97 to 01/19/00, 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.

[signature] Commissions 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date Jan. 19, 2000

MO : 97110883000

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, California 91770

Unit: 2
MO: 98051825000
Rspec: ASME SECTION XI DATA-0460
PID: 40124B (H2)
N5: S2-1208-5

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Chemical and Volume Control

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	N59380-00-0010	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: N/A

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.

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 Authorization No: N/A Expiration Date: N/A

Signed: [signature] Supervising ASME Codes Engineer Date: 12/21/00
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 **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 10/6/00 to 12/21/00, 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.

[signature] Commissions 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date Dec. 21, 2000

MO: 98051825000

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

Unit: 2
MO: 98051989001 98051989000
Rspec: ASME SECTION XI DATA-0207
P&ID: 40112D (C5)
N-5: S2-1201-4

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Safety Injection and Shutdown Cooling

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
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: System Functional Pressure Test Pressure: NOP Temp: N/A

See: AR 980701362-30

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.

(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 Authorization No: N/A Expiration Date: N/A

Signed: [signature] Supervising ASME Codes Engineer Date: 6/9/00
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 **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 11/06/98 to 06/09/00, 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.

[signature] Commissions 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date June 9, 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
Rosemead, California 91770

Unit: 2
CWO: 98060026000 98060170000
FCN: F14828M, F16308M, F14939M
Rspec: 113-98 R3

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

PID: 40192C (C6)
N5: S2-2418-2

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Service Gas (Nitrogen)

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-416-1

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" Check Valve	Kerotest	JAW 29-10	N/A	S22418MU108	1985	Replaced	Yes
2" 600# Check Valve	Flowserve	E-172P-1-1	N/A	RSO-1357-99	1999	Replacement	Yes

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 Pressure: NOP Temp: NOT

See: AR 980100211-11

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.

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 **repair and 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: 12/18/00
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 **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 10/17/00 to 12/19/00, 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 1862 California
Inspector's Signature
National Board, State, Province, and Endorsements

Date Dec 19, 2000

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

2. Plant: San Onofre Nuclear Generating Station
   San Clemente, California 92674-0128

3. Work Performed by: Southern California Edison Company

4. Identification of System: Chemical and Volume Control

Unit: 2
MO: 98063094000
FCN: F16075M
Rspec: ASME SECTION XI DATA-0599
P&ID: 40123B (E5)
N-5: S2-1208-4

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

5. (a) Applicable Construction Code: ASME Section III, Class 2, 1974 Edition, Summer 1974 Addenda (Valve design); ASME II, 1989 Edition, No Addenda (Spindle); 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
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: System Functional Pressure Test Pres: NOP Temp: NOT
   See: AR 980900986-09

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.

(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 Authorization No: N/A Expiration Date: N/A

Signed: [signature] Supervising ASME Codes Engineer Date: 1/17/03
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 08/23/99 to 01/18/00, 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.

[signature] Commissions 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date 01/18/00

MO : 98063094000

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, California 91770

Unit: 2
MO: 99021229000
Rspec: ASME SECTION XI DATA-0073, 990201060-04
PID: 40140B (G5)

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

N5: S2-1415-1

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Nuclear Service Water

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: 1989 Editon, No Addenda; 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
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 valve in plant position S21415MU236 (s/n A2788) with an in-kind replacement valve (s/n C4790). The replaced valve was cut out and the replacement valve welded into place in accordance with weld record WR2-99-214 and Repair Specification 990201060-04.

8. Tests Conducted: System Leakage Pressure Test Pressure: NOP Temp: NOT

See: AR 990201060-06

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.

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 **repair and 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: 12/18/00
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 **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 2/18/00 to 12/19/00, 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 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date Dec. 19, 2000

WO: 99021229000

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

Unit: A
MO: 99031617000 (SOG-99-001)
Rspec: N/A
P&ID: N/A
N-5: N/A

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Reactor Coolant

5. (a) Applicable Construction Code: ASME Section III, NB (Class 1), 1971 Ed., Summer 1972 Add. (design); 1986 Ed., No Add. (material); Code Case: 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
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: 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.

(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 Authorization No: N/A Expiration Date: N/A

Signed: [signature] Supervising ASME Codes Engineer Date: 9/20/99
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 09-03-99 to 09/21/99, 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.

[signature] Commissions 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date Sept. 21, 1999

MO : 99031617000

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

Unit: A
MO: 99031617000 (hardcopy traveler) SOG-99-001 Rev. 1
Rspec: 990301156-01
P&ID: N/A
N-5: N/A

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Reactor Coolant

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

(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 spare 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.

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 Authorization No: N/A Expiration Date: N/A

Signed: [signature] Supervising ASME Codes Engineer Date: 2/24/00
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 **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 12/08/98 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.

[signature] Commissions 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date Feb. 24, 1999

MO: 99031617000

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

2. Plant: San Onofre Nuclear Generating Station
   San Clemente, California 92674-0128

3. Work Performed by: Southern California Edison Company

4. Identification of System: Safety Injection and Shutdown Cooling

Unit: 2
MO: 99041084000
FCN: FCN F16640M
Rspec: ASME SECTION XI DATA-0384, 990400907-12
P&ID: 40122B (F5)
N-5: S2-1201-4

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

5. (a) Applicable Construction Code: ASME Section III, Class 2 (NC), 1971 Edition, Summer 1973 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
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: N/A Pres: 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.

(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: [signature] 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 04/29/99 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.

[signature] Commissions 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date July 13, 1999

MO : 99041084000

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

2. Plant: San Onofre Nuclear Generating Station
   San Clemente, California 92674-0128

3. Work Performed by: Southern California Edison Company

4. Identification of System: Safety Injection and Shutdown Cooling

Unit: 2
MO: 99041368000
FCN: F16640M
Rspec: ASME SECTION XI DATA-0384, 990400907-12
P&ID: 40112B (F5)
N-5: S2-1201-4

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

5. (a) Applicable Construction Code: ASME Section III, Class 2 (NC), 1971 Edition, Summer 1973 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
14" 300# Swing Check Valve	Anchor/Darling	E9877-7-4	N/A	S21201MU202	1982	Repaired	Yes

7. Description of Work:

   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: 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.

(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: [signature] Supervising ASME Codes Engineer Date: 7/12/99
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 04/22/99 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.

[signature] Commissions 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date July 13, 1999

MO: 99041368000

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

Unit: N
MO: 99050737000
Rspec: GEN-166 R1
P&ID: N/A
N-5: N/A

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Main Steam

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 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: 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 : 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 Authorization No: N/A Expiration Date: N/A

Signed: [signature] Supervising ASME Codes Engineer Date: 5/3/00
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 **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 06/01/99 to 05/05/00, 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.

[signature] Commissions NB8 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date May 4, 2000

MO : 99050737000

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, California 91770

Unit: A
MO: 99051280000
Rspec: ASME SECTION XI DATA-0207
PID: N/A
N5: N/A

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Safety Injection and Shutdown Cooling

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 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)	N/A	Replacement	No
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

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: 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.
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: 9/26/00
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 **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 05/25/99 to 09/26/00, 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 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date Sept. 26, 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
Rosemead, California 91770

Unit: 2
MO: 99051554000
Rspec: ASME SECTION XI DATA-0142
PID: 40141D (E6)
N5: S2-1301-1

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Main Steam

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
8" 900# Drag Valve	B&W/CCI	18447-3-1	N/A	2HV8419	1979	—	Yes
Valve Plug	CCI	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 in-kind replacements.

8. Tests Conducted: System Inservice Pressure Test Pressure: NOP Temp: N/A

See: AR 990402126-05

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: 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 **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: for 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 **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 9/18/00 to 1/26/01, 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 Jan. 26, 2001

WO: 99051554000

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, California 91770

Unit: A
MO: 99051790000
Rspec: ASME SECTION XI DATA-0207
PID: N/A
N5: N/A

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

3. Work Performed by: Southern California Edison Company

4. Identification of System: Safety Injection and Shutdown Cooling

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 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	N60061-00-0004	N/A	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

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.

FORM NIS-2 (back)

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: _____ Supervising ASME Codes Engineer Date: 9/26/00
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 **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 06/24/99 to 09/26/00, 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 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date Sept. 26, 2000

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

Unit: 2
MO: 99060050000
Rspec: ASME SECTION XI DATA-0460
P&ID: 40124B (C4)
N-5: S2-1208-5

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Chemical and Volume Control

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	N59380-00-0001	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: System Functional Pressure Test Pressure: NOP Temp: N/A

See: AR 990601263-01, 991200976-02

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.

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 Authorization No: N/A Expiration Date: N/A

Signed: _____ Supervising ASME Codes Engineer Date: 1/25/00
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 **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 6/26/99 to 01/25/00, 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 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date Jan 25, 2000

MO : 99060050000

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, California 91770

Unit: 2
CWO: 99060413000
Rspec: GEN-170
PID: 40111A
N5: S2-1201-3

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Reactor Coolant

5. (a) Applicable Construction Code: ASME Section III, Class 1, 1971 Edition, Summer 1971 Addenda (SG); Class 1, 1989 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	71270-2	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.

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 **repair and 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 **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 10/26/00 to 01/08/01, 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 Jan. 8, 2001

SONGS-2 SLEEVE LIST
S/G 88 Oct. 00 2C11

S/G	Row	Col	Hot Leg	Cold Leg	Reason For Plugging	Tube Qty	Slv Qty	Rev. No.	VERIF.BY/DATE
SG 88	2	54	Sleeve	NA	ID SCI TSH -5.55	1	1	00	CRG 11/4/00
SG 88	4	48	Sleeve	NA	ID SCI TSH -5.66	2	2	00	CRG 11/4/00
SG 88	5	51	Sleeve	NA	ID SCI TSH -4.85	3	3	00	CRG 11/4/00
SG 88	7	145	Sleeve	NA	ID SCI TSH -4.32	4	4	00	CRG 11/4/00
SG 88	9	51	Sleeve	NA	ID SCI TSH -6.89	5	5	00	CRG 11/4/00
SG 88	10	156	Sleeve	NA	ID MCI TSH -0.05	6	6	00	CRG 11/4/00
SG 88	14	132	Sleeve	NA	ID SCI TSH -5.42	7	7	00	CRG 11/4/00
SG 88	14	150	Sleeve	NA	ID SCI TSH -0.06	8	8	00	CRG 11/4/00
SG 88	15	53	Sleeve	NA	ID SCI TSH -6.60	9	9	00	CRG 11/4/00
SG 88	16	126	Sleeve	NA	ID SCI TSH -0.08	10	10	00	CRG 11/4/00
SG 88	17	51	Sleeve	NA	ID SCI TSH -0.04	11	11	00	CRG 11/4/00
SG 88	17	53	Sleeve	NA	ID SCI TSH -5.52	12	12	00	CRG 11/4/00
SG 88	17	53	Sleeve	NA	ID SAI TSH -1.98	12	12	00	NA
SG 88	18	30	Sleeve	NA	ID SAI TSH -4.81	13	13	00	CRG 11/4/00
SG 88	18	116	Sleeve	NA	ID SCI TSH -0.10	14	14	00	11/5/00
SG 88	20	58	Sleeve	NA	ID SCI TSH -0.04	15	15	00	CRG 11/4/00
SG 88	22	52	Sleeve	NA	ID SCI TSH -0.08	16	16	00	CRG 11/4/00
SG 88	23	135	Sleeve	NA	ID SCI TSH -0.13	17	17	00	CRG 11/4/00
SG 88	24	108	Sleeve	NA	OD SCI TSH +0.01	18	18	00	11/5/00
SG 88	24	130	Sleeve	NA	ID SCI TSH -5.65	19	19	00	CRG 11/4/00
SG 88	25	125	Sleeve	NA	ID MCI TSH -0.12	20	20	00	CRG 11/4/00
SG 88	26	60	Sleeve	NA	ID SAI TSH -0.36	21	21	00	CRG 11/4/00
SG 88	26	132	Sleeve	NA	ID SAI TSH -5.25	22	22	00	CRG 11/4/00
SG 88	26	132	Sleeve	NA	ID SAI TSH -3.78	22	22	00	NA
SG 88	26	136	Sleeve	NA	ID SAI TSH -4.12	23	23	00	NA
SG 88	26	136	Sleeve	NA	ID SCI TSH -5.18	23	23	00	CRG 11/4/00
SG 88	26	136	Sleeve	NA	ID SAI TSH -4.87	23	23	00	NA
SG 88	26	136	Sleeve	NA	ID SAI TSH -4.49	23	23	00	NA
SG 88	26	136	Sleeve	NA	ID SCI TSH -4.48	23	23	00	NA
SG 88	27	47	Sleeve	NA	ID SCI TSH -0.18	24	24	00	CRG 11/4/00
SG 88	27	65	Sleeve	NA	ID MCI TSH -6.02	25	25	00	11/5/00
SG 88	27	65	Sleeve	NA	ID SAI TSH -0.60	25	25	00	11/5/00
SG 88	28	60	Sleeve	NA	ID SAI TSH -4.10	26	26	00	CRG 11/4/00
SG 88	33	69	Sleeve	NA	ID SAI TSH -0.26	27	27	00	CRG 11/4/00
SG 88	34	46	Sleeve	NA	ID SCI TSH -0.08	28	28	00	CRG 11/4/00
SG 88	34	114	Sleeve	NA	ID SCI TSH -4.58	29	29	00	11/5/00
SG 88	34	114	Sleeve	NA	ID SAI TSH -1.75	29	29	00	NA
SG 88	34	114	Sleeve	NA	ID SCI TSH -5.10	29	29	00	NA
SG 88	34	114	Sleeve	NA	ID MCI TSH -5.54	29	29	00	NA
SG 88	34	114	Sleeve	NA	ID SCI TSH -6.03	29	29	00	NA
SG 88	37	109	Sleeve	NA	ID SAI TSH -5.25	30	30	00	11/5/00
SG 88	37	109	Sleeve	NA	ID SAI TSH -3.79	30	30	00	NA
SG 88	38	58	Sleeve	NA	ID SAI TSH -0.85	31	31	00	CRG 11/4/00
SG 88	39	103	Sleeve	NA	ID SAI TSH -5.68	32	32	00	11/5/00
SG 88	39	109	Sleeve	NA	OD SAI TSH +1.05	33	33	00	11/5/00
SG 88	39	111	Sleeve	NA	ID SAI TSH -0.01	34	34	00	11/5/00
SG 88	40	68	Sleeve	NA	ID SAI TSH -0.90	35	35	00	CRG 11/4/00
SG 88	40	132	Sleeve	NA	ID SCI TSH -0.10	36	36	00	CRG 11/4/00
SG 88	41	45	Sleeve	NA	ID SCI TSH -0.11	37	37	00	CRG 11/4/00
SG 88	41	105	Sleeve	NA	ID SAI TSH -0.69	38	38	00	11/5/00
SG 88	41	125	Sleeve	NA	ID SCI TSH -0.20	39	39	00	CRG 11/4/00
SG 88	42	52	Sleeve	NA	ID SCI TSH -0.14	40	40	00	CRG 11/4/00
SG 88	42	102	Sleeve	NA	ID MCI TSH -6.43	41	41	00	11/5/00
SG 88	42	124	Sleeve	NA	OD SCI TSH +0.10	42	42	00	CRG 11/4/00
SG 88	43	111	Sleeve	NA	ID SAI TSH -3.05	43	43	00	11/5/00
SG 88	43	111	Sleeve	NA	ID SCI TSH -2.66	43	43	00	NA
SG 88	43	111	Sleeve	NA	ID SAI TSH -0.44	43	43	00	NA
SG 88	43	111	Sleeve	NA	ID SAI TSH -4.34	43	43	00	NA
SG 88	44	72	Sleeve	NA	ID SAI TSH -1.65	44	44	00	CRG 11/4/00
SG 88	44	130	Sleeve	NA	ID SCI TSH -0.10	45	45	00	CRG 11/4/00
SG 88	46	102	Sleeve	NA	ID SAI TSH -0.52	46	46	00	11/5/00
SG 88	46	120	Sleeve	NA	OD SCI TSH +0.12	47	47	00	CRG 11/4/00
SG 88	47	109	Sleeve	NA	ID SAI TSH -1.36	48	48	00	11/5/00
SG 88	47	109	Sleeve	NA	ID SCI TSH -0.15	48	48	00	NA
SG 88	48	72	Sleeve	NA	ID SAI TSH -4.05	49	49	00	CRG 11/4/00
SG 88	48	78	Sleeve	NA	ID SCI TSH -0.09	50	50	00	CRG 11/4/00
SG 88	49	111	Sleeve	NA	OD SAI TSH +0.13	51	51	00	11/5/00
SG 88	49	121	Sleeve	NA	ID SCI TSH -2.87	52	52	00	CRG 11/4/00
SG 88	51	129	Sleeve	NA	ID SCI TSH -0.08	53	53	00	CRG 11/4/00

Duplicate entries marked 'NA'

SONGS-2 SLEEVE LIST
S/G 88 Oct. 00 2C11

S/G	Row	Col	Hot Leg	Cold Leg	Reason For Plugging				Tube Qty	Slv Qty	Rev. No.	VERIF. BY/DATE
SG 88	53	73	Sleeve	NA	ID	SAI	TSH	-1.01	54	54	00	CRG 11/3/00
SG 88	54	88	Sleeve	NA	ID	SAI	TSH	-0.92	55	55	00	CRG 11/4/00
SG 88	54	90	Sleeve	NA	ID	SCI	TSH	+0.08	56	56	00	CRG 11/4/00
SG 88	54	96	Sleeve	NA	ID	SCI	TSH	-2.14	57	57	00	CRG 11/4/00
SG 88	54	98	Sleeve	NA	ID	SCI	TSH	-0.01	58	58	00	CRG 11/4/00
SG 88	55	83	Sleeve	NA	OD	SAI	TSH	+0.96	59	59	00	CRG 11/4/00
SG 88	55	93	Sleeve	NA	ID	SAI	TSH	-1.46	60	60	00	CRG 11/4/00
SG 88	58	72	Sleeve	NA	ID	SAI	TSH	-2.42	61	61	00	CRG 11/4/00
SG 88	58	74	Sleeve	NA	OD	SCI	TSH	-0.02	62	62	00	CRG 11/4/00
SG 88	59	111	Sleeve	NA	ID	SCI	TSH	-3.64	63	63	00	CRG 11/4/00
SG 88	60	66	Sleeve	NA	OD	SAI	TSH	+1.12	64	64	00	CRG 11/4/00
SG 88	60	130	Sleeve	NA	ID	SCI	TSH	-0.11	65	65	00	CRG 11/4/00
SG 88	62	64	Sleeve	NA	ID	SCI	TSH	-0.10	66	66	00	CRG 11/4/00
SG 88	63	79	Sleeve	NA	OD	SCI	TSH	+0.14	67	67	00	11/5/00
SG 88	63	107	Sleeve	NA	OD	SAI	TSH	+2.32	68	68	00	CRG 11/4/00
SG 88	64	76	Sleeve	NA	OD	MAI	TSH	+0.71	69	69	00	CRG 11/4/00
SG 88	65	101	Sleeve	NA	OD	SAI	TSH	+1.01	70	70	00	CRG 11/4/00
SG 88	65	115	Sleeve	NA	ID	SAI	TSH	-2.80	71	71	00	CRG 11/4/00
SG 88	65	115	Sleeve	NA	ID	SAI	TSH	-5.80	71	71	00	NO 2
SG 88	66	90	Sleeve	NA	ID	SCI	TSH	-0.10	72	72	00	CRG 11/4/00
SG 88	66	98	Sleeve	NA	OD	SAI	TSH	+0.19	73	73	00	CRG 11/4/00
SG 88	66	98	Sleeve	NA	OD	MAI	TSH	+0.93	73	73	00	11/5/00
SG 88	69	77	Sleeve	NA	ID	SCI	TSH	-0.01	74	74	00	CRG 11/5/00
SG 88	69	87	Sleeve	NA	OD	SAI	TSH	+0.69	75	75	00	CRG 11/4/00
SG 88	69	97	Sleeve	NA	OD	SAI	TSH	+1.45	76	76	00	CRG 11/4/00
SG 88	70	102	Sleeve	NA	ID	SCI	TSH	-0.06	77	77	00	CRG 11/4/00
SG 88	72	62	Sleeve	NA	ID	SCI	TSH	-0.06	78	78	00	CRG 11/4/00
SG 88	72	78	Sleeve	NA	ID	SCI	TSH	-0.05	79	79	00	CRG 11/4/00
SG 88	72	92	Sleeve	NA	OD	SAI	TSH	+1.53	80	80	00	CRG 11/4/00
SG 88	72	92	Sleeve	NA	OD	SAI	TSH	+2.38	80	80	00	" "
SG 88	73	101	Sleeve	NA	ID	SCI	TSH	-0.11	81	81	00	CRG 11/4/00
SG 88	74	98	Sleeve	NA	OD	SCI	TSH	+0.00	82	82	00	CRG 11/4/00
SG 88	75	65	Sleeve	NA	ID	SCI	TSH	-0.16	83	83	00	CRG 11/4/00
SG 88	75	121	Sleeve	NA	ID	SCI	TSH	-0.07	84	84	00	CRG 11/4/00
SG 88	77	69	Sleeve	NA	ID	SCI	TSH	-0.07	85	85	00	CRG 11/4/00
SG 88	79	101	Sleeve	NA	ID	SCI	TSH	-0.03	86	86	00	CRG 11/4/00
SG 88	79	109	Sleeve	NA	ID	SCI	TSH	-0.07	87	87	00	CRG 11/4/00
SG 88	80	76	Sleeve	NA	ID	SCI	TSH	-0.12	88	88	00	CRG 11/4/00
SG 88	80	102	Sleeve	NA	ID	SCI	TSH	+0.00	89	89	00	CRG 11/4/00
SG 88	84	56	Sleeve	NA	ID	SCI	TSH	-0.15	90	90	00	11/5/00
SG 88	84	70	Sleeve	NA	ID	MCI	TSH	-0.05	91	91	00	CRG 11/4/00
SG 88	84	94	Sleeve	NA	ID	SCI	TSH	-0.12	92	92	00	CRG 11/4/00
SG 88	89	79	Sleeve	NA	ID	SCI	TSH	-0.08	93	93	00	CRG 11/4/00
SG 88	91	79	Sleeve	NA	ID	SCI	TSH	-0.16	94	94	00	CRG 11/4/00
SG 88	94	86	Sleeve	NA	ID	SCI	TSH	-0.10	95	95	00	CRG 11/4/00
SG 88	95	127	Sleeve	NA	ID	SCI	TSH	-0.08	96	96	00	CRG 11/4/00
SG 88	97	71	Sleeve	NA	ID	SCI	TSH	-0.09	97	97	00	CRG 11/4/00
SG 88	99	91	Sleeve	NA	ID	SCI	TSH	-0.14	98	98	00	11/5/00

X _____ 11/2/00
FTI Tube Integrity Engineering FTI Level III

X _____ 11/2/00
SCE Engineering Concurrence

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, California 91770

Unit: 2
CWO: 99060414000
Rspec: GEN-170
PID: 40111A
N5: S2-1201-3

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Reactor Coolant

5. (a) Applicable Construction Code: ASME Section III, Class 1, 1971 Edition, Summer 1971 Addenda (SG); Class 1, 1989 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: 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.

(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.
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 **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 10/26/00 to 01/08/01, 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 Jan. 8, 2001

WO: 99060414000

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

S/G	Row	Col	Hot Leg	Cold Leg	Reason For Plugging	Tube Qty	Slv Qty	Rev. No.	LOCATION VERIF/DATE
SG 89	16	24	Sleeve	NA	ID SCI @TSH +0.01	1	1	00	[illegible] 11/2/00
SG 89	9	29	Sleeve	NA	ID SCI @TSH -0.07	2	2	00	[illegible] 11/2/00
SG 89	12	40	Sleeve	NA	ID SAI @TSH -2.53	3	3	00	[illegible] 11/2/00
SG 89	60	48	Sleeve	NA	ID SCI @TSH -0.06	4	4	00	[illegible] 11/2/00
SG 89	83	49	Sleeve	NA	ID SCI @TSH -0.14	5	5	00	[illegible] 11/2/00
SG 89	8	52	Sleeve	NA	ID SCI @TSH -3.14	6	6	00	[illegible] 11/2/00
SG 89	28	52	Sleeve	NA	OD SCI @TSH +0.18	7	7	00	[illegible] 11/2/00
SG 89	84	54	Sleeve	NA	ID SCI @TSH -0.04	8	8	00	[illegible] 11/2/00
SG 89	65	57	Sleeve	NA	OD SAI @TSH +2.12	9	9	00	[illegible] 11/2/00
SG 89	62	58	Sleeve	NA	ID SAI @TSH -6.57	10	10	00	[illegible] 11/2/00
SG 89	26	60	Sleeve	NA	ID SAI @TSH -2.29	11	11	00	[illegible] 11/2/00
SG 89	11	63	Sleeve	NA	OD SCI @TSH +0.11	12	12	00	[illegible] 11/2/00
SG 89	11	63	Sleeve	NA	ID SAI @TSH -0.74	12	12	00	"
SG 89	34	64	Sleeve	NA	OD SAI @TSH +1.31	13	13	00	[illegible] 11/2/00
SG 89	26	66	Sleeve	NA	ID SAI @TSH -3.63	14	14	00	[illegible] 11/2/00
SG 89	57	67	Sleeve	NA	OD SAI @TSH +3.51	15	15	00	[illegible] 11/5/00
SG 89	57	67	Sleeve	NA	OD SAI @TSH +3.38	15	15	00	"
SG 89	63	67	Sleeve	NA	ID SCI @TSH -0.14	16	16	00	[illegible] 11/5/00
SG 89	44	68	Sleeve	NA	OD MAI @TSH +0.55	17	17	00	[illegible] 11/5/00
SG 89	58	70	Sleeve	NA	OD SAI @TSH +2.53	18	18	00	[illegible] 11/5/00
SG 89	78	82	Sleeve	NA	ID SAI @TSH -6.23	19	19	00	[illegible] 11/2/00
SG 89	56	84	Sleeve	NA	OD SCI @TSH +0.04	20	20	00	[illegible] 11/2/00
SG 89	120	84	Sleeve	NA	OD SCI @TSH +0.02	21	21	00	[illegible] 11/2/00
SG 89	83	89	Sleeve	NA	ID SCI @TSH -0.11	22	22	00	[illegible] 11/1/00
SG 89	107	89	Sleeve	NA	OD SCI @TSH +0.07	23	23	00	[illegible] 11/1/00
SG 89	64	92	Sleeve	NA	OD SAI @TSH +1.77	24	24	00	[illegible] 11/2/00
SG 89	57	93	Sleeve	NA	ID SAI @TSH -1.26	25	25	00	[illegible] 11/2/00
SG 89	57	93	Sleeve	NA	ID SAI @TSH -5.73	25	25	00	"
SG 89	63	93	Sleeve	NA	OD SAI @TSH +1.32	26	26	00	[illegible] 11/2/00
SG 89	64	96	Sleeve	NA	ID SAI @TSH -0.92	27	27	00	[illegible] 11/2/00
SG 89	64	98	Sleeve	NA	OD SAI @TSH +0.63	28	28	00	[illegible] 11/2/00
SG 89	78	98	Sleeve	NA	ID SAI @TSH -6.09	29	29	00	[illegible] 11/2/00
SG 89	54	102	Sleeve	NA	ID SAI @TSH -5.96	30	30	00	[illegible] 11/2/00
SG 89	41	105	Sleeve	NA	ID SAI @TSH -3.24	31	31	00	[illegible] 11/2/2000
SG 89	34	106	Sleeve	NA	ID SAI @TSH -4.71	32	32	00	[illegible] 11/2/2000
SG 89	38	106	Sleeve	NA	ID SAI @TSH -0.61	33	33	00	[illegible] 11/2/2000
SG 89	56	106	Sleeve	NA	OD SAI @TSH +0.82	34	34	00	[illegible] 11/2/00
SG 89	36	108	Sleeve	NA	ID SAI @TSH -1.16	35	35	00	[illegible] 11/2/2000
SG 89	37	109	Sleeve	NA	OD SAI @TSH +1.30	36	36	00	[illegible] 11/2/2000
SG 89	36	110	Sleeve	NA	ID SAI @TSH -0.65	37	37	00	[illegible] 11/2/2000
SG 89	36	110	Sleeve	NA	ID SAI @TSH -1.34	37	37	00	
SG 89	36	110	Sleeve	NA	ID SAI @TSH -3.46	37	37	00	
SG 89	38	110	Sleeve	NA	OD SAI @TSH +1.01	38	38	00	[illegible] 11/2/2000
SG 89	40	110	Sleeve	NA	OD SAI @TSH +2.13	39	39	00	[illegible] 11/2/2000
SG 89	29	111	Sleeve	NA	OD SCI @TSH +0.02	40	40	00	[illegible] 11/2/2000

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

S/G	Row	Col	Hot Leg	Cold Leg	Reason For Plugging	Tube Qty	Slv Qty	Rev. No.	LOCATION VERIF / DATE
SG 89	21	113	Sleeve	NA	OD SCI @ TSH +0.03	41	41	00	
SG 89	37	113	Sleeve	NA	ID SAI @ TSH -1.94	42	42	00	
SG 89	49	113	Sleeve	NA	OD SAI @ TSH +1.71	43	43	00	
SG 89	59	113	Sleeve	NA	ID SAI @ TSH -5.27	44	44	00	
SG 89	59	113	Sleeve	NA	ID SAI @ TSH -5.68	44	44	00	
SG 89	48	114	Sleeve	NA	ID SAI @ TSH -5.03	45	45	00	
SG 89	62	116	Sleeve	NA	ID SAI @ TSH -5.80	46	46	00	
SG 89	62	116	Sleeve	NA	ID SAI @ TSH -6.31	46	46	00	
SG 89	68	118	Sleeve	NA	ID SAI @ TSH -5.18	47	47	00	
SG 89	20	120	Sleeve	NA	ID SCI @ TSH -6.87	48	48	00	
SG 89	82	122	Sleeve	NA	ID SCI @ TSH -0.09	49	49	00	
SG 89	8	124	Sleeve	NA	ID SCI @ TSH -5.14	50	50	00	
SG 89	9	125	Sleeve	NA	ID SCI @ TSH -6.44	51	51	00	
SG 89	9	125	Sleeve	NA	ID SCI @ TSH -4.95	51	51	00	
SG 89	46	126	Sleeve	NA	ID SCI @ TSH -0.10	52	52	00	
SG 89	5	127	Sleeve	NA	ID SCI @ TSH -5.86	53	53	00	
SG 89	11	129	Sleeve	NA	ID MCI @ TSH -3.84	54	54	00	
SG 89	7	133	Sleeve	NA	ID SCI @ TSH -7.46	55	55	00	
SG 89	10	136	Sleeve	NA	ID MCI @ TSH -4.70	56	56	00	
SG 89	78	136	Sleeve	NA	ID SAI @ TSH -7.48	57	57	00	
SG 89	78	136	Sleeve	NA	ID SAI @ TSH -6.86	57	57	00	
SG 89	19	139	Sleeve	NA	ID SCI @ TSH -5.04	58	58	00	
SG 89	8	146	Sleeve	NA	ID SAI @ TSH -6.46	59	59	00	

x Carl G. Thurston 11/2/00
FTI Tube Integrity Engineering

x Charles Gardner 11/02/00
FTI Level III

x C.L. Mathews 11-2-00
SCE Engineering Concurrence

x Richard A Pate 11/2/00
SCE Engineering Concurrence

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, California 91770

Unit: 2
MO: 99070170000
FCN: F20327M
Rspec: GEN-173

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

PID: 40141A
N5: S2-1201-3

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Reactor Coolant

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: 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.

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.

(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: 11/21/00
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 **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 10/10/00 to 11/22/00, 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 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date Nov. 22, 2000

WO: 99070170000

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, California 91770

Unit: 2
MO: 99080603000
Rspec: ASME SECTION XI DATA-0173
PID: 40111B (G5)
N5: S2-1201-2

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Reactor Coolant

5. (a) Applicable Construction Code: ASME Section III, Class 1, 1974 Edition, No 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
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. 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.

(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: 1/10/01
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 **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 03/03/00 to 01/10/01, 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 Jan. 10, 2001

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, California 91770

Unit: 2
MO: 99080621000
Rspec: GEN-106 R2
PID: 40111A
N5: S2-1201-3

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Reactor Coolant

5. (a) Applicable Construction Code: ASME Section III, Class 1, 1971 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: 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
36" Reactor Coolant Pump	Byron Jackson	701-N-0558		S21201MP001	1977	—	Yes
Mechanical Seal Cartridge	Bingham-Williamette	1659057-2	1173	SO23-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. 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.

(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** (repair or 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: 11/30/00
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 **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 01/26/00 to 12/4/00, 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 1862 California
Inspector's Signature
National Board, State, Province, and Endorsements

Date Dec 4, 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
Rosemead, California 91770

Unit: 2
MO: 99080631000
Rspec: ASME SECTION XI DATA-0185
PID: 40141D
N5: S2-1301-1

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Main Steam

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	N58737-01-0028	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: System Inservice Pressure Test Pressure: NOP Temp: NOT
See: AR 000300902-03

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: 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: 1/9/01
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 **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 02/04/00 to 01/08/01, 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 Jan. 8, 2001

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, California 91770

Unit: 2
MO: 99080667000
Rspec: ASME SECTION XI DATA-0173
PID: 40111B (G7)
N5: S2-1201-2

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Reactor Coolant

5. (a) Applicable Construction Code: ASME Section III, Class 1, 1974 Ed., No Add. (Valve); 1974 Ed., S.'74 Add. (Inlet Bolting); 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
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. 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.

(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: 1/10/01
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 **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 03/03/00 to 01/10/01, 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 Jan. 10, 2001

WO: 99080667000

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, California 91770

Unit: 2
MO: 99080671000
Rspec: ASME SECTION XI DATA-0186
PID: 40141D
N5: S2-1301-1

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Main Steam

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: System Inservice Pressure Test Pressure: NOP Temp: NOT

See: AR 000300902-03

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: 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 **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 02/03/00 to 01/08/01, 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 Jan. 8, 2001

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, California 91770

Unit: 2
MO: 99080708000
Rspec: ASME SECTION XI DATA-0489
PID: 40123B (C6)
N5: S2-1208-4

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Chemical and Volume Control

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: 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
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: System Functional Pressure Test Pressure: NOP Temp: N/A

See: AR 000300902-05

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: 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 **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: 1/25/01
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 **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 3/20/00 to 1/26/01, 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 Jan. 26, 2001

WO: 99080708000

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, California 91770

Unit: 2
MO: 99080709000
Rspec: ASME SECTION XI DATA-0188
PID: 40141D
N5: S2-1301-1

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Main Steam

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	N58737-01-0025	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: System Inservice Pressure Test Pressure: NOP Temp: NOT

See: AR 000300902-03

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: 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 **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 02/03/00 to 01/08/01, 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 Jan. 8, 2001

WO: 99080709000

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, California 91770

Unit: 2
MO: 99080725000
Rspec: ASME SECTION XI DATA-0190
PID: 40141D
N5: S2-1301-1

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Main Steam

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	N58737-01-0022	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: System Inservice Pressure Test Pressure: NOP Temp: NOT
See: AR 000300902-03

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: 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 **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 02/04/00 to 01/08/01, 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: Jan 8, 2001

WO: 99080725000

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, California 91770

Unit: 2
MO: 99080731000
Rspec: ASME SECTION XI DATA-0191
PID: 40141D
N5: S2-1301-1

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Main Steam

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	N58737-01-0032	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	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 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 Pressure: NOP Temp: NOT

See: AR 000300902-03

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: 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** (repair or 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: 1/8/01
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 **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 02/03/00 to 01/08/101, 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 Jan 8, 2001

WO: 99080731000

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, California 91770

Unit: 2
MO: 99080768000
Rspec: ASME SECTION XI DATA-0191
PID: 40141D
N5: S2-1301-2

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Main Steam

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: System Inservice Pressure Test Pressure: NOP Temp: NOT

See: AR 000300902-03

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: 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 **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 02/23/00 to 01/08/01, 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 Jan. 8, 2001

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, California 91770

Unit: 2
CWO: 99081503000
Rspec: GEN-105s
PID: 40141A
N5: S2-1201-3

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Reactor Coolant

5. (a) Applicable Construction Code ASME Section III, Class 2, 1971 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 (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: System Inservice Pressure Test Pressure: NOP Temp: N/A
See: AR 000300902-06

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.

(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: [signature] Supervising ASME Codes Engineer Date: 12/19/00
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 **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 6/25/99 to 12/19/00, 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.

[signature] Commissions 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date Dec. 19, 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
Rosemead, California 91770

Unit: 2
CWO: 99081807000
Rspec: GEN-105s
PID: 40141A
N5: S2-1201-3

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: Reactor Coolant

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: 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	71270-1	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: System Inservice Pressure Test Pressure: NOP Temp: NOT
See: AR 000300902-07

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: 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).

(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: 12/19/00
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 **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 9/25/00 to 12/19/00, 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 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date Dec. 19, 2000

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

2. Plant: San Onofre Nuclear Generating Station
   San Clemente, California 92674-0128

3. Work Performed by: Southern California Edison Company

4. Identification of System: N/A - Spare

Unit: A
MO: 99100415000
Rspec: ASME SECTION XI DATA-0460
P&ID: N/A
N-5: N/A

Type Code Symbol Stamp: N/A
Authorization No: N/A
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 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: 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.

(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 Authorization No: N/A Expiration Date: N/A

Signed: [signature] 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 **California**, and employed by **Arkwright Mutual Insurance Company** of **Waltham, Massachusetts** have inspected the components described in this Owner's Report during the period 10/15/99 to 01/18/00, 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.

[signature] Commissions 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date 01/18/00

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

Unit: A
MO: 99110008000
Rspec: ASME SECTION XI DATA-0460
P&ID: N/A
N-5: N/A

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: N/A - Spare

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	N59380-00-0006	N/A	025-83508-N59380-00-0006	1978	---	Yes
Disc	Crosby Valve & Gage	N91241-44-0070	N/A	RSO-0137-92, part #N91241, Stellite 6B	1991	Replacement	Yes

7. Description of Work:

Replaced the valve disc on the spare valve (S/N N59380-00-0006) that was removed from plant position 3PSV9226 under MO 99100503, 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. 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.

(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 Authorization No: N/A Expiration Date: N/A

Signed: _____ Supervising ASME Codes Engineer Date: 1/24/00
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 **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 11/05/99 to 01/21/00, 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 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date Jan. 21, 2000

MO: 99110008000

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, California 91770

Unit: A
MO: 99110011000
Rspec: ASME SECTION XI DATA-0460
PID: N/A
N5: N/A

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-012

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: N/A - Spare

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 1/2" x 2" Nozzle Type Relief Valve	Crosby Valve & Gage	N59380-00-0010	N/A	025-83508-N59380-00-0010	1985	---	Yes
Disc	Crosby Valve & Gage	N91241-44-0069, Ht.# 18100187	N/A	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. 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.

(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: 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 **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 11/12/99 to 07/24/00, 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 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date July 24, 2000

MO: 99110011000

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

Unit: A
MO: 99121408000
Rspec: ASME SECTION XI DATA-0460
P&ID: N/A
N-5: N/A

2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128

3. Work Performed by: Southern California Edison Company

Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

4. Identification of System: N/A - Spare

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	N59380-00-0001	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. #1810-0-1087 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

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.

(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 Authorization No: N/A Expiration Date: N/A

Signed: [signature] Supervising ASME Codes Engineer Date: 6/9/00
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 **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 01/03/00 to 06/09/00, 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.

[signature] Commissions 1862 California
Inspector's Signature National Board, State, Province, and Endorsements

Date June 9, 2000

MO: 99121408000