

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
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: 95051027003 95051027000
Rspec: ASME SECTION XI DATA-0581
P&ID: 40123A (G2)
N-5: S2-1208-3
- Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

5. (a) Applicable Construction Code: ASME Section III, Class 2, 9171 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
1 1/2" Angle Drag Valve	Control Components	35208-1-1-2	N/A	2LV0110B	1984	---	Yes
Spindle (Plug)	Control Components	M416600 S/N 1	N/A	RSO 0509-93, SA479 316	1993	Replacement	Yes
Bonnet Studs (8)	Cardinal Industrial Products	Ht. # KN827, Trace Code Y20 F169	N/A	RSO-3170-88, SA564 Tp.630	N/A	Replacement	No
Bonnet Nuts (8)	Control Components	Ht. # 626420 Trace Code AJJ	N/A	RSO-2207-87, SA564 Tp.630	N/A	Replacement	No

7. Description of Work:

The pressurizer level control valve located in plant position 2LV0110B was found to be leaking. The valve was disassembled and the spindle (plug) and bonnet bolting was replaced with in-kind replacements. The valve was reassembled, reinstalled and a System Functional VT-2 test was performed with satisfactory results.

8. Tests Conducted: System Functional Pressure Test

Pressure: NOP

Temp: N/A

See: AR 950600088-3

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-2001-93 reconciles the replacement studs and nuts which were certified to ASME III-2, 1974 Edition, Summer 1974 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
Owner or Owner's Designee, Title

Date: 1/25/99

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 6/5/95 to 1/26/99, 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.

Inspector's Signature [Signature]

Commissions 1862

California

National Board, State, Province, and Endorsements

Date Jan 26, 1999

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: 95051300000
Rspec: ASME SECTION XI DATA-0176
P&ID: 40124A (H6)
N-5: S2-1208-11
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
4. Identification of System: Chemical and Volume Control
Expiration Date: N/A
5. (a) Applicable Construction Code: ASME Section III, Class 2, 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
3" 150# Flow Diverting Valve (BW)	Hammel-Dahl Conoflow	74/5797/018	N/A	2LV0227A	1977	---	Yes
3" Upper Valve Plug	Neles-Jamesbury	5S4331	N/A	RSO-1365-96, SA351 CF8M	N/A	Replacement	Yes
3" Lower Valve Plug	Hammel-Dahl Conoflow	S/N 2, Ht.# B4166	N/A	RSO-6804-85, SA351 CF8M	N/A	Replacement	Yes
Valve Plug Nut	Anchor/Darling	Ht.# 693656	N/A	RSO-0106-91, SA479 Tp.316	N/A	Replacement	No

7. Description of Work:

The valve in plant position 2LV0227A (Volume Control Tank Inlet Valve) was disassembled, inspected, and refurbished. The upper and lower valve plugs and valve plug nut, were replaced in accordance with ASME XI DATA FLAG - 0176 and MO 95051300000. The removed valve plugs were placed into the Rebuild Program.

8. Tests Conducted: System Functional Pressure Test Pressure: NOP Temp: N/A
See: AR 961100997-1

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 Authorization No: N/A

Expiration Date: N/A

Signed: [Signature] Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 9/15/97

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 12/12/96 to 09/16/97, 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]
Inspector's Signature

Commissions

1862 California
National Board, State, Province, and Endorsements

Date

Sept. 16, 1997

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, California 91770

Unit: 2
MO: 95111190000
FCN: F16074M, F16170M
Rspec: 175-98
P&ID: 40123B (E6)
N-5: S2-1208-11

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
2" 600# Globe Valve	Control Components	36995-1-1	N/A	2PV0201A	1984	---	Yes
Spindle	Control Components	S/N M241280, Ht. Code CY23	N/A	RSO-1479-98, SB637 N07718	1998	Replacement	Yes

7. Description of Work:

Replaced the spindle on the valve in plant location 2PV0201A with a new unbalanced Inconel 718 spindle in accordance with Repair Specification 175-98 and FCN's F16074M and F16170M.

8. Tests Conducted: System Functional Pressure Test
See: AR 980900986-06

Pres: NOP

Temp: N/A

NOTE: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 3 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
Owner or Owner's Designee, Title

Date: 4/24/99

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 1/16/98 to 4/26/99, 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]
Inspector's Signature

Commissions

1862

California

National Board, State, Province, and Endorsements

Date

April 26, 1999

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

As Required by the Provisions of the ASME Code Section XI

Sheet 1 of 1

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

Unit: 2
MO: 96090159000
FCN: F12059M
Rspec: ASME SECTION XI DATA-0581
P&ID: 40123A (G1)
N-5: S2-1208-3

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, 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
1 1/2" 1500# Drag Valve	Control Components	352081-1-1	N/A	2LV0110A	1984	---	Yes
Spindle (Plug)	Control Components	S/N 2, Ht.# EN93	N/A	RSO-0017-98, SB637 N07718 (INCONEL)	1998	Replacement	No

7. Description of Work:

The valve spindle was re-designed to use Inconel 718 instead of type 316 stainless steel in order to reduce erosion, and was replaced in accordance with the new design as shown in drawing SO23-950-186. Reference: FCN F12059M.

8. Tests Conducted: System Functional Pressure Test

Pres: NOP

Temp: N/A

See: AR 960600865-14

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-1001-96 reconciles the replacement spindle (plug) which was certified to ASME III, Class 2, 1989 Edition, No Addenda.

(Applicable Manufacturers Data Reports are available on-site)

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI. 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
Owner or Owner's Designee, Title

Date: 4/11/98

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 01/13/98 to 04/13/98, 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]
Inspector's Signature

Commissions 1862 California
National Board, State, Province, and Endorsements

Date April 13, 1998

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
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: 96100247000
Rspec: 209-95
P&ID: 40123B (E6)
N-5: S2-1208-11
- Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A
5. (a) Applicable Construction Code: ASME Section III, Class 2, 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
2" 1500# Packed Y-type Globe Valve	Kerotest	AFE2-11	N/A	S21208MU166	1984	Repaired	Yes

7. Description of Work:

The valve in plant location S21208MU166 was found to have a seat leakage problem. The bonnet seal weld was cut to gain access to the valve internals. No ASME Code items were replaced. The seal weld was reapplied in accordance with weld record WR2-95-638 and Repair Specification 209-95. Reference: AR 981101182

8. Tests Conducted: System Functional Pressure Test
See: AR 961100997-2

Pressure: NOP

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 : 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
Owner or Owner's Designee, Title

Date: 1/12/99

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 10/2/96 to 01/12/99, 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]
Inspector's Signature

Commissions

1862 California
National Board, State, Province, and Endorsements

Date

Jan 12, 1999

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
2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128
3. Work Performed by: Bechtel Construction Company
P.O. Box 450
San Clemente, CA. 92674-0128
- Unit: 2
MO: 97030391000
Rspec : GEN-107A R1, GEN-107B
P&ID: 40111A
N-5: N/A
- 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, Winter 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
CEDM #19 Vent Valve Assembly	ABB Combustion Engineering	1370-182	N/A	S21104CEDM #19	N/A	Repaired	Yes
Ball Seal Housing	ABB Combustion Engineering	S/N 413 HL#MT13222/95843	N/A	RSO-1391-97, SA479 316	N/A	Replacement	No
Vent Stem	ABB Combustion Engineering	S/N 436	N/A	RSO-1726-94, SA479 316	N/A	Replacement	No
Housing Nut	ABB Combustion Engineering	S/N 412 HL#36101	N/A	RSO-1974-92, SA479 316	N/A	Replacement	No
CEDM #67 Vent Valve Assembly	ABB Combustion Engineering	1370-130	N/A	S21104CEDM #67	N/A	Repaired	Yes
Ball Seal Housing	ABB Combustion Engineering	S/N 412 HL#MT13222/95843	N/A	RSO-1391-97, SA479 316	N/A	Replacement	No
Vent Stem	ABB Combustion Engineering	S/N 428	N/A	RSO-1726-94, SA479 316	N/A	Replacement	No
Housing Nut	ABB Combustion Engineering	S/N 413 HL#36101	N/A	RSO-1974-92, SA479 316	N/A	Replacement	No
Weld Filler Metal	Johnston Stainless	HL#S469929	N/A	RSO-8069-84, ER-308L	N/A	Replacement	No

7. Description of Work:

The Reactor Head CEDM vent valve assemblies were replaced at plant CEDM locations #19 and #67 per NCR 950300079 and 970300002 dispositions. The work was performed under MO 97030391 and ABB CE Traveler 2008620-001 respectively. Work activities included: a) cutting out the ball seal housings (#19 and #67), machining the new weld prep on the upper pressure housings, and performing a P.T. examination of new weld preps; b) installation of new seal ball housings, performance of the "omega" seal weld, and performance of post weld PT examination; c) reassembly of vent valves using new internals (ie. vent stem and housing nut). All replacement pressure boundary materials were verified to meet the requirements of the original construction code. Note: Activities (a) and (b) above were performed by ABB CE in accordance with ABB CE Traveler 2008620-001 utilizing ABB CE procedures and personnel. Activity (c) was performed by SCE maintenance personnel.

8. Tests Conducted: System Leakage Pressure Test
See: AR 970300002-5, 950300079-6

Pres: NOP

Temp: NOT

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 Authorization No: N/A

Expiration Date: N/A

Signed: [Signature] Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 2/25/99

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 8/11/98 to 02/25/99, 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]
Inspector's Signature

Commissions 1862 California
National Board, State, Province, and Endorsements

Date Feb. 25, 1999

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: 97030424000
Rspec: ASME SECTION XI DATA-0207
P&ID: 40112DSO3 (C5)
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: 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	Crosby Valve & Gage	N60061-00-0003	N/A	026-44409	1980	---	Yes
Spindle Point	Crosby Valve & Gage	N91311-37-0008, Ht.#824556	N/A	RSO2-P-1023-81, SA479 Tp.316	N/A	Replacement	No

7. Description of Work:

MO 97030424000 disassembled the spare relief valve, inspected the valve internals and replaced the spindle point with an in-kind replacement.

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: 9/11/98
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 6/12/97 to 9/11/98, 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]
Inspector's Signature

Commissions

1862

California

National Board, State, Province, and Endorsements

Date

Sept. 11, 1998

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: 97061681000
Rspec: 081-97 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 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-H; 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-H was partially fabricated in accordance with Repair Specification 046-97, M.O. 97040953 (machining), and M.O. 97041119 (welding) and weld record WR3-97-244. Completion status was as follows:

Welding was completed, machining and NDE still needed to be performed.

M.O. 97061681 completed the fabrication as follows:

Completed the internal and external machining to meet the final dimensions of drawing 41116, Sheet 1 and performed final NDE. Final NDE is documented on reports 3RT-078-97 and 3PT-163-97.

Note: AR's 970700325 and 970900470 were generated to document and address not having performed the electropolishing of the nozzle bore per 41116, Sheet 1, Note 4. NCR 970700405 was generated to document and address a dimensional non conformance.

8. Tests Conducted: N/A

Pressure: N/A

Temp: N/A

FORM NIS-2 (back)

9. Remarks: None.

(Applicable Manufacturers Data Reports are available on-site)

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI. 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
Owner or Owner's Designee, Title

Date: 3/4/99

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 07/04/97 to 03/04/99, 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.

Inspector's Signature [Signature]

Commissions 1862 California
National Board, State, Province, and Endorsements

Date March 4, 1999

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

As Required by the Provisions of the ASME Code Section XI

Sheet 1 of 1

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: Reactor Coolant

Unit: 2
MO: 97070201000
FCN: F13805M, F13810M
Rspec: 109-97
P&ID: 40123A (C7)
N-5: S2-1201-3-7

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

5. (a) Applicable Construction Code: ASME Section III, NB (Class1), 1971 Edition, Summer 1973 Addenda (valve); 1974 Edition, Summer 1974 Addenda (installation); Code Case: N-416-1
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Edition, No Addenda; 1992 Edition, No Addenda (NDE & 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
2"- 1513# Y-type Check Valve	Kerotest	NAW9-20	N/A	S21201MU019	N/A	Replaced	Yes
2"- 1665# Y-type Check Valve	BW/IP International	901-L-0126	N/A	RSO-1094-97	1991	Replacement	Yes

7. Description of Work:

Existing mark # 554 valve in plant position S21201MU019 was replaced with a mark # 558 valve per weld records WR2-97-374 (2PT-051-97, 2PT-057-97, 2PT-059-97, 2RT-035-97), WR2-97-375 (2PT-052-97, 2PT-058-97, 2PT-060-97, 2RT-034-97). Prior to installation, the body/bonnet sealweld was cut and the valve was disassembled. The valve was reassembled after installation and body/bonnet re-sealwelded per WR2-97-376 (2PT-053-97, 2PT-063-97). Reference: FCN's F13805M & F13810M

8. Tests Conducted: System Leakage Pressure Test
See: AR 970700021-5

Pres: NOP

Temp: NOT

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

FORM NIS-2 (back)

9. Remarks : Just prior to replacement of this valve, ASME Code work was performed on the replaced valve under M.O.'s 97070047 and 97070048.

(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 Authorization No: N/A

Expiration Date: N/A

Signed: *Or Miller* Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 4/11/98

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 07/07/97 to 04/13/98, 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.

St. Thompson
Inspector's Signature

Commissions 1862 California
National Board, State, Province, and Endorsements

Date April 13, 1998

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
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: 97070291000
Rspec: ASME SECTION XI DATA-0179, 110-97
P&ID: 40112C (D4)
N-5: S2-1204-11
- 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, No 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
2" Y-Type Globe Valve	Target Rock	S/N 9	N/A	2HV9323	1977	Repaired	Yes

7. Description of Work:

Removed and restored the body-to-bonnet seal weld of the valve located in plant position 2HV9323 in accordance with Repair Specification 110-97 and weld record WR2-97-377. Performed a post weld PT (2PT-105-99) of the completed bonnet seal weld with satisfactory results. Note: MO 97061532 inspected valve internals, but performed no ASME code work.

8. Tests Conducted: System Functional Pressure Test

Pressure: N/A

Temp: N/A

See: AR 970500163-04

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 ALA.

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
Owner or Owner's Designee, Title

Date: 4/14/99

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 09/02/97 to 04/15/99, 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.

Inspector's Signature [Signature]

Commissions 1862 California
National Board, State, Province, and Endorsements

Date April 15, 1999

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

As Required by the Provisions of the ASME Code Section XI

Sheet 1 of 1

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

Unit: 2
MO: 97070339000
FCN: F13783M, F13787M
Rspec: 089-97
P&ID: 40123A (E7)
N-5: S2-1201-3-9

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 1973 Addenda (valve); 1974 Edition, Summer 1974 Addenda (installation); Code Case: N-416-1

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Edition, No Addenda; 1992 Edition, No Addenda (NDE & 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
2" 1513# Y-type Check Valve	Kerotest	ABR9-17	N/A	S21201MU021	1983	Replaced	Yes
2" 1665# Y-type Check Valve	BW/IP International	901-L-0129	N/A	RSO-1119-97	1992	Replacement	Yes

7. Description of Work:

Existing mark #554 valve in plant position S21201MU021 was replaced with a mark #558 valve per weld records WR2-97-347 (2PT-054-97, 2PT-064-97, 2PT-067-97, 2RT-037-97), WR2-97-348 (2PT-055-97, 2PT-065-97, 2PT-066-97, 2RT-036-97). Prior to installation, the body/bonnet sealweld was cut and the valve was disassembled. The valve was reassembled after installation and the body/bonnet re-sealwelded per weld record WR2-97-349 (2PT-056-97, 2PT-068-97). Reference: FCN's F13783M & F13787M

8. Tests Conducted: System Leakage Pressure Test

Pres: NOP

Temp: NOT

See: AR 970700245-5

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 : Just prior to replacement of this valve, ASME Code Work was performed on the old (replaced) valve under M.O.'s 97061931 & 97061935.

(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
Owner or Owner's Designee, Title

Date: 4/11/98

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 07/07/97 to 04/13/98, 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]
Inspector's Signature

Commissions 1862 California
National Board, State, Province, and Endorsements

Date April 13, 1998

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: 97080010000
Rspec: GEN-105P
P&ID: 40141A (E5)
N-5: S2-1201-3
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, Class 1, 1971 Edition, Summer 1971 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
Steam Generator	CE	71270-1	22218	S21301ME089P	1976	---	Yes
1 1/2"-8x 14 1/4" Manway Stud (1)	Energy Steel & Sup.	Ht.# 96894, Lot Code DUE5	N/A	RSO-1144-97, SA540, Gr.B24 (CR-3007-94)	N/A	Replacement	No
1 1/2" Geared Nut (1)	Vitco Nuclear Products	Ht.# 52763, Trace Code V,86C-6	N/A	RSO-2554-85, SA194, Gr.7	N/A	Replacement	No

7. Description of Work:

The steam generator manway studs and nuts were removed and examined. All manway studs and nuts were acceptable for reuse with the exception of stud number 14 and geared nut number 14, which were replaced. A VT-1 examination was performed on the replacement bolting 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 : CR-3007-94 reconciles the replacement stud which was certified to ASME III, Class 1, 1989 Ed., No Add.; The Memo of Code Reconciliation, reconciles the replacement geared nut which was certified to ASME III, Class 1, 1971 Ed., Summer 1971 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 Authorization No: N/A

Expiration Date: N/A

Signed: [Signature] Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 3/16/98

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 1/23/98 to 3/4/98, 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]
Inspector's Signature

Commissions 1300 California
National Board, State, Province, and Endorsements

Date 3/16/98

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: 97080013000
Rspec: GEN-105P
P&ID: 40141A (E5)
N-5: S2-1201-3
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, Class 1, 1971 Edition, Summer 1971 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
Steam Generator	CE	71270-2	22219	S21301ME088P	1976	---	Yes
1 1/2"-8x 14 1/4" Manway Stud (1)	Energy Steel & Sup.	Ht.# 96894, Lot Code DUE5	N/A	RSO-1144-97, SA540, Gr.B24 (CR-3007-94)	N/A	Replacement	No
1 1/2" Geared Nut (1)	Vitco Nuclear Products	Ht.# 52763, Trace Code V,86C-6	N/A	RSO-2554-85, SA194, Gr.7	N/A	Replacement	No

7. Description of Work:

The steam generator manway studs and nuts were removed and examined. All manway studs and nuts were acceptable for reuse with the exception of stud number 17 and geared nut number 17, which were replaced. A VT-1 examination was performed on the replacement bolting 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 : CR-3007-94 reconciles the replacement stud which was certified to ASME III, Class 1, 1989 Ed., No Add.;
The Memo of Code Reconciliation, reconciles the replacement geared nut which was certified to ASME III,
Class 1, 1971 Ed., Summer 1971 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 Authorization No: N/A

Expiration Date: N/A

Signed: [Signature] Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 3/16/98

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
1/23/98 to 3/4/98, 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]
Inspector's Signature

Commissions

1300 California
National Board, State, Province, and Endorsements

Date

3/16/98

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: 97080542000
Rspec: ASME SECTION XI DATA-0243
P&ID: 40124B (G2)
N-5: S2-1208-11
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, 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
2" 1500# Y-type Globe Valve	Kerotest	MC8-3	N/A	S21208MU068	1976	---	Yes
Disc	Kerotest	ABH4-4	N/A	RSO2-P-1271-83, SA479 Tp.316	1983	Replacement	Yes

7. Description of Work:

Replaced the valve disc to correct leak by in the valve located in plant position S21208MU068. A VT-2 examination was performed per MO 98021389001 with satisfactory results.

8. Tests Conducted: System Functional Pressure Test

Pressure: NOP

Temp: NOT

See: AR 980202236-4

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 Authorization No: N/A

Expiration Date: N/A

Signed: [Signature] Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 4/11/98

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 1/12/97 to 04/13/98, 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]
Inspector's Signature

Commissions 1862 California
National Board, State, Province, and Endorsements

Date April 13, 1998

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, California 91770
2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128
3. Work Performed by: Southern California Edison Company

Unit: 2
MO: 97081627002 97081627001
97081627000
Rspec: 262-97 R1
P&ID: 40124B (G2)
N-5: S2-1208-5 & 11

4. Identification of System: Chemical and Volume Control

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

5. (a) Applicable Construction Code: ASME Section III, Class 1, 1974 Ed.; S '76 Add.(Replacement valve & seal weld reinstallation); ASME Section III, Class 2, 1974 Ed.; S '74 Add.(Install); Code Case: N-416-1

(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Edition, No Add.(Replacement); 1992 Edition, No Add.(NDE & 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
2" 2580# Check Valve	Kerotest	AJ02-21	N/A	S21208MU067	1986	Replaced	Yes
2" 1539# Y-type Check Valve	BW/IP International	881-H-0013	N/A	RSO-1131-97, SA182 Gr.316	1989	Replacement	Yes

7. Description of Work:

The Kerotest Mark 554 check valve, located in plant position S21208MU067, was replaced with a BW/IP Mark 559 check valve in accordance with FCNs F14402M, F14404M, F14405M, F14406M, F14754M, F14756M. Reinstallation of the body-to-bonnet seal weld was performed in accordance with Repair Specification 262-97 R1 and weld record WR2-97-548. Installation of the replacement valve was performed in accordance with weld records WR2-97-544, WR2-97-545, WR2-98-073 and Repair Specification 262-97 R1. * Note: The existing Kerotest Mark 554 was removed and replaced with a 2" BW/IP Mark 559 check Valve (S/N 76667) in accordance with WR2-97-544, but the valve was damaged during installation and the resulting NDE (2RT-008-98 performed per WR2-97-544) was rejected. The new replacement BW/IP Mark 559 check valve was installed and all other NDE examinations were performed with satisfactory results. The damaged Mark 559 check valve was scrapped.

8. Tests Conducted: System Leakage Pressure Test
See: AR 970700881-15

Pres: NOT

Temp: NOT

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

FORM NIS-2 (back)

9. Remarks : CR-3003-97 R1 reconciles the replacement valve which was certified to ASME III, Class 1, 1974 Edition, Summer 1976 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 repair and 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
Owner or Owner's Designee, Title

Date: 8/7/98

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 1/15/98 to 8/11/98, 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]
Inspector's Signature

Commissions 1862 California
National Board, State, Province, and Endorsements

Date August 11, 1998

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: 97100646000 97120530000 (mach),
97110607000 (weld)
Rspec: 205-97
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, Class 1, 1971 Edition, Summer 1972 Add. (design & fab); ASME III, Class 1, 1989 Edition, 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
RCS Loop Pressure Measurement Nozzle- Type 2; Mat. Code 027-79890	SCE	205-97	N/A	RSO-1665-97, Ht.# NX0643HG1, Lot# 136502; RSO-1711-97, Ht.# 435702	N/A	Replacement	No

7. Description of Work:

A spare instrument nozzle was machined from SB166-N06690 (INCONEL 690) bar stock. A stainless steel safe-end (SA312-TP316L, 3/4" NPS, schedule 160 pipe) was welded to the INCONEL section per WR2/3-97-474. PT exams were performed on all accessible machined surfaces (Ref: 2PT-002-98). RT and PT exams were performed on the weld (Ref: 2RT-001-98, 2PT-019-98 & 2PT-020-98). RefDwg: 41116, Sheet 1, Rev 1, DCN #2. * Pressure test will be performed on installation. The ≤ 1 " NPS exemption (Ref: IWA-4700) applies for the nozzle fabrication.

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
Owner or Owner's Designee, Title

Date: 3/4/98

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 12/3/97 to 3/5/98, 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 [Signature]

Commissions

1862

California

National Board, State, Province, and Endorsements

Date

March 5, 1998

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
2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128
3. Work Performed by: Southern California Edison Company
4. Identification of System: Reactor Coolant
- UNIT: 2/3
MO: See item 6 below
Rspec: Same as Serial No. (item 6)
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 Add. (design & fab); ASME III, Class 1, 1989 Edition, 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.	M.O. / PT Report #	Other Identification	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
RCS Loop Temp Nozzle; Mat.Code 027-79858	SCE	168-97	97100647, 97120483, 2PT-024-98	RSO 1360-97, Ht. #NX0264JG1, Lot #135888	Replacement	No
RCS Loop Temp Nozzle; Mat.Code 027-79858	SCE	177-97	97100973, 97120492, 2PT-031-98	RSO 1360-97, Ht. #NX0264JG1, Lot #135888	Replacement	No
RCS Loop Temp Nozzle; Mat.Code 027-79858	SCE	178-97	97100974, 97120493, 2PT-040-98	RSO 1360-97, Ht. #NX0264JG1, Lot #135888	Replacement	No
RCS Loop Temp Nozzle; Mat.Code 027-79858	SCE	179-97	97100975, 97120494, 2PT-032-98	RSO 1360-97, Ht. #NX0264JG1, Lot #135888	Replacement	No
RCS Loop Temp Nozzle; Mat.Code 027-79858	SCE	180-97	97100976, 97120495, 2PT-044-98	RSO 1360-97, Ht. #NX0264JG1, Lot #135888	Replacement	No
RCS Loop Temp Nozzle; Mat.Code 027-79858	SCE	181-97	97100977, 97120496, 2PT-033-98	RSO 1360-97, Ht. #NX0264JG1, Lot #135888	Replacement	No
RCS Loop Temp Nozzle; Mat.Code 027-79858	SCE	184-97	97100980, 97120499, 2PT-018-98	RSO 1360-97, Ht. #NX0264JG1, Lot #135888	Replacement	No
RCS Loop Temp Nozzle; Mat.Code 027-79858	SCE	195-97	97100991, 97120511, 2PT-045-98	RSO 1084-96, Ht. #ED84; Lot #133531	Replacement	No
RCS Loop Temp Nozzle; Mat.Code 027-79858	SCE	202-97	97101000, 97120519, 2PT-046-98	RSO 1084-96, Ht. #ED84; Lot #133531	Replacement	No

7. Description of Work:

(9) Spare instrument nozzles were machined from SB166-N066 90 (INCONEL 690) bar stock. Each nozzle was dimensionally verified and all accessible surfaces were PT examined. Reference Dwg: 41116, Sheet 1, Rev 1. Pressure test will be performed at installation.

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]
Owner or Owner's Designee, Title

Supervising ASME Codes Engineer

Date: 3/4/98

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 11/14/97 to 3/5/98, 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

[Signature]

Commissions

1862 California
National Board, State, Province, and Endorsements

Date March 5, 1998

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: 2/3
MO: See item 6 below
Rspec: Same as Serial No. (item 6)
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, Class 1, 1971 Edition, Summer 1972 Addenda (design & fab), ASME III, Class 1, 1989 Edition, No Addenda (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.	M.O. / PT Report #	Other Identification	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
RCS Temperature Nozzle Plug	SCE	RS-058-98	97100741 2PT-202-98	RSO-1646-97, Ht. #NX0643HG1	Replacement	No
RCS Temperature Nozzle Plug	SCE	RS-063-98	97101055 2PT-200-98	RSO-1646-97, Ht. #NX0643HG1	Replacement	No
RCS Temperature Nozzle Plug	SCE	RS-064-98	97101056 2PT-205-98	RSO-1646-97, Ht. #NX0643HG1	Replacement	No
RCS Temperature Nozzle Plug	SCE	RS-065-98	97101057 2PT-203-98	RSO-1646-97, Ht. #NX0643HG1	Replacement	No
RCS Temperature Nozzle Plug	SCE	RS-067-98	97101059 2PT-204-98	RSO-1646-97, Ht. #NX0643HG1	Replacement	No
RCS Temperature Nozzle Plug	SCE	RS-068-98	97101060 2PT-206-98	RSO-1646-97, Ht. #NX0643HG1	Replacement	No
RCS Temperature Nozzle Plug	SCE	RS-069-98	97101061 2PT-199-98	RSO-1646-97, Ht. #NX0643HG1	Replacement	No
RCS Temperature Nozzle Plug	SCE	RS-070-98	97101062 2PT-201-98	RSO-1646-97, Ht. #NX0643HG1	Replacement	No
RCS Temperature Nozzle Plug	SCE	RS-072-98	97101064 2PT-207-98	RSO-1646-97, Ht. #NX0643HG1	Replacement	No

7. Description of Work:

(9) spare temperature nozzle plugs for the reactor coolant loop piping were machined from SB166-N06690 (INCONEL 690) barstock. Each nozzle plug was dimensionally verified and all accessible surfaces were PT examined. Reference Dwg: 41116, sheet 1. Pressure test will be performed after installation. The 1" and less NPS exemption (Reference IWA-4700) applies for fabrication.

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 : 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
Owner or Owner's Designee, Title

Date: 1/22/99

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 Arlwright Mutual Insurance Company of Waltham, Massachusetts have inspected the components described in this Owner's Report during the period 01/21/98 to 01/23/99, 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.

Inspector's Signature

Commissions

1862

California

National Board, State, Province, and Endorsements

Date

Jan. 29, 1999

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

As Required by the Provisions of the ASME Code Section XI

Sheet 1 of 2

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

UNIT: 2/3
MO: See item 6 below
Rspec: Same as Serial No. (item 6)
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, Class 1, 1971 Edition, Summer 1972 Add. (design & fab); ASME III, Class 1, 1989 Edition, 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.	M.O. / PT Report #	Other Identification	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
RCS Loop Temp Nozzle; Mat. Code 027-79858	SCE	169-97	97100965, 97120484, 2PT-025-98	RSO 1360-97, Ht. #NX0264HG1, Lot #135888	Replacement	No
RCS Loop Temp Nozzle; Mat. Code 027-79858	SCE	170-97	97100966, 97120485, 2PT-026-98	RSO 1360-97, Ht. #NX0264HG1, Lot #135888	Replacement	No
RCS Loop Temp Nozzle; Mat. Code 027-79858	SCE	172-97	97100968, 97120487, 2PT-027-98	RSO 1360-97, Ht. #NX0264HG1, Lot #135888	Replacement	No
RCS Loop Temp Nozzle; Mat. Code 027-79858	SCE	173-97	97100969, 97120488, 2PT-028-97	RSO 1360-97, Ht. #NX0264HG1, Lot #135888	Replacement	No
RCS Loop Temp Nozzle; Mat. Code 027-79858	SCE	175-97	97100971, 97120490, 2PT-029-98	RSO 1360-97, Ht. #NX0264HG1, Lot #135888	Replacement	No
RCS Loop Temp Nozzle; Mat. Code 027-79858	SCE	182-97	97100978, 97120497, 2PT-034-98	RSO 1360-97, Ht. #NX0264HG1, Lot #135888	Replacement	No
RCS Loop Temp Nozzle; Mat. Code 027-79858	SCE	183-97	97100979, 97120498, 2PT-017-98	RSO 1360-97, Ht. #NX0264HG1, Lot #135888	Replacement	No

7. Description of Work:

(11) spare temperature nozzles were machined from SB166-N06690 (INCONEL 690) bar stock. Each nozzle was dimensionally verified and all accessible surfaces were PT examined. Ref Dwg: 41116, Sheet 1, Rev 1. Pressure test will be performed at installation.

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: [Signature] Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 3/4/98

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 11/21/97 to 3/5/98, 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 March 5, 1998

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
2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128
3. Work Performed by: Southern California Edison Company
4. Identification of System: Reactor Coolant
- UNIT: 2/3
MO: See item 6 below
Rspec: Same as Serial No. (item 6)
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
6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name Of Manufacturer	Manufacturer Serial No.	M.O. / PT Report #	Other Identification	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
RCS Loop Temp. Nozzle; Mat.Code 027-79858	SCE	171-97	97100967 97120486 2PT-113-98	RSO-1360-97, Ht. NX0264HG1 lot 135888	Replacement	No
RCS Loop Temp. Nozzle; Mat.Code 027-79858	SCE	174-97	97100970 97120489 2PT-114-98	RSO-1360-97, Ht. NX0264HG1 lot 135888	Replacement	No
RCS Loop Temp. Nozzle; Mat.Code 027-79858	SCE	176-97	97100972 97120491 2PT-115-98	RSO-1360-97, Ht. NX0264HG1 lot 135888	Replacement	No
RCS Loop Temp. Nozzle; Mat.Code 027-79858	SCE	187-97	97100983 97120503 2PT-116-98	RSO-1084-96, Ht. ED84 lot. 133531	Replacement	No
RCS Loop Temp. Nozzle; Mat.Code 027-79858	SCE	190-97	97100986 97120506 3PT-008-98	RSO-1360-97, Ht. NX0264HG1 lot 135888	Replacement	No
RCS Loop Temp. Nozzle; Mat.Code 027-79858	SCE	191-97	97100987 97120507 2PT-118-98	RSO-1360-97, Ht. NX0264HG1 lot 135888	Replacement	No
RCS Loop Temp. Nozzle; Mat.Code 027-79858	SCE	192-97	97100988 97120508 2PT-037-98	RSO-1084-96, Ht. ED84 lot. 133531	Replacement	No
RCS Loop Temp. Nozzle; Mat.Code 027-79858	SCE	193-97	97100989 97120509 2PT-119-98	RSO-1084-96, Ht. ED84 lot. 133531	Replacement	No
RCS Loop Temp. Nozzle; Mat.Code 027-79858	SCE	194-97	97100990 97120510 2PT-128-98	RSO-1084-96, Ht. ED84 lot. 133531	Replacement	No
RCS Loop Temp. Nozzle; Mat.Code 027-79858	SCE	196-97	97100992 97120513 2PT-120-98	RSO-1084-96, Ht. ED84 lot. 133531	Replacement	No

7. Description of Work:

(10) spare instrument nozzles were machined from SB166-N06690 (INCONEL 690) bar stock. Each nozzle was dimensionally verified and all accessible surfaces were PT examined. Ref Dwg: 41116, Sheet 1, Revision 1. Note: Pressure test will be performed at installation (IWA-7400, <= 1" NPS exemption taken for nozzle fab pressure test).

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
Owner or Owner's Designee, Title

Date: 4/11/98

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 11/21/97 to 04/13/98, 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]
Inspector's Signature

Commissions 1862 California
National Board, State, Province, and Endorsements

Date April 13, 1998

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: 2/3
MO: See item 6 below
Rspec: Same as Serial No. (item 6)
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, 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
6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name Of Manufacturer	Manufacturer Serial No.	M.O. / PT Report #	Other Identification	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
RCS Loop Temperature Nozzle; Mat. Code 027-79858	SCE	198-97	97100996 97120515 2PT-122-98	RSO-1360-97, Ht. NX0264HG1 Lot 135888	Replacement	No
RCS Loop Temperature Nozzle; Mat. Code 027-79858	SCE	197-97	97100995 97120514 2PT-121-98	RSO-1084-96, Ht. ED84 Lot 133531	Replacement	No
RCS Loop Temperature Nozzle; Mat. Code 027-79858	SCE	199-97	97100997 97120516 2PT-123-98	RSO-1360-97, Ht. NX0264HG1 Lot 135888	Replacement	No
RCS Loop Temperature Nozzle; Mat. Code 027-79858	SCE	200-97	97100998 97120517 2PT-124-98	RSO-1360-97, Ht. NX0264HG1 Lot 135888	Replacement	No
RCS Loop Temperature Nozzle; Mat. Code 027-79858	SCE	201-97	97100999 97120518 3PT-009-98	RSO-1084-96, Ht. ED84 Lot 133531	Replacement	No
RCS Loop Temperature Nozzle; Mat. Code 027-79858	SCE	203-97	97101001 97120520 2PT-126-98	RSO-1084-96, Ht. ED84 Lot 133531	Replacement	No
RCS Loop Temperature Nozzle; Mat. Code 027-79858	SCE	204-97	97101002 97120522 2PT-127-98	RSO-1084-96, Ht. ED84 Lot 133531	Replacement	No

7. Description of Work:

(7) spare instrument nozzles were machined from SB166-N06690 (INCONEL 690) bar stock. Each nozzle was dimensionally verified and all accessible surfaces were PT examined. Ref Dwg: 41116, Sheet 1, Revision 1. Note: Pressure test will be performed at installation (IWA-7400, ≤ 1 " NPS exemption taken for nozzle fab pressure test).

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]
Owner or Owner's Designee, Title

Supervising ASME Codes Engineer

Date: 4/11/98

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 11/20/97 to 04/13/98, 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]
Inspector's Signature

Commissions

1862

California

National Board, State, Province, and Endorsements

Date

April 13, 1998

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

As Required by the Provisions of the ASME Code Section XI

Sheet 2 of 2

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

UNIT: 2/3
MO: See item 6 below
Rspec: Same as Serial No. (item 6)
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, Class 1, 1971 Edition, Summer 1972 Add. (design & fab); ASME III, Class 1, 1989 Edition, No Add. (material); Code Case: N-474-1
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Edition, No Addenda

Name of Component	Name Of Manufacturer	Manufacturer Serial No.	M.O. / PT Report #	Other Identification	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
RCS Loop Temp Nozzle; Mat. Code 027-79858	SCE	185-97	97100981, 97120500, 2PT-041-98	RSO 1360-97, Ht. #NX0264HG1, Lot #135888	Replacement	No
RCS Loop Temp Nozzle; Mat. Code 027-79858	SCE	186-97	97100982, 97120502, 2PT-042-98	RSO 1360-97, Ht. #NX0264HG1, Lot #135888	Replacement	No
RCS Loop Temp Nozzle; Mat. Code 027-79858	SCE	188-97	97100984, 97120504, 2PT-036-98	RSO 1360-97, Ht. #NX0264HG1, Lot #135888	Replacement	No
RCS Loop Temp Nozzle; Mat. Code 027-79858	SCE	189-97	97100985, 97120505, 2PT-035-98	RSO 1360-97, Ht. #NX0264HG1, Lot #135888	Replacement	No

Owner:

Initials/Date

ANII:

Initials/Date

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
2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128
3. Work Performed by: Southern California Edison Company
4. Identification of System: Reactor Coolant
- UNIT: 2/3
MO: See item 6 below
Rspec: Same as Serial No. (item 6)
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 Add. (design & fab); ASME III, Class 1, 1989 Edition, 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.	M.O. / PT Report #	Other Identification	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
RCS Loop Thermowell; Mat. Code 027-79882	SCE	132-97	97101007, 2PT-094-97	RSO-1360-97, Ht# NX0264HG1, Lot# 135888	Replacement	No
RCS Loop Thermowell; Mat. Code 027-79882	SCE	135-97	97101010, 2PT-005-98	RSO-1360-97, Ht# NX0264HG1, Lot# 135888	Replacement	No
RCS Loop Thermowell; Mat. Code 027-79882	SCE	140-97	97101015, 2PT-101-97	RSO-1360-97, Ht# NX0264HG1, Lot# 135888	Replacement	No
RCS Loop Thermowell; Mat. Code 027-79882	SCE	141-97	97101016, 2PT-097-97	RSO-1360-97, Ht# NX0264HG1, Lot# 135888	Replacement	No
RCS Loop Thermowell; Mat. Code 027-79882	SCE	142-97	97101017, 2PT-006-98	RSO-1360-97, Ht# NX0264HG1, Lot# 135888	Replacement	No
RCS Loop Thermowell; Mat. Code 027-79882	SCE	143-97	97101018, 2PT-007-98	RSO-1360-97, Ht# NX0264HG1, Lot# 135888	Replacement	No
RCS Loop Thermowell; Mat. Code 027-79882	SCE	144-97	97101019, 2PT-095-97	RSO-1360-97, Ht# NX0264HG1, Lot# 135888	Replacement	No
RCS Loop Thermowell; Mat. Code 027-79882	SCE	148-97	97101023, 2PT-008-98	RSO-1360-97, Ht# NX0264HG1, Lot# 135888	Replacement	No
RCS Loop Thermowell; Mat. Code 027-79882	SCE	150-97	97101026, 2PT-009-98	RSO-1360-97, Ht# NX0264HG1, Lot# 135888	Replacement	No
RCS Loop Thermowell; Mat. Code 027-79882	SCE	151-97	97101027, 2PT-010-98	RSO-1360-97, Ht# NX0264HG1, Lot# 135888	Replacement	No

7. Description of Work:

(10) spare thermowells were machined from SB166-N06690 (INCONEL 690) bar stock. Each thermowell was dimensionally verified and hydrotested. A PT exam was performed on all accessible surfaces of each thermowell. Ref Dwgs: SO23-924-282 (DCN# 5,6,7) & SO23-924-287 (DCN# 1,2,3).

8. Tests Conducted: System Hydrostatic Pressure Test Pressure: >3900 psig Temp: AMBIENT

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
Owner or Owner's Designee, Title

Date: 3/4/98

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 10/31/97 to 03/05/98, 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 [Signature]

Commissions 1862

California

National Board, State, Province, and Endorsements

Date March 5, 1998

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
2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128
3. Work Performed by: Southern California Edison Company
4. Identification of System: Reactor Coolant
- UNIT: 2/3
MO: See item 6 below
Rspec: Same as Serial No. (item 6)
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
6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name Of Manufacturer	Manufacturer Serial No.	M.O. / PT Report #	Other Identification	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
RCS Loop Thermowell Mat. Code-027-79882	SCE	146-97	97101021 2PT-099-97	RSO-1360-97, Ht.# NX0264HG1, Lot# 135888	Replacement	No
RCS Loop Thermowell Mat. Code-027-79882	SCE	161-97	97101040 2PT-098-97	RSO-1360-97, Ht.# NX0264HG1, Lot# 135888	Replacement	No
RCS Loop Thermowell Mat. Code-027-79882	SCE	131-97	97100648 2PT-070-98	RSO-1665-97, Ht.# NX0643HG1, Lot# 136502	Replacement	No
RCS Loop Thermowell Mat. Code-027-79882	SCE	134-97	97101009 3PT-003-98	RSO-1665-97, Ht.# NX0643HG1, Lot# 136502	Replacement	No
RCS Loop Thermowell Mat. Code-027-79882	SCE	136-97	97101011 3PT-012-98	RSO-1665-97, Ht.# NX0643HG1, Lot# 136502	Replacement	No
RCS Loop Thermowell Mat. Code-027-79882	SCE	137-97	97101012 3PT-015-98	RSO-1665-97, Ht.# NX0643HG1, Lot# 136502	Replacement	No
RCS Loop Thermowell Mat. Code-027-79882	SCE	138-97	97101013 3PT-007-98	RSO-1665-97, Ht.# NX0643HG1, Lot# 136502	Replacement	No
RCS Loop Thermowell Mat. Code-027-79882	SCE	145-97	97101020 2PT-071-98	RSO-1665-97, Ht.# NX0643HG1, Lot# 136502	Replacement	No
RCS Loop Thermowell Mat. Code-027-79882	SCE	157-97	97101035 2PT-073-98	RSO-1360-97, Ht.# NX0264HG1, Lot# 135888	Replacement	No
RCS Loop Thermowell Mat. Code-027-79882	SCE	158-97	97101036 2PT-074-98	RSO-1665-97, Ht.# NX0643HG1, Lot# 136502	Replacement	No

7. Description of Work:

(10) spare thermowells were machined from SB166-N06690 (INCONEL 690) bar stock. Each thermowell was dimensionally verified and hydrotested. A PT examination was performed on all accessible surfaces of each thermowell. Reference Dwgs: SO23-924-282 (DCN # 5.6.7) & SO23-924-287 (DCN # 1.2.3).

8. Tests Conducted: Hydrostatic Pressure Test

Pressure: >3900 psig

Temp: AMBIENT

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
Owner or Owner's Designee, Title

Date: 3/27/98

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 10/29/97 to 3/30/98, 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 [Signature]

Commissions

1862

California

National Board, State, Province, and Endorsements

Date

March 30, 1998

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: 2/3
MO: See item 6 below
Rspec: Same as Serial No. (item 6)
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, Class 1, 1971 Edition, Summer 1972 Add. (design & fab): ASME III, Class 1, 1989 Edition, 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.	M.O. / PT Report #	Other Identification	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
RCS Loop Thermowell; Mat. Code 027-79882	SCE	153-97	97101029, 2PT-014-98	RSO-1360-97, Ht.# NX0264HG1, Lot# 135888	Replacement	No
RCS Loop Thermowell; Mat. Code 027-79882	SCE	154-97	97101031, 2PT-015-98	RSO-1360-97, Ht.# NX0264HG1, Lot# 135888	Replacement	No
RCS Loop Thermowell; Mat. Code 027-79882	SCE	156-97	97101034, 2PT-016-98	RSO-1360-97, Ht.# NX0264HG1, Lot# 135888	Replacement	No
RCS Loop Thermowell; Mat. Code 027-79882	SCE	159-97	97101038, 2PT-100-97	RSO-1360-97, Ht.# NX0264HG1, Lot# 135888	Replacement	No
RCS Loop Thermowell; Mat. Code 027-79882	SCE	160-97	97101039, 2PT-048-98	RSO-1360-97, Ht.# NX0264HG1, Lot# 135888	Replacement	No
RCS Loop Thermowell; Mat. Code 027-79882	SCE	162-97	97101041, 2PT-011-98	RSO-1360-97, Ht.# NX0264HG1, Lot# 135888	Replacement	No
RCS Loop Thermowell; Mat. Code 027-79882	SCE	163-97	97101043, 2PT-012-98	RSO-1360-97, Ht.# NX0264HG1, Lot# 135888	Replacement	No
RCS Loop Thermowell; Mat. Code 027-79882	SCE	164-97	97101044, 2PT-013-98	RSO-1665-97, Ht.# NX0643HG1, Lot# 136502	Replacement	No

7. Description of Work:

(8) spare thermowells were machined from SB166-N06690 (INCONEL 690) bar stock. Each thermowell was dimensionally verified and hydrotested. A PT exam was performed on all accessible surfaces of each thermowell. Ref Dwgs: SO23-924-282 (DCN# 5,6,7) & SO23-924-287 (DCN# 1,2,3).

8. Tests Conducted: System Hydrostatic Pressure Test

Pressure: >3900 psig

Temp: AMBIENT

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
Owner or Owner's Designee, Title

Date: 3/21/98

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 10/7/97 to 3/21/98, 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

March 21, 1998

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
2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128
3. Work Performed by: Southern California Edison Company
4. Identification of System: Reactor Coolant
- UNIT: 2/3
MO: See item 6 below
Rspec: Same as Serial No. (item 6)
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
6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name Of Manufacturer	Manufacturer Serial No.	M.O. / PT Report #	Other Identification	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
RCS Loop Thermowell Mat. Code-027-79882	SCE	165-97	97101045 2PT-075-98	RSO-1665-97, Ht.# NX0643HG1, Lot # 136502	Replacement	No
RCS Loop Thermowell Mat. Code-027-79882	SCE	166-97	97101046 2PT-076-98	RSO-1665-97, Ht.# NX0643HG1, Lot # 136502	Replacement	No
RCS Loop Thermowell Mat. Code-027-79882	SCE	249-97	97120795 3PT-004-98	RSO-1665-97, Ht.# NX0643HG1, Lot # 136502	Replacement	No
RCS Loop Thermowell Mat. Code-027-79882	SCE	250-97	97120796 3PT-013-98	RSO-1665-97, Ht.# NX0643HG1, Lot # 136502	Replacement	No
RCS Loop Thermowell Mat. Code-027-79882	SCE	251-97	97120797 3PT-006-98	RSO-1685-97, Ht.# NX0643HG1, Lot # 136518	Replacement	No
RCS Loop Thermowell Mat. Code-027-79882	SCE	253-97	97120799 3PT-014-98	RSO-1665-97, Ht.# NX0643HG1, Lot # 136502	Replacement	No
RCS Loop Thermowell Mat. Code-027-79882	SCE	255-97	97120801 3PT-010-98	RSO-1665-97, Ht.# NX0643HG1, Lot # 136502	Replacement	No
RCS Loop Thermowell Mat. Code-027-79882	SCE	256-97	97120802 3PT-002-98	RSO-1665-97, Ht.# NX0643HG1, Lot # 136502	Replacement	No
RCS Loop Thermowell Mat. Code-027-79882	SCE	257-97	97120803 2PT-077-98	RSO-1665-97, Ht.# NX0643HG1, Lot # 136502	Replacement	No
RCS Loop Thermowell Mat. Code-027-79882	SCE	260-97	97120808 3PT-011-98	RSO-1665-97, Ht.# NX0643HG1, Lot # 136502	Replacement	No

7. Description of Work:

(10) spare thermowells were machined from SB166-N06690 (INCONEL 690) bar stock. Each thermowell was dimensionally verified and hydrotested. A PT examination was performed on all accessible surfaces of each thermowell. Reference Dwgs: SO23-924-282 (DCN # 5.6.7) & SO23-924-287 (DCN # 1.2.3).

8. Tests Conducted: Hydrostatic Pressure Test

Pressure: >3900 psig

Temp: AMBIENT

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
Owner or Owner's Designee, Title

Date: 3/27/98

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 11/12/97 to 3/30/98, 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]
Inspector's Signature

Commissions

1862

California

National Board, State, Province, and Endorsements

Date

March 30, 1998

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
2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128
3. Work Performed by: Southern California Edison Company
4. Identification of System: Reactor Coolant
- UNIT: 2/3
MO: See item 6 below
Rspec: Same as Serial No. (item 6)
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 (design & fab), ASME III, Class 1, 1989 Edition, No Addenda (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.	M.O. / PT Report #	Other Identification	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
RCS Temperature Nozzle Plug	SCE	RS-059-98	97101049 2PT-222-98	RSO-1646-97, Ht. #NX0643HG1 Lot#136503	Replacement	No
RCS Temperature Nozzle Plug	SCE	RS-060-98	97101050 2PT-225-98	RSO-1646-97, Ht. #NX0643HG1 Lot#136503	Replacement	No
RCS Temperature Nozzle Plug	SCE	RS-061-98	97101051 2PT-223-98	RSO-1646-97, Ht. #NX0643HG1 Lot#136503	Replacement	No
RCS Temperature Nozzle Plug	SCE	RS-062-98	97101053 2PT-221-98	RSO-1646-97, Ht. #NX0643HG1 Lot#136503	Replacement	No
RCS Temperature Nozzle Plug	SCE	RS-066-98	97101058 2PT-226-98	RSO-1646-97, Ht. #NX0643HG1 Lot#136503	Replacement	No
RCS Temperature Nozzle Plug	SCE	RS-071-98	97101063 2PT-224-98	RSO-1646-97, Ht. #NX0643HG1 Lot#136503	Replacement	No

7. Description of Work:

(6) spare temperature nozzle plugs for the reactor coolant loop piping were machined from SB166-N06690 (INCONEL 690) barstock. Each nozzle plug was dimensionally verified and all accessible surfaces were PT examined. Reference Dwg: 41116, sheet 1. Pressure test will be performed after installation. The 1" and less NPS exemption (Reference IWA-4700) applies for fabrication.

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
Owner or Owner's Designee, Title

Date: 4/19/99

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 06/10/98 to 04/20/99, 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.

Inspector's Signature [Signature]

Commissions 1862

California

National Board, State, Province, and Endorsements

Date April 20, 1999

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: 97101066000 (mach) 97110609000 (weld),
97120531000 (mach)
Rspec: 206-97
2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128
P&ID: N/A
N-5: N/A
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 1972 Add. (design & fab): ASME III, Class 1, 1989 Edition, 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
RCS Loop Pressure Measurement Nozzle- Type 2; Mat. Code 027-79890	SCE	206-97	N/A	RSO-1646-97, Ht.# NX0643HG1, Lot #136503; RSO-1711-97, Ht.# 435702, Lot #92411	N/A	Replacement	No

7. Description of Work:

A spare instrument nozzle was machined from SB166-N06690 (INCONEL 690) bar stock. A stainless steel safe-end (SA312-TP316L, 3/4" NPS, schedule 160 pipe) was welded to the INCONEL section per WR2/3-97-475. PT exam was performed on all accessible machined surfaces (Ref: 2PT-166-98). RT and PT exams were performed on the weld (Ref: 2RT-038-98, 2PT-217-98 & 2PT-219-98). Ref Dwg: 41116, Sheet 1, Rev 1, DCN #2. * Pressure test will be performed on installation. The 1" & less NPS exemption (Ref: IWA-4700) applies for the nozzle fabrication.

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 : 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 Authorization No. N/A

Expiration Date: N/A

Signed: [Signature] Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 1/6/99

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 12/5/97 to 1/6/99, 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]
Inspector's Signature

Commissions

1862

California

National Board, State, Province, and Endorsements

Date

Jan. 6, 1999

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: 97101067000 97120532000 (mach),
97110610000 (weld)
2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128
- Rspec: 207-97
P&ID: N/A
N-5: N/A
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 1972 Add. (design & fab); ASME III, Class 1, 1989 Edition, 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
RCS Loop Pressure Measurement Nozzle- Type 2; Mat. Code 027-79890	SCE	207-97	N/A	RSO-1665-97, Ht.# NX0643HG1, Lot# 136502; RSO- 1711-97, Ht.# 435702	N/A	Replacement	No

7. Description of Work:

A spare instrument nozzle was machined from SB166-N06690 (INCONEL 690) bar stock. A stainless steel safe-end (SA312-TP316L, 3/4" NPS, schedule 160 pipe) was welded to the INCONEL section per WR2/3-97-476. PT exams were performed on all accessible machined surfaces (Ref: 2PT-003-98 & 2PT-021-98). RT and PT exams were performed on the weld (Ref: 2RT-003-98, 2PT-043-98. Ref Dwg: 41116, Sheet 1, Rev 1, DCN #2. * Pressure test will be performed on installation. The ≤ 1 " NPS exemption (Ref: IWA-4700) applies for the nozzle fabrication.

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 Authorization No: N/A

Expiration Date: N/A

Signed: [Signature] Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 3/26/98

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 01/12/98 to 03/27/98, 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]
Inspector's Signature

Commissions

1862

California

National Board, State, Province, and Endorsements

Date

March 27, 1998

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: 97101068000 97120533000 (mach),
97110611000 (weld)
2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128
- Rspec: 208-97
P&ID: N/A
N-5: N/A
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 1972 Add. (design & fab); ASME III, Class 1, 1989 Edition, 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
RCS Loop Pressure Measurement Nozzle- Type 2; Mat. Code 027-79890	SCE	208-97	N/A	RSO-1665-97, Ht.# NX0643HG1, Lot# 136502; RSO- 1711-97, Ht.# 435702	N/A	Replacement	No

7. Description of Work:

A spare instrument nozzle was machined from SB166-N06690 (INCONEL 690) bar stock. A stainless steel safe-end (SA312-TP316L, 3/4" NPS, schedule 160 pipe) was welded to the INCONEL section per WR2/3-97-477. PT exams were performed on all accessible machined surfaces (Ref: 2PT-039-98 & 2PT-087-98). RT and PT exams were performed on the weld (Ref: 2RT-017-98, 2PT-093-98 & 2PT-106-98). Ref Dwg: 41116, Sheet 1, Rev 1, DCN #2. * Pressure test will be performed on installation. The ≤ 1 " NPS exemption (Ref: IWA-4700) applies for the nozzle fabrication.

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 : 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
Owner or Owner's Designee, Title

Date: 3/4/98

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 12/5/97 to 3/5/98, 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

March 5, 1998

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: 97101069000 97120534000 (mach),
97110612000, 001 (weld)
Rspec: 209-97
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, Class 1, 1971 Edition, Summer 1972 Add. (design & fab); ASME III, Class 1, 1989 Edition, 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
RCS Loop Pressure Measurement Nozzle-Type 2; Mat. Code 027-79890	SCE	209-97	N/A	RSO-1665-97, Ht.# NX0643HG1, Lot# 136502; RSO-1711-97, Ht.# 435702	N/A	Replacement	No

7. Description of Work:

A spare instrument nozzle was machined from SB166-N06690 (INCONEL 690) bar stock. A stainless steel safe-end (SA312-TP316L, 3/4" NPS, schedule 160 pipe) was initially welded to the INCONEL section per WR2/3-97-478, but failed the RT examination. The defective weld was cut-out and rewelded per WR2/3-98-033. PT exams were performed on all accessible machined surfaces (Ref: 2PT-090-98 & 2PT-094-98). RT and PT exams were performed on the weld (Ref: 2RT-018-98, 2PT-105-98). Ref Dwg: 41116, Sheet 1, Rev 1, DCN #2. * Pressure test will be performed on installation. The <= 1" NPS exemption (Ref: IWA-4700) applies for the nozzle fabrication.

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 Authorization No: N/A

Expiration Date: N/A

Signed: [Signature] Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 3/26/98

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 01/12/98 to 03/27/98, 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

March 27, 1998

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: 97101070000 (mach) 97110613000 (weld),
97120535000 (mach)
Rspec: 210-97
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, Class 1, 1971 Edition, Summer 1972 Add. (design & fab); ASME III, Class 1, 1989 Edition, 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
RCS Loop Pressure Measurement Nozzle- Type 2; Mat. Code 027-79890	SCE	210-97	N/A	RSO-1646-97, Ht.# NX0643HG1, Lot #136503; RSO- 1711-97, Ht.# 435702, Lot #92411	N/A	Replacement	No

7. Description of Work:

A spare instrument nozzle was machined from SB166-N06690 (INCONEL 690) bar stock. A stainless steel safe-end (SA312-TP316L, 3/4" NPS, schedule 160 pipe) was welded to the INCONEL section per WR2/3-97-479. PT exam was performed on all accessible machined surfaces (Ref: 2PT-165-98). RT and PT exams were performed on the weld (Ref: 2RT-036-98, 2PT-213-98 & 2PT-215-98). Ref Dwg: 41116, Sheet 1, Rev 1, DCN #2. * Pressure test will be performed on installation. The 1" & less NPS exemption (Ref: IWA-4700) applies for the nozzle fabrication.

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 Authorization No: N/A

Expiration Date: N/A

Signed: [Signature] Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 1/25/99

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 Arkway Industrial Insulation Company of Waltham, Massachusetts have inspected the components described in this Owner's Report during the period 12/5/98 to 1/26/99, 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.

Inspector's Signature [Signature]

Commissions 1862 California
National Board, State, Province, and Endorsements

Date Jan 26, 1999

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
2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128
3. Work Performed by: Southern California Edison Company
4. Identification of System: Reactor Coolant
5. (a) Applicable Construction Code: ASME Section III, Class 1, 1971 Edition, Summer 1972 Add. (design & fab): ASME III, Class 1, 1989 Edition, No Add.(material): Code Case: N-474-1
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Edition, No Addenda

Unit: N
MO: 97101071000 (mach) 97110614000 (weld),
97120536000 (mach)
Rspec: 211-97
P&ID: N/A
N-5: N/A
Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

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 Loop Pressure Measurement Nozzle- Type 2; Mat. Code 027-79890	SCE	211-97	N/A	RSO-1646-97, Ht.# NX0643HG1, Lot #136503; RSO-1711-97, Ht.# 435702, Lot #92411	N/A	Replacement	No

7. Description of Work:

A spare instrument nozzle was machined from SB166-N06690 (INCONEL 690) bar stock. A stainless steel safe-end (SA312-TP316L, 3/4" NPS, schedule 160 pipe) was welded to the INCONEL section per WR2/3-97-480. PT exam was performed on all accessible machined surfaces (Ref: 2PT-198-98). RT and PT exams were performed on the weld (Ref: 2RT-039-98, 2PT-214-98 & 2PT-216-98). Ref Dwg: 41116, Sheet 1, Rev 1, DCN #2. * Pressure test will be performed on installation. The 1" & less NPS exemption (Ref: IWA-4700) applies for the nozzle fabrication.

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 Authorization No: N/A

Expiration Date: N/A

Signed: [Signature] Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 1/25/99

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 Waltham, Massachusetts have inspected the components described in this Owner's Report during the period 12/5/97 to 1/26/99, 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]
Inspector's Signature

Commissions 1862 California
National Board, State, Province, and Endorsements

Date Jan 26, 1999

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: 97101072000 97120537000 (mach),
97110615000, 001,002 (weld)
Rspec: 212-97, 090-98
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, 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

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 Loop PDT type 2 Nozzle	SCE	212-97	SB166-N06690 SA312-316L	Mat. Code 027-79890	N/A	Replacement	No

7. Description of Work:

A spare PDT type 2 nozzle was fabricated. The INCONEL 690 piece was machined from SB166 alloy N06690 bar stock (RSO 1646-97, Ht. NX0643HG1, Lot 136503). After machining, all accessible surfaces were PT examined (3PT-071-98). A stainless steel safe-end, SA312 type 316L, 3/4" NPS, schedule 160 pipe (RSO 1711-97, Ht. 435702) was welded to the INCONEL per *WR2/3-98-124. The final weld was PT examined (2PT-156-98) and RT examined (2RT-022-98). The hydrotest exemption (1" NPS and less) of IWA-4700 was taken for fabrication of this part.

*Initial welding was performed on WR2/3-97-484, but the weld was cut-out due to a failed RT examination.

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 Authorization No: N/A

Expiration Date: N/A

Signed: [Signature] Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 10/27/98

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 12/5/97 to 10/27/98, 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]
Inspector's Signature

Commissions

1862

California

National Board, State, Province, and Endorsements

Date

Oct. 27, 1998

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
2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128
3. Work Performed by: Southern California Edison Company
4. Identification of System: Reactor Coolant
5. (a) Applicable Construction Code: ASME Section III, Class 1, 1971 Edition, Summer 1972 Add. (design & fab): ASME III, Class 1, 1989 Edition, No Add. (material): Code Case: N-474-1
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Edition, No Addenda

Unit: N
MO: 97101073000 (mach) 97110616000 (weld),
97120538000 (mach)
Rspec: 213-97
P&ID: N/A
N-5: N/A
Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

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 Loop Pressure Measurement Nozzle- Type 2; Mat. Code 027-79890	SCE	213-97	N/A	RSO-1646-97, Ht.# NX0643HG1, Lot #136503; RSO- 1711-97, Ht.# 435702, Lot #92411	N/A	Replacement	No

7. Description of Work:

A spare instrument nozzle was machined from SB166-N06690 (INCONEL 690) bar stock. A stainless steel safe-end (SA312-TP316L, 3/4" NPS, schedule 160 pipe) was welded to the INCONEL section per WR2/3-97-485. PT exam was performed on all accessible machined surfaces (Ref: 2PT-164-98). RT and PT exams were performed on the weld (Ref: 2RT-040-98, 2PT-218-98 & 2PT-220-98). Ref Dwg: 41116, Sheet 1, Rev 1, DCN #2. * Pressure test will be performed on installation. The 1" & less NPS exemption (Ref: IWA-4700) applies for the nozzle fabrication.

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 : 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 Authorization No: N/A

Expiration Date: N/A

Signed: [Signature]

Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 1/25/99

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 12/5/97 to 1/26/99, 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]
Inspector's Signature

Commissions

1862

California

National Board, State, Province, and Endorsements

Date

Jan. 26, 1999

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: 97101074000 97120539000 (mach),
97110617000 (weld)
Rspec: 214-97
2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128
P&ID: N/A
N-5: N/A
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 1972 Addenda; 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
RCS Loop PDT type 2 Nozzle	SCE	214-97	SB166 N06690, SA312-316L	Mat. Code 027-79890	N/A	Replacement	No

7. Description of Work:

A spare PDT type 2 nozzle was fabricated. The INCONEL 690 piece was machined from SB-166, alloy N06690 bar stock (RSO 1646-97, Ht. NX0643HG1, Lot 136503). After machining, all accessible surfaces were PT examined (3PT-070-98). A stainless steel safe-end, SA312, type 316L, 3/4" NPS schedule 160 pipe (RSO 1711-97, Ht. 435702 was welded to the INCONEL per WR2/3-97-486. The final weld was PT examined (2PT-137-98) and RT examined (2RT-021-98). The hydrotest exemption (≤ 1 " NPS) of IWA-4700 was taken for fabrication of this part.

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 Manufacturers 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 Authorization No: N/A

Expiration Date: N/A

Signed: [Signature] Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 4/20/98

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 12/05/97 to 04/22/98, 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]
Inspector's Signature

Commissions 1862 California
National Board, State, Province, and Endorsements

Date April 22, 1998

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)
 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:

Unit: 2
CWO: 97101538000
FCN(S): F13928M, F13933M,
F13948M, F13953M
Repair Spec: 221-97, Rev. 0
P&ID: 40111A
N-5: S2-1201-3
Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

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	175-97	N/A	2TW0138A	N/A	Replacement	No
INCONEL 690 Half Nozzle	SCE	169-97	N/A	2TW0138D	N/A	Replacement	No
INCONEL 690 Half Nozzle	SCE	172-97	N/A	2TE0112-2	N/A	Replacement	No
INCONEL 690 Half Nozzle	SCE	182-97	N/A	2TE0112-3	N/A	Replacement	No
INCONEL 690 Thermowell	SCE	143-97	N/A	2TW0138A	N/A	Replacement	No
INCONEL 690 Thermowell	SCE	161-97	N/A	2TW0138D	N/A	Replacement	No
INCONEL 690 Thermowell	SCE	140-97	N/A	2TE0112-2	N/A	Replacement	No
INCONEL 690 Thermowell	SCE	132-97	N/A	2TE0112-3	N/A	Replacement	No

7. Description of Work:
As a leak prevention measure, the INCONEL 600 nozzles in instrument locations 2TW0138-A, 2TW0138-D, 2TE0112-2, 2TE0112-3 were replaced with INCONEL 690 half nozzles. The existing thermowells in those instrument locations were also replaced using INCONEL 690 thermowells. Cutting, milling, pre-heat and installation of the nozzles was performed in accordance with Repair Spec. 221-97, Rev. 0 and weld records WR2-97-510 and WR2-97-511. Instrument nozzles are located on C.E. Spool 503-01 (E-089 Hot Leg).
8. Tests Conducted: System Leakage ☒ 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 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 to be attached)

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp: N/A

Certificate of Authorization No: N/A

Expiration Date: N/A

Signed: [Signature]
Owner or Owner's Designee, Title

Supervising ASME Codes Engineer

Date: 5/29, 19 98

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 1/2/98 to 6/2/98, 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 [Signature]

Commissions 1862 California
(National Board, State, Province, and Endorsements)

Date June 2, 19 98

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

Sheet 1 of 1

Unit: 2
CWO: 97101554000
FCN(S): F13938M, F13943M,
F13958M, F13963M
Repair Spec: 222-97, Rev. 0
P&ID: 40111A
N-5: S2-1201-3

4. Identification of System: REACTOR COOLANT (1201)

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	170-97	N/A	2TW0139-A	N/A	Replacement	No
INCONEL 690 Half Nozzle	SCE	188-97	N/A	2TW0139-D	N/A	Replacement	No
INCONEL 690 Half Nozzle	SCE	183-97	N/A	2TE0122-2	N/A	Replacement	No
INCONEL 690 Half Nozzle	SCE	173-97	N/A	2TE0122-3	N/A	Replacement	No
INCONEL 690 Thermowell	SCE	146-97	N/A	2TW0139-A	N/A	Replacement	No
INCONEL 690 Thermowell	SCE	159-97	N/A	2TW0139-D	N/A	Replacement	No
INCONEL 690 Thermowell	SCE	162-97	N/A	2TE0122-2	N/A	Replacement	No
INCONEL 690 Thermowell	SCE	156-97	N/A	2TE0122-3	N/A	Replacement	No

7. Description of Work:

As a leak prevention measure, the INCONEL 600 nozzles in instrument locations 2TW0139-A, 2TW0139-D, 2TE0122-2, 2TE0122-3 were replaced with INCONEL 690 half nozzles. The existing thermowells in those instrument locations were also replaced using INCONEL 690 thermowells. Cutting, milling, pre-heat and installation of the nozzles was performed in accordance with Repair Spec. 222-97, Rev. 0 and weld records WR2-97-512 and WR2-97-513. Instrument nozzles are located on C.E. Spool 503-03 (E-088 Hot Leg).

8. Tests Conducted: System Leakage ☒ System Functional ☐ System Inservice ☐ Hydrostatic ☐ Pneumatic ☐ Other ☐
Pressure: NOP Temp: N/A
(Reference: AR #980100396-07 for VT-2)

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 to be attached)

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp: N/A

Certificate of Authorization No: N/A

Expiration Date: N/A

Signed: [Signature] Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 4/11, 1998

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 01/15/98 to 04/13/98, 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 April 13, 1998

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
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: 97101664000 98061176000
Rspec: ASME SECTION XI DATA-0244, 106-98
P&ID: 40123A (G2)
N-5: S2-1208-3
- Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

5. (a) Applicable Construction Code: ASME Section III, Class 2, 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
2" 1500# SS Y-Globe Valve	Kerotest	ABR12-10	N/A	S21208MU164	1984	Repaired	Yes
Stem & Disc Assembly	Kerotest	ALH3/AKJ-3	N/A	RSO-5821-85, SA479, 316 Stellite Hardface	1985	Replacement	Yes

7. Description of Work:

The valve in plant location S21208MU164 was found difficult to open or close throughout its entire travel. The bonnet seal weld was cut to gain access to the valve internals. The stem and disc assembly was replaced with an in-kind replacement in accordance with MO 97101664. The seal weld was reapplied in accordance with MO 98061176, weld record WR2-98-189 and Repair Specification 106-98. NDE examination (2PT-194-98) of the completed seal weld was performed with satisfactory results. Reference: AR 971000817

8. Tests Conducted: System Inservice Pressure Test

Pressure: NOP

Temp: NOT

See: AR 91000817-2

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 stem and disc assembly 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 repair and 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
Owner or Owner's Designee, Title

Date: 1/8/99

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 6/18/98 to 1/11/99, 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]
Inspector's Signature

Commissions 1862 California
National Board, State, Province, and Endorsements

Date Jan. 11, 1999

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

As Required by the Provisions of the ASME Code Section XI

- Sheet 1 of 1
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)
 5. (a) Applicable Construction Code: ASME Section III, Class 1, 1971 Edition, S'71 Addenda, Code Cases: 1588 & 1820
(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	C.E.	S/N 1, Code # J6421	N/A	S21201ME605	1983	Replaced	Yes
PRESSURIZER HEATER	C.E.	S/N 10, Code # J-7032-10	N/A	RSO-0365-93/4723-85, SA213 Tp.316 & SA479 Tp.316	1986	Replacement	Yes

7. Description of Work:
A replacement shot-peened pressurizer heater was installed in location S21201ME605 per Repair Spec. 232-97 Rev. 3 and Weld Record WR2-98-028, weld "A".
8. Tests Conducted: System Leakage ☒ System Functional ☐ System Inservice ☐ Hydrostatic ☐ Pneumatic ☐ Other ☐
Pressure: NOP Temp: NOT
(Ref: AR#970300715-13 for VT-2)

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 to be attached)

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp: N/A

Certificate of Authorization No: N/A

Expiration Date: N/A

Signed: [Signature]
Owner or Owner's Designee, Title

Supervising ASME Codes Engineer

Date: 5/29, 19 98

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 1/22/98 to 6/12/98, 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 [Signature]

Commissions 1862 California
(National Board, State, Province, and Endorsements)

Date June 2, 19 98

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
2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128
3. Work Performed by: Bechtel Construction Company
P.O. Box 450
San Clemente, CA. 92674-0128
4. Identification of System: Reactor Coolant
5. (a) Applicable Construction Code: ASME Section III, Class 1, 1971 Edition, Summer 1971 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:

Unit: 2
MO: 97110434000
FCN: F13931M, F13932M
Rspec: 231-97
P&ID: 40111B (E5)
N-5: S2-1201-2
Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

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	ABB Combustion Engineering	CE70602	21495	S21201ME087	1971	Repaired	Yes
Lower Flange	ABB Combustion Engineering	Ht.# 93150, E-MNSA-228-004-1	N/A	RSO-1118-97, SA479 Tp.304	N/A	Replacement	No
Upper Flange-Top	ABB Combustion Engineering	Ht.# 93150, E-MNSA-228-004-5	N/A	RSO-1118-97, SA479 Tp.304	N/A	Replacement	No
Upper Flange-Bottom	ABB Combustion Engineering	Ht.# 93150, E-MNSA-228-004-29	N/A	RSO-1118-97, SA479 Tp.304	N/A	Replacement	No
Seal Retainer	ABB Combustion Engineering	Ht.# 602675, E-MNSA-228-004-2	N/A	RSO-1118-97, SA479 Tp.304	N/A	Replacement	No
Compression Collar	ABB Combustion Engineering	Ht.# 602675, E-MNSA-228-004-3	N/A	RSO-1118-97, SA479 Tp.304	N/A	Replacement	No
Top Plate	ABB Combustion Engineering	Ht.# Y0817, E-MNSA-228-004-6	N/A	RSO-1118-97, SA479 Tp.304	N/A	Replacement	No
Tie Rods (4 per assembly)	ABB Combustion Engineering	Ht.# 516097, E-MNSA-228-004-15	N/A	RSO-1118-97, SA453 Gr.660	N/A	Replacement	No
Socket Head Screws (2 per assembly)	ABB Combustion Engineering	Ht.# 516560, E-MNSA-228-004-23	N/A	RSO-1118-97, SA453 Gr.660	N/A	Replacement	No
Hex Head Bolts (1 per assembly)	ABB Combustion Engineering	Ht.# 517742, E-MNSA-228-004-24	N/A	RSO-0113-98, SA453 Gr.660	N/A	Replacement	No
Hex Head Bolts (1 per assembly)	ABB Combustion Engineering	Ht.# 516560, E-MNSA-228-004-24	N/A	RSO-1118-97, SA453 Gr.660	N/A	Replacement	No
Hex Head Bolts (1 per assembly)	ABB Combustion Engineering	Ht.# 6L9727, E-MNSA-228-004-25	N/A	RSO-0113-98, SA453 Gr.660	N/A	Replacement	No
Hex Head Bolts (1 per assembly)	ABB Combustion Engineering	Ht.# 516560, E-MNSA-228-004-25	N/A	RSO-1118-97, SA453 Gr.660	N/A	Replacement	No
Hex Nuts (12 per assembly)	ABB Combustion Engineering	Ht.# 516560, E-MNSA-228-004-27	N/A	RSO-1118-97, SA453 Gr.660	N/A	Replacement	No

7. Description of Work:

Mechanical Nozzle Seal Assemblies (MNSAs) Part No. E-MNSA-228-001-1, were installed on the Bottom Pressurizer (S21201ME087) Level Nozzles for instruments 2LT0110-1 and 2LT0110-2 in accordance with Repair Specification 231-97 and per FCNs F13931M and F13932M. A VT-1 examination was performed on the replacement bolting and tie rods with satisfactory results. (Reference: NCR 980200400)

8. Tests Conducted: System Leakage Pressure Test

Pres: NOP

Temp: NOT

See: AR 980100396-13

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 AJA.

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 Authorization No: N/A

Expiration Date: N/A

Signed: [Signature] Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 3/17/98

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 1/22/98 to 3/16/98, 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.

James C. Keenan
Inspector's Signature

Commissions

1300 California
National Board, State, Province, and Endorsements

Date

3/17/98

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

4. Identification of System: REACTOR COOLANT (1201)

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	180-97	N/A	2TE9178-1	N/A	Replacement	No
INCONEL 690 Half Nozzle	SCE	178-97	N/A	2TE9178-3	N/A	Replacement	No
INCONEL 690 Half Nozzle	SCE	179-97	N/A	2TE0111-Y1	N/A	Replacement	No
INCONEL 690 Thermowell	SCE	151-97	N/A	2TE9178-1	N/A	Replacement	No
INCONEL 690 Thermowell	SCE	160-97	N/A	2TE9178-3	N/A	Replacement	No
INCONEL 690 Thermowell	SCE	164-97	N/A	2TE0111-Y1	N/A	Replacement	No

7. Description of Work:

As a leak prevention measure, the INCONEL 600 nozzles in instrument locations 2TE9178-1, 2TE9178-3, 2TE0111-Y1 were replaced with INCONEL 690 half nozzles. The existing thermowells in those instrument locations were also replaced using INCONEL 690 thermowells. Cutting, milling, pre-heat and installation of the nozzles was performed in accordance with Repair Spec. 223-97, Rev. 0 and weld records WR2-97-514 and WR2-97-515. Instrument nozzles are located on C.E. Spool 504-01 (P-001 Cold Leg).

8. Tests Conducted: System Leakage ☒ System Functional ☐ System Inservice ☐ Hydrostatic ☐ Pneumatic ☐ Other ☐
Pressure: NOP Temp: N/A
(Reference: AR #980100396-09 for VT-2)

Sheet 1 of 1

Unit: 2

CWO: 97110639000

FCN(S): F14124M, F14134M, F14129M

Repair Spec: 223-97, Rev. 0

P&ID: 40111A

N-5: S2-1201-3

Type Code Symbol Stamp: N/A

Authorization No: N/A

Expiration Date: N/A

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 to be attached)

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp: N/A

Certificate of Authorization No: N/A

Expiration Date: N/A

Signed: [Signature]
Owner or Owner's Designee, Title

Supervising ASME Codes Engineer

Date: 5/29, 1998

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 1/21/98 to 6/2/98, 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: June 2, 1998

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

Sheet 1 of 1

Unit: 2
CWO: 97110641000
FCN(S): F14149M, F14139M, F14144M
Repair Spec: 224-97, Rev. 1
P&ID: 40111A
N-5: S2-1201-3

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'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	202-97	N/A	2TE9179-2	N/A	Replacement	No
INCONEL 690 Half Nozzle	SCE	189-97	N/A	2TE9179-4	N/A	Replacement	No
INCONEL 690 Half Nozzle	SCE	186-97	N/A	2TE0121-Y2	N/A	Replacement	No
INCONEL 690 Thermowell	SCE	148-97	N/A	2TE9179-2	N/A	Replacement	No
INCONEL 690 Thermowell	SCE	135-97	N/A	2TE9179-4	N/A	Replacement	No
INCONEL 690 Thermowell	SCE	154-97	N/A	2TE0121-Y2	N/A	Replacement	No

7. Description of Work:

As a leak prevention measure, the INCONEL 600 nozzles in instrument locations 2TE9179-2, 2TE9179-4, 2TE0121-Y2 were replaced with INCONEL 690 half nozzles. The existing thermowells in those instrument locations were also replaced using INCONEL 690 thermowells. Cutting, milling, pre-heat and installation of the nozzles was performed in accordance with Repair Spec. 224-97, Rev. 1 and weld records WR2-97-516 and WR2-97-517. Instrument nozzles are located on C.E. Spool 505-04 (P-002 Cold Leg).

8. Tests Conducted: System Leakage ☒ System Functional ☐ System Inservice ☐ Hydrostatic ☐ Pneumatic ☐ Other ☐
Pressure: NOP Temp: N/A
(Reference: AR #980100396-10 for VT-2)

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 to be attached)

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp: N/A

Certificate of Authorization No: N/A

Expiration Date: N/A

Signed: [Signature]
Owner or Owner's Designee, Title

Supervising ASME Codes Engineer

Date: 5/29, 19 98

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 1/20/98 to 6/2/98, 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: June 2, 19 98

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
4. Identification of System: REACTOR COOLANT (1201)
- Sheet 1 of 1
Unit: 2
CWO: 97110642000
FCN(S): F14154M, F14164M, F14159M
Repair Spec: 225-97, Rev. 1
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	185-97	N/A	2TE9178-2	N/A	Replacement	No
INCONEL 690 Half Nozzle	SCE	184-97	N/A	2TE9178-4	N/A	Replacement	No
INCONEL 690 Half Nozzle	SCE	177-97	N/A	2TE0115-2	N/A	Replacement	No
INCONEL 690 Thermowell	SCE	144-97	N/A	2TE9178-2	N/A	Replacement	No
INCONEL 690 Thermowell	SCE	163-97	N/A	2TE9178-4	N/A	Replacement	No
INCONEL 690 Thermowell	SCE	142-97	N/A	2TE0115-2	N/A	Replacement	No

7. Description of Work:
- As a leak prevention measure, the INCONEL 600 nozzles in instrument locations 2TE9178-2, 2TE9178-4, 2TE0115-2 were replaced with INCONEL 690 half nozzles. The existing thermowells in those instrument locations were also replaced using INCONEL 690 thermowells. Cutting, milling, pre-heat and installation of the nozzles was performed in accordance with Repair Spec. 225-97, Rev. 1 and weld records WR2-97-518 and WR2-97-519. Instrument nozzles are located on C.E. Spool 505-01 (P-003 Cold Leg).
8. Tests Conducted: System Leakage ☒ System Functional ☐ System Inservice ☐ Hydrostatic ☐ Pneumatic ☐ Other ☐
Pressure: NOP Temp: N/A
(Reference: AR #980100396-11 for VT-2)

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 to be attached)

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp: N/A

Certificate of Authorization No: N/A

Expiration Date: N/A

Signed: [Signature]
Owner or Owner's Designee, Title

Supervising ASME Codes Engineer

Date: 5/29, 1998

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 1/20/98 to 6/2/98, 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]
Inspector's Signature

Commissions 1862 California
(National Board, State, Province, and Endorsements)

Date June 2, 1998

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

4. Identification of System: REACTOR COOLANT (1201)

Sheet 1 of 1

Unit: 2

CWO: 97110643000

FCN: F14169M, F14179M, F14174M

Repair Spec: 226-97, REV. 1

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	168-97	N/A	2TE9179-1	N/A	Replacement	No
INCONEL 690 Half Nozzle	SCE	195-97	N/A	2TE9179-3	N/A	Replacement	No
INCONEL 690 Half Nozzle	SCE	181-97	N/A	2TE0125-1	N/A	Replacement	No
INCONEL 690 Thermowell	SCE	141-97	N/A	2TE9179-1	N/A	Replacement	No
INCONEL 690 Thermowell	SCE	153-97	N/A	2TE9179-3	N/A	Replacement	No
INCONEL 690 Thermowell	SCE	150-97	N/A	2TE0125-1	N/A	Replacement	No

7. Description of Work:

As a leak prevention measure the INCONEL 600 nozzles in instrument locations 2TE9179-1, 2TE9179-3, 2TE0125-1 were replaced with INCONEL 690 half nozzles. The existing thermowells in those instrument locations were also replaced using INCONEL 690 thermowells. Cutting, milling, pre-heat and installation of the nozzles was performed in accordance with Repair Spec. 226-97 Rev. 1 and weld records WR2-97-520 and WR2-97-521. Instrument nozzles are located on C.E. Spool 504-04 (P-004 Cold Leg).

8. Tests Conducted: System Leakage ☒ System Functional ☐ System In-service ☐ Hydrostatic ☐ Pneumatic ☐ Other ☐
Pressure: NOP Temp: N/A
(Reference: AR #980100396-12 for VT2)

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 to be attached)

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp: N/A

Certificate of Authorization No: N/A

Expiration Date: N/A

Signed: [Signature]
Owner or Owner's Designee, Title

Supervising ASME Codes Engineer

Date: 5/29, 19 98

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 1/20/98 to 6/2/98, 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: June 2, 19 98

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: 97111283000
Rspec: ASME SECTION XI DATA-0398
P&ID: 40124BSO2 (D3)
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
4. Identification of System: Chemical and Volume Control
Expiration Date: N/A
5. (a) Applicable Construction Code: ASME Section III, Class 2, 1974 Edition, Summer 1975 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
Discharge Stabilizer	Greer Hydraulics	GHI-2981	234	S21208MW219	1978	---	Yes
Bladder Assembly Valve Stem	ABB Combustion Engineering	Ht.# 32638, Lot 25729	N/A	RSO-0074-96, SA479 Gr.304	1995	Replacement	No

7. Description of Work:

The valve stem, an integral attachment to the valve bladder assembly, was replaced due to bladder leakage.

8. Tests Conducted: System Functional Pressure Test Pressure: NOP Temp: N/A
See: AR 971101561-3

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 Manufacturers Data Reports are available on-site)

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI. 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
Owner or Owner's Designee, Title

Date: 4/16/98

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 12/05/97 to 04/13/98, 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 18602 California
Inspector's Signature National Board, State, Province, and Endorsements

Date April 13, 1998

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: 2/3
MO: See item 6 below
Rspec: Same as Serial No. (item 6)
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, Class 1, 1971 Edition, Summer 1972 Add. (design & fab): ASME III, Class 1, 1989 Edition, 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.	M.O. / PT Report #	Other Identification	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
RCS Loop Temperature Nozzle; Mat. Code 027-79858	SCE	236-97	97120525 97120732 2PT-138-98	RSO-1360-97, Ht. NX0264HG1 Lot 135888	Replacement	No
RCS Loop Temperature Nozzle; Mat. Code 027-79858	SCE	237-97	97120733 98012461 2PT-139-98	RSO-1360-97, Ht. NX0264HG1 Lot 135888	Replacement	No
RCS Loop Temperature Nozzle; Mat. Code 027-79858	SCE	238-97	97120735 98012462 2PT-140-98	RSO-1360-97, Ht. NX0264HG1 Lot 135888	Replacement	No
RCS Loop Temperature Nozzle; Mat. Code 027-79858	SCE	239-97	97120736 98012463 2PT-141-98	RSO-1360-97, Ht. NX0264HG1 Lot 135888	Replacement	No
RCS Loop Temperature Nozzle; Mat. Code 027-79858	SCE	240-97	97120737 98012464 2PT-142-98 2PT-197-98	RSO-1360-97, Ht. NX0264HG1 Lot 135888	Replacement	No
RCS Loop Temperature Nozzle; Mat. Code 027-79858	SCE	241-97	97120739 98012465 2PT-150-98	RSO-1360-97, Ht. NX0264HG1 Lot 135888	Replacement	No
RCS Loop Temperature Nozzle; Mat. Code 027-79858	SCE	242-97	97120740 98012466 2PT-143-98	RSO-1360-97, Ht. NX0264HG1 Lot 135888	Replacement	No

7. Description of Work:

(7) spare instrument nozzles were machined from SB166-N06690 (INCONEL 690) bar stock. Each nozzle was dimensionally verified and all accessible surfaces were PT examined. Ref Dwg: 41116, Sheet 1, Revision 1. Note: Pressure test will be performed at installation (IWA-7400, 1" and less NPS exemption taken for nozzle fab pressure test).

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
Owner or Owner's Designee, Title

Date: 1/22/99

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 01/21/98 to 01/29/99, 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.

Inspector's Signature [Signature]

Commissions

1862

California

National Board, State, Province, and Endorsements

Date

Jan. 29, 1999

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
2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128
3. Work Performed by: Southern California Edison Company
4. Identification of System: Reactor Coolant
- UNIT: 2/3
MO: See item 6 below
Rspec: Same as Serial No. (item 6)
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 Add. (design & fab): ASME III, Class 1, 1989 Edition, 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.	M.O. / PT Report #	Other Identification	Repaired, Replaced or Replacement	ASME Code Stamped Yes/No
RCS Loop Temperature Nozzle; Mat. Code 027-79858	SCE	243-97	97120741 98012467 2PT-151-98	RSO-1360-97, Ht. NX0264HG1 Lot 135888	Replacement	No
RCS Loop Temperature Nozzle; Mat. Code 027-79858	SCE	244-97	97120742 98012468 2PT-152-98	RSO-1360-97, Ht. NX0264HG1 Lot 135888	Replacement	No
RCS Loop Temperature Nozzle; Mat. Code 027-79858	SCE	245-97	97120743 98012469 2PT-144-98	RSO-1360-97, Ht. NX0264HG1 Lot 135888	Replacement	No
RCS Loop Temperature Nozzle; Mat. Code 027-79858	SCE	246-97	97120744 98012470 2PT-145-98	RSO-1360-97, Ht. NX0264HG1 Lot 135888	Replacement	No
RCS Loop Temperature Nozzle; Mat. Code 027-79858	SCE	247-97	97120746 98012471 2PT-146-98	RSO-1360-97, Ht. NX0264HG1 Lot 135888	Replacement	No
RCS Loop Temperature Nozzle; Mat. Code 027-79858	SCE	248-97	97120747 98012472 2PT-153-98	RSO-1360-97, Ht. NX0264HG1 Lot 135888	Replacement	No

7. Description of Work:

(6) spare instrument nozzles were machined from SB166-N06690 (INCONEL 690) bar stock. Each nozzle was dimensionally verified and all accessible surfaces were PT examined. Ref Dwg: 41116, Sheet 1, Revision 1. Note: Pressure test will be performed at installation (TWA-7400, 1" and less NPS exemption taken for nozzle fab pressure test).

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
Owner or Owner's Designee, Title

Date: 1/28/99

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 06/10/98 to 01/29/99, 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.

Inspector's Signature [Signature]

Commissions 1862

California

National Board, State, Province, and Endorsements

Date Jan. 29, 1999

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
AR: 98010178200
Rspec: N/A
P&ID: 40114D
N-5: S2-1204-37
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
4. Identification of System: Safety Injection and Shutdown Cooling
Expiration Date: N/A
5. (a) Applicable Construction Code: ASME Section III, Class 2, 1974 Edition, Summer 1974 Addenda; Code Case: None
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 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
Flued Head of Piping Containment Penetration #6	Ametek	141	N/A	S21204ML111	1976	---	Yes

7. Description of Work:

The flued head of penetration #6, marked with serial number 141, had the design parameters rerated. Previous design pressure was 1600 psig @ 200 deg. F and has been rerated to a design pressure of 1900 psig @ 400 deg. F per AR 980101782.

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
Owner or Owner's Designee, Title

Date: 8/28/98

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 8/31/98 to 8/31/98, 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]
Inspector's Signature

Commissions 1862 California
National Board, State, Province, and Endorsements

Date August 31, 1998

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
2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128
3. Work Performed by: Southern California Edison Company
4. Identification of System: Reactor Coolant
- Unit: 2
MO: 98010376000
Rspec: ASME SECTION XI DATA-0173
P&ID: 40111B (G7)
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, 1974 Edition, No 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" Pressurizer Safety Valve	Dresser	BS-03210	N/A	2PSV0200	1978	Replaced	Yes
6" x 8" Pressurizer Safety Valve	Dresser	BS-03212	N/A	RSO-0239-98	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. The replacement valve body's internal surface was visually examined (VT-3) with satisfactory results. The removed valve was placed into the rebuild program.

8. Tests Conducted: System Leakage Pressure Test
See: AR 980701362-40

Pressure: NOP

Temp: NOT

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

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
Owner or Owner's Designee, Title

Date: 4/14/99

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 12/03/98 to 04/15/99, 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]
Inspector's Signature

Commissions

1862

California

National Board, State, Province, and Endorsements

Date

April 15, 1999

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
2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128
3. Work Performed by: Southern California Edison Company
4. Identification of System: Reactor Coolant
- Unit: 2
MO: 98010393000
Rspec: GEN-140 R2
P&ID: 40111B (G6)
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, Summer 1971 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
Pressurizer	CE	70602	21495	S21201ME087	1976	---	Yes
1 1/2"-8N Manway Heavy Hex Nuts (20)	ABB Combustion Engineering	Ht.#M66401 H092, Ht. Code Y12	N/A	RSO-1244-98, SA193 Gr.B7	N/A	Replacement	No

7. Description of Work:

The pressurizer manway studs and nuts were removed and examined. All manway studs were acceptable for reuse, but all (20) manway nuts were replaced. The specific location of the replacement nuts was identified by etching the stud hole number onto the replacement nuts. A VT-1 examination was performed on the studs and the replacement nuts with satisfactory results.

8. Tests Conducted: System Leakage Pressure Test

Pressure: NOP

Temp: NOT

See: AR 980701362-17

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
Owner or Owner's Designee, Title

Date: 4/20/99

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 12/23/98 to 4/21/99, 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]
Inspector's Signature

Commissions 1862 California
National Board, State, Province, and Endorsements

Date April 21, 1999

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
2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128
3. Work Performed by: Southern California Edison Company
4. Identification of System: Reactor Coolant
- Unit: 2
MO: 98010421000
Rspec: ASME SECTION XI DATA-0173
P&ID: 40111B (G7)
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, 1974 Edition, No 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" Pressurizer Safety Valve	Dresser	BS-03211	N/A	2PSV0201 (to be rebuilt on MO 98110372)	1978	Replaced	Yes
6" x 8" Pressurizer Safety Valve	Dresser	BU-06253	N/A	RSO-0239-98	1980	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 flange bolting with satisfactory results. The replacement valve body's internal surface was visually examined (VT-2) with satisfactory results. The removed valve was placed into the rebuild program.

8. Tests Conducted: System Leakage Pressure Test

Pressure: NOP

Temp: NOT

See: AR 980701362-40

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
Owner or Owner's Designee, Title

Date: 4/21/99

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 12/3/98 to 4/21/99, 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]
Inspector's Signature

Commissions 1862 California
National Board, State, Province, and Endorsements

Date April 21, 1999

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
2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128
3. Work Performed by: Southern California Edison Company
4. Identification of System: Main Steam
- Unit: 2
MO: 98010466000
Rspec: ASME SECTION XI DATA-0189
P&ID: 40141D
N-5: S2-1301-1
- 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
6" x 10" Main Steam Safety Valve	Crosby Valve & Gage	N58737-00-0035	N/A	2PSV8405	1977	Replaced	Yes
6" x 10" Main Steam Safety Valve	Crosby Valve & Gage	N58737-01-0010	N/A	RSO-0007-98-01	1976	Replacement	Yes
1 3/8" x 9" Inlet Studs (12)	Nova Machine Products	Ht.#97138	N/A	RSO-1584-98, SA193 Gr.B7 (CR-3005-96)	N/A	Replacement	No
1 3/8" Heavy Hex Inlet Nuts (12)	Nova Machine Products	Ht.#83633, Ht. Code FGS	N/A	RSO-1212-97, SA194 Gr.7 (CR-3004-96), (SEE 92-0065)	N/A	Replacement	No

7. Description of Work:

The main steam safety valve (2PSV8405) was replaced for preventative maintenance action with a set-point tested spare valve. During installation 12 inlet studs and nuts were also replaced. The removed valve was placed into the rebuild program to be rebuilt under MO 98120080.

8. Tests Conducted: System Inservice Pressure Test

Pressure: NOP

Temp: N/A

See: AR 980701362-24

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-3004-96 (nuts) and CR-3005-96 (studs) reconciles the replacement bolting which was certified to ASME III-2, 1989 Ed., No Add. SEE No. 92-0065 allows for the replacement of Gr.2H with Gr.7 (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 Authorization No: N/A

Expiration Date: N/A

Signed: [Signature] Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 4/29/99

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 11/10/98 to 4/30/99, 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]
Inspector's Signature

Commissions

1862

California

National Board, State, Province, and Endorsements

Date

April 30, 1999

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: 98010485000
Rspec: ASME SECTION XI DATA-0192
P&ID: 40141D
N-5: S2-1301-1

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
6" x 10" Main Steam Safety Valve	Crosby Valve & Gage	N58737-00-0040	N/A	2PSV8408	1984	Replaced	Yes
6" x 10" Main Steam Safety Valve	Crosby Valve & Gage	N58737-01-0015	N/A	RSO-0007-98-01	1976	Replacement	Yes
1 3/8" x 9" Inlet Studs (12)	Nova Machine Products	Ht.#97138	N/A	RSO-1584-98, SA193 Gr.B7 (CR-3005-96)	N/A	Replacement	No
1 3/8" Heavy Hex Inlet Nuts (12)	Nova Machine Products	Ht.#83633, Ht. Code FGS	N/A	RSO-1212-97, SA194 Gr.7 (CR-3004-96), (SEE 92-0065)	N/A	Replacement	No

7. Description of Work:

The main steam safety valve (2PSV8408) was replaced for preventative maintenance action with a set-point tested spare valve. During installation 12 inlet studs and nuts were also replaced. The removed valve was placed into the rebuild program to be rebuilt under MO 98120093.

8. Tests Conducted: System Inservice Pressure Test

Pressure: NOP

Temp: N/A

See: AR 980701362-24

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 (nuts) and CR-3005-96 (studs) reconciles the replacement bolting which was certified to ASME III-2, 1989 Ed., No Add. SEE No. 92-0065 allows for the replacement of Gr.2H with Gr.7 (nuts).

(Applicable Manufacturers Data Reports are available on-site)

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this replacement conforms to the rules of the ASME Code, Section XI. 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
Owner or Owner's Designee, Title

Date: 4/29/99

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 11/6/98 to 4/30/99, 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]
Inspector's Signature

Commissions 1862 California
National Board, State, Province, and Endorsements

Date April 30, 1999

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

As Required by the Provisions of the ASME Code Section XI

- | | |
|---|---|
| <p>1. Owner: Southern California Edison Company
2244 Walnut Grove Avenue
Rosemead, California 91770</p> <p>2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128</p> <p>3. Work Performed by: Southern California Edison Company</p> <p>4. Identification of System: Main Steam</p> | <p>Unit: 2</p> <p>MO: 98010494000</p> <p>Rspec: ASME SECTION XI DATA-0186</p> <p>P&ID: 40141C</p> <p>N-5: S2-1301-2</p> <p>Type Code Symbol Stamp: N/A</p> <p>Authorization No: N/A</p> <p>Expiration Date: N/A</p> |
|---|---|

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 10" Main Steam Safety Valve	Crosby Valve & Gage	N58737-00-0026	N/A	2PSV8411	1977	Replaced	Yes
6" x 10" Main Steam Safety Valve	Crosby Valve & Gage	N58737-01-0017	N/A	RSO-0007-98-01	1976	Replacement	Yes
1 3/8" x 9" Inlet Studs (12)	Nova Machine Products	Ht.#97138	N/A	RSO-1584-98, SA193 Gr.B7 (CR-3005-96)	N/A	Replacement	No
1 3/8" Heavy Hex Inlet Nuts (12)	Nova Machine Products	Ht.#83633, Ht. Code FGS	N/A	RSO-1212-97, SA194 Gr.7 (CR-3004-96), (SEE 92-0065)	N/A	Replacement	No

7. Description of Work:

The main steam safety valve (2PSV8411) was replaced for preventative maintenance action with a set-point tested spare valve. During installation 12 inlet studs and nuts were also replaced. The removed valve was placed into the rebuild program to be rebuilt under MO 98120095.

8. Tests Conducted: System Inservice Pressure Test
- See: AR 980701362-25

Pressure: NOP

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-3004-96 (nuts) and CR-3005-96 (studs) reconciles the replacement bolting which was certified to ASME III-2, 1989 Ed., No Add. SEE No. 92-0065 allows for the replacement of Gr.2H with Gr.7 (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 Authorization No: N/A

Expiration Date: N/A

Signed: [Signature] Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 4/29/99

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 11/6/98 to 4/30/99, 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]
Inspector's Signature

Commissions 1862 California
National Board, State, Province, and Endorsements

Date April 30, 1999

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: 98010501000
Rspec: ASME SECTION XI DATA-0188
P&ID: 40141C
N-5: S2-1301-2
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
6" x 10" Main Steam Safety Valve	Crosby Valve & Gage	N58737-00-0039	N/A	2PSV8413	1984	Replaced	Yes
6" x 10" Main Steam Safety Valve	Crosby Valve & Gage	N58737-01-0027	N/A	RSO-0007-98-01	1977	Replacement	Yes
1 3/8" x 9" Inlet Studs (12)	Nova Machine Products	Ht.#97138	N/A	RSO-1584-98, SA193 Gr.B7 (CR-3005-96)	N/A	Replacement	No
1 3/8" Heavy Hex Inlet Nuts (12)	Nova Machine Products	Ht.#83633, Ht. Code FGS	N/A	RSO-1212-97, SA194 Gr.7 (CR-3004-96), (SEE 92-0065)	N/A	Replacement	No

7. Description of Work:

The main steam safety valve (2PSV8413) was replaced for preventative maintenance action with a set-point tested spare valve. During installation 12 inlet studs and nuts were also replaced. The removed valve was placed into the rebuild program to be rebuilt under MO 98120101.

8. Tests Conducted: System Inservice Pressure Test

Pressure: NOP

Temp: N/A

See: AR 980701362-25

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 (nuts) and CR-3005-96 (studs) reconciles the replacement bolting which was certified to ASME III-2, 1989 Ed., No Add. SEE No. 92-0065 allows for the replacement of Gr.2H with Gr.7 (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 Authorization No: N/A

Expiration Date: N/A

Signed: [Signature] Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 4/29/99

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 11/06/98 to 4/30/99, 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]
Inspector's Signature

Commissions 1862 California
National Board, State, Province, and Endorsements

Date April 30, 1999

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
2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128
3. Work Performed by: Southern California Edison Company
4. Identification of System: Main Steam
- Unit: 2
MO: 98010509000
Rspec: ASME SECTION XI DATA-0189
P&ID: 40141C
N-5: S2-1301-2
- 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
6" x 10" Main Steam Safety Valve	Crosby Valve & Gage	N58737-00-0042	N/A	2PSV8414	1993	Replaced	Yes
6" x 10" Main Steam Safety Valve	Crosby Valve & Gage	N58737-01-0016	N/A	RSO-0007-98-01	1976	Replacement	Yes
1 3/8" x 9" Inlet Studs (12)	Nova Machine Products	Ht.#97138	N/A	RSO-1584-98, SA193 Gr.B7 (CR-3005-96)	N/A	Replacement	No
1 3/8" Heavy Hex Inlet Nuts (12)	Nova Machine Products	Ht.#83633, Ht. Code FGS	N/A	RSO-1212-97, SA194 Gr.7 (CR-3004-96), (SEE 92-0065)	N/A	Replacement	No

7. Description of Work:

The main steam safety valve (2PSV8414) was replaced for preventative maintenance action with a set-point tested spare valve. During installation 12 inlet studs and nuts were also replaced. The removed valve was placed into the rebuild program to be rebuilt under MO 98120104.

8. Tests Conducted: System Inservice Pressure Test

Pressure: NOP

Temp: N/A

See: AR 980701362-25

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-3004-96 (nuts) and CR-3005-96 (studs) reconciles the replacement bolting which was certified to ASME III-2, 1989 Ed., No Add. SEE No. 92-0065 allows for the replacement of Gr.2H with Gr.7 (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 Authorization No: N/A

Expiration Date: N/A

Signed: [Signature] Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 4/23/99

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 11/17/99 to 4/20/99, 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]
Inspector's Signature

Commissions 1862 California
National Board, State, Province, and Endorsements

Date April 30, 1999

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: 98010514000
Rspec: ASME SECTION XI DATA-0190
P&ID: 40141C
N-5: S2-1201-2

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
6" x 10" Main Steam Safety Valve	Crosby Valve & Gage	N58737-00-0041	N/A	2PSV8415	1984	Replaced	Yes
6" x 10" Main Steam Safety Valve	Crosby Valve & Gage	N58737-01-0009	N/A	RSO-0007-98-01	1976	Replacement	Yes
1 3/8" x 9" Inlet Studs (12)	Nova Machine Products	Ht.#97138	N/A	RSO-1584-98, SA193 Gr.B7 (CR-3005-96)	N/A	Replacement	No
1 3/8" Heavy Hex Inlet Nuts (12)	Nova Machine Products	Ht.#83633, Ht. Code FGS	N/A	RSO-1212-97, SA194 Gr.7 (CR-3004-96), (SEE 92-0065)	N/A	Replacement	No

7. Description of Work:

The main steam safety valve (2PSV8415) was replaced for preventative maintenance action with a set-point tested spare valve. During installation 12 inlet studs and nuts were also replaced. The removed valve was placed into the rebuild program to be rebuilt under MO 98120105.

8. Tests Conducted: System Inservice Pressure Test

Pressure: NOP

Temp: N/A

See: AR 980701362-25

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 (nuts) and CR-3005-96 (studs) reconciles the replacement bolting which was certified to ASME III-2, 1989 Ed., No Add. SEE No. 92-0065 allows for the replacement of Gr.2H with Gr.7 (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 Authorization No: N/A

Expiration Date: N/A

Signed: [Signature] Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 4/29/99

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 11/17/98 to 4/20/99, 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.

Inspector's Signature

Commissions

1862

California

National Board, State, Province, and Endorsements

Date

April 30, 1999

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: 98010565000
Rspec: ASME SECTION XI DATA-0205
P&ID: 40124A (C6)
N-5: S2-1208-8

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
3"x 4" Relief Valve	Crosby Valve & Gage	N59379-00-0001	N/A	2PSV9220 (to be rebuilt on MO 99011047)	1978	Replaced	Yes
3"x 4" Relief Valve	Crosby Valve & Gage	N59379-00-0003	N/A	RSO-1306-93	1993	Replacement	Yes

7. Description of Work:

The relief valve in plant position 2PSV9220 was replaced with a tested spare as a preventative maintenance action. The removed valve was placed into the rebuild program (to be rebuilt under MO 99011047).

8. Tests Conducted: System Inservice Pressure Test

Pressure: NOP

Temp: NOT

See: AR 980701362-41

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 AJA.

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
Owner or Owner's Designee, Title

Date: 5/5/99

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 1/5/99 to 5/6/99, 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]
Inspector's Signature

Commissions 1862 California
National Board, State, Province, and Endorsements

Date May 6, 1999

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
2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128
3. Work Performed by: Southern California Edison Company
4. Identification of System: Reactor Coolant
5. (a) Applicable Construction Code: ASME Section III, Class 1, 1971 Edition, Summer 1972 Add. (design & fab): ASME
Section III, Class 1, 1989 Edition, No Add. (material): Code Case: N-474-1
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Edition, No Addenda

Unit: N
MO: 98012729000 (mach) 98012733000 (weld),
98013012000 (mach)
Rspec: 004-98
P&ID: N/A
N-5: N/A
Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

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 Hot Leg Sample Nozzle; Mat. Code 027-79874	SCE	004-98	N/A	RSO-1646-97, Ht.# NX0643HG1, Lot #136503; RSO-1711-97, Ht.# 435702, Lot #92411	N/A	Replacement	No

7. Description of Work:

A spare sample nozzle was machined from SB166-N06690 (INCONEL 690) bar stock. A stainless steel safe-end (SA312-TP316L, 3/4 NPS schedule 160 pipe) was welded to the INCONEL section per WR2/3-98-030. PT examinations were performed on all accessible machined surfaces (Ref: 2PT-148-98). RT and PT examinations were performed on the weld (Ref: 2RT-030-98 and 2PT-189-98 and 2PT-192-98). Ref Dwg: 41116, Revision 1, Sheet 1 & DCN #3. Note: Pressure test will be performed after installation (IWA-7400, less than 1" NPS exemption taken for nozzle fab pressure test).

8. Tests Conducted: N/A

Pressure: N/A

Temp: N/A

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 Authorization No: N/A

Expiration Date: N/A

Signed: [Signature] Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 1/6/99

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 1/23/98 to 1/6/99, 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]
Inspector's Signature

Commissions 1862 California
National Board, State, Province, and Endorsements

Date Jan. 6, 1999

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: 98012730000 (mach) 98012734000 (weld),
98013015000 (mach)
Rspec: 005-98
2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128
P&ID: N/A
N-5: N/A
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 1972 Add. (design & fab): ASME
Section III, Class 1, 1989 Edition, 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
RCS Hot Leg Sample Nozzle; Mat. Code 027-79874	SCE	005-98	N/A	RSO-1646-97, Ht.# NX0643HG1, Lot #136503; RSO-1711-97, Ht.# 435702, Lot #92411	N/A	Replacement	No

7. Description of Work:

A spare sample nozzle was machined from SB166-N06690 (INCONEL 690) bar stock. A stainless steel safe-end (SA312-TP316L, 3/4 NPS schedule 160 pipe) was welded to the INCONEL section per WR2/3-98-030. PT examinations were performed on all accessible machined surfaces (Ref: 2PT-163-98). RT and PT examinations were performed on the weld (Ref: 2RT-031-98 and 2PT-190-98 and 2PT-193-98). Ref Dwg: 41116, Revision 1, Sheet 1 & DCN #3. Note: Pressure test will be performed after installation (IWA-7400, less than 1" NPS exemption taken for nozzle fab pressure test).

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 : 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 Authorization No: N/A

Expiration Date: N/A

Signed: [Signature] Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 1/6/99

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 1/23/98 to 1/6/99, 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]
Inspector's Signature

Commissions

1862

California

National Board, State, Province, and Endorsements

Date

Jan. 6, 1999

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: 98012731000 98013016000 (mach),
98012735000 (weld)
Rspec: 006-98
2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128
P&ID: N/A
N-5: N/A
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 1972 Addenda; 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
RCS Hot Leg Sample Nozzle Mat Code 027-79874	SCE	006-98	N/A	RSO-1646-97, Ht.# NX0643HG1, Lot #136503; RSO-1711-97, Ht. #435702 lot # 92411	N/A	Replacement	No

7. Description of Work:

A spare sample nozzle was machined from SB166-N06690 (INCONEL 690) bar stock. A stainless steel safe-end (SA312-TP316L, 3/4 NPS schedule 160 pipe) was welded to the INCONEL section per WR2/3-98-031. PT examinations were performed on all accessible machined surfaces (Ref: 2PT-147-98 and 2PT-159-98). RT and PT examinations were performed on the weld (Ref: 2RT-025-98 and 2PT-160-98). Ref Dwg: 41116, Revision 1, Sheet 1 & DCN #3. Note: Pressure test will be performed after installation (TWA-7400, less than 1" NPS exemption taken for nozzle fab pressure test).

8. Tests Conducted: N/A

Pressure: N/A

Temp: N/A

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 Authorization No: N/A

Expiration Date: N/A

Signed: [Signature] Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 4/19/99

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 01/23/98 to 04/20/99, 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.

Inspector's Signature

Commissions

1862

California

National Board, State, Province, and Endorsements

Date

April 20, 1999

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
2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128
3. Work Performed by: Southern California Edison Company
4. Identification of System: Reactor Coolant
5. (a) Applicable Construction Code: ASME Section III, Class 1, 1971 Edition, Summer 1972 Add. (design & fab); ASME Section III, Class 1, 1989 Edition, No Add. (material); Code Case: N-474-1
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Edition, No Addenda

Unit: N
MO: 98012736000 98013019000 (mach),
98012737002 (weld)
Rspec: 007-98 R2
P&ID: N/A
N-5: N/A

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

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 Hot Leg Sample Nozzle; Mat. Code 027-79874	SCE	007-98	N/A	RSO-1646-97, Ht.# NX0643HG1, Lot #136503; RSO-1711-97, Ht.#435702 lot # 92411	N/A	Replacement	No

7. Description of Work:

A spare sample nozzle was machined from SB166-N06690 (INCONEL 690) bar stock. A stainless steel safe-end (SA312-TP316L, 3/4 NPS schedule 160 pipe) was welded to the INCONEL section per WR2/3-98-310. PT examinations were performed on all accessible machined surfaces (Ref: 2PT-149-98, 2PT-181-98 and 2PT-182-98). RT and PT examinations were performed on the weld (Ref: 2RT-029-98 and 2PT-188-98). Ref Dwg: 41116, Revision 1, Sheet 1 & DCN #3. Note: Pressure test will be performed after installation (IWA-7400, less than 1" NPS exemption taken for nozzle fab pressure test).

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 : 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 Authorization No: N/A

Expiration Date: N/A

Signed: [Signature] Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 4/15/99

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 01/23/98 to 04/20/99, 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]
Inspector's Signature

Commissions 1862 California
National Board, State, Province, and Endorsements

Date April 20, 1999

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: 98013163000
Rspec: GEN-106 R2
P&ID: 40111A
N-5: S2-1201-3
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, Class 1, 1980 Edition Summer 1982 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
Reactor Coolant Pump	Byron Jackson	701-N-0557	N/A	S21201MP004	1977	---	Yes
RCP Pump Mechanical Seal	Bingham Willamette	1659057-11	1219	RSO-2320-88, SO23-CART-#25, Rebuild MO 98013378	1986	Replaced	Yes
RCP Pump Mechanical Seal	Bingham Willamette	1714880-8	1168	RSO-2779-86, SO23-CART-#18	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 rebuild program.

8. Tests Conducted: System Leakage Pressure Test

Pressure: NOP

Temp: N/A

See: AR 980101416-3

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
Owner or Owner's Designee, Title

Date: 3/16/98

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 1/27/98 to 3/11/98, 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]
Inspector's Signature

Commissions 1300 California
National Board, State, Province, and Endorsements

Date 3/17/98

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)
5. (a) Applicable Construction Code: ASME Section III, Class 1, 1971 Edition, S'72 Addenda, Code Cases: N/A
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Edition, No Addenda
6. Identification of Components Repaired or Replaced and Replacement Components:

Sheet 1 of 1
Unit: 2
CWO: 98013319000,98020312000
FCN: F14116M, F14705M
Repair Spec: 009-98 REV. 0
P&ID: 40111A / E3
N-5: S2-1201-3
Type Code Symbol Stamp: N/A
Authorization No: N/A
Expiration Date: N/A

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
HOT LEG TOP PLATE	ABB C.E.	HT. Y1491	N/A	RSO-1118-97, SA479 TP.304; E-MNSA-228-004-28	N/A	REPLACEMENT	NO
UPPER FLANGE	ABB C.E.	HT. Y1491	N/A	RSO-1118-97, SA479 TP.304; E-MNSA-228-004-16	N/A	REPLACEMENT	NO
LOWER FLANGE	ABB C.E.	HT. Y0817	N/A	RSO-1118-97, SA479 TP.304; E-MNSA-228-004-17	N/A	REPLACEMENT	NO
SEAL RETAINER	ABB C.E.	HT. 606054	N/A	RSO-1118-97, SA479 TP.304; E-MNSA-228-004-19	N/A	REPLACEMENT	NO
COMPRESSION COLLAR	ABB C.E.	HT. 606054	N/A	RSO-1118-97, SA479 TP.304; E-MNSA-228-004-18	N/A	REPLACEMENT	NO
TIE RODS (4)	ABB C.E.	HT. 516968	N/A	RSO-1118-97, SA453 GR.660; E-MNSA-228-004-14	N/A	REPLACEMENT	NO
HEX HEAD BOLTS (4)	ABB C.E.	HT. 6L9727	N/A	RSO-0116-98, SA453 GR.660; E-MNSA-228-004-13	N/A	REPLACEMENT	NO
HEX NUTS (12)	ABB C.E.	HT. 516560	N/A	RSO-1118-97, SA453 SA453 GR.660; E-MNSA-228-004-27	N/A	REPLACEMENT	NO

7. Description of Work:
A Mechanical Nozzle Seal Assembly (MNSA) was installed on RCS nozzle 2TWO139B on line S21201ML002 (E088 Hot Leg) in accordance with FCN F14116M and Repair Spec. 009-98 Rev. 0. MO 98020312000 machined the OEM RTD nozzle to facilitate installation of the MNSA in accordance with Repair Specification 041-98. Reference: FCN F14705M
8. Tests Conducted: System Leakage ☒ System Functional ☐ System Inservice ☐ Hydrostatic ☐ Pneumatic ☐ Other ☐
Pressure: NOP Temp: N/A
(Ref.: AR #980100396-17 for VT-2)

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 to be attached)

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp: N/A

Certificate of Authorization No: N/A

Expiration Date: N/A

Signed: [Signature] Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 6/3, 19 98

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 2/8/98 to 6/4/98, 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 June 4, 19 98

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)**
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:

Sheet 1 of 1

Unit: 2
CWO: 98013356000, 98020449000
FCN: F14191M
Repair Spec: 026-98 Rev. 0, 043-98 Rev. 0
P&ID: 40111A / E3
N-5: S2-1201-3

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

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
MNSA CLAMP	ABB C.E.	(SEE BELOW)					
HOT LEG TOP PLATE	ABB C.E.	HT. Y2243-3B	N/A	RSO-0116-98, SA479 TP.304; E-MNSA-228-004-28	N/A	REPLACEMENT	NO
UPPER FLANGE	ABB C.E.	HT. Y2243-3B	N/A	RSO-0116-98, SA479 TP.304; E-MNSA-228-004-16	N/A	REPLACEMENT	NO
FLAT LOWER FLANGE	ABB C.E.	HT. 9J050-80	N/A	RSO-0116-98, SA479 TP.304; E-MNSA-228-004-37	N/A	REPLACEMENT	NO
FLAT SEAL RETAINER	ABB C.E.	HT. 50265	N/A	RSO-0116-98, SA479 TP.304; E-MNSA-228-004-32	N/A	REPLACEMENT	NO
COMPRESSION COLLAR	ABB C.E.	HT. 50265	N/A	RSO-0116-98, SA479 TP.304; E-MNSA-228-004-18	N/A	REPLACEMENT	NO
TIE RODS (4)	ABB C.E.	HT. 515422	N/A	RSO-0116-98, SA453 GR.660; E-MNSA-228-004-14	N/A	REPLACEMENT	NO
HEX HEAD BOLTS (4)	ABB C.E.	HT. 517742	N/A	RSO-0116-98, SA453 GR.660; E-MNSA-278-004-13	N/A	REPLACEMENT	NO
HEX NUTS (12)	ABB C.E.	HT. 518635	N/A	RSO-0116-98, SA453 GR.660; E-MNSA-228-004-27	N/A	REPLACEMENT	NO

7. Description of Work:
Base material on pipe spool 503-03 was removed to facilitate the installation of a MNSA clamp at location 2TE0122-4 (Reference: CWO 98020449 AR/CPR 980200513, Repair Spec. 043-98).

A Mechanical Nozzle Seal Assembly (MNSA) was installed on Reactor Coolant Hot Leg RTD 2TE0122-4 (E-088 Hot Leg) in accordance with CWO 98013356000 and Repair Spec. 026-98 Rev. 0.
8. Tests Conducted: System Leakage ☒ System Functional ☐ System Inservice ☐ Hydrostatic ☐ Pneumatic ☐ Other ☐
Pressure: NOP Temp: N/A
(Reference: AR #980300261 for VT-2 information).

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 to be attached)

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp: N/A

Certificate of Authorization No: N/A

Expiration Date: N/A

Signed: [Signature]
Owner or Owner's Designee, Title

Supervising ASME Codes Engineer

Date: 6/3, 1998

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 2/8/98 to 6/4/98, 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 June 11, 1998

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
2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128
3. Work Performed by: Bechtel Construction Company
P.O. Box 450
San Clemente, CA. 92674-0128
4. Identification of System: Reactor Coolant
5. (a) Applicable Construction Code: ASME Section III, Class 1, 1971 Edition, Summer 1971 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
Steam Generator	ABB Combustion Engineering	71270-1	22218	S21301ME089P	1976	Repaired	Yes
Lower Flange	ABB Combustion Engineering	Ht.# Y3496-6B, E-MNSA-228-013-2	N/A	RSO-0116-98, SA479 Tp.304	N/A	Replacement	No
Upper Flange-Top	ABB Combustion Engineering	Ht.# 198930, E-MNSA-228-013-11	N/A	RSO-0116-98, SA479 Tp.304	N/A	Replacement	No
Upper Flange-Bottom	ABB Combustion Engineering	Ht.# 198930, E-MNSA-228-013-10	N/A	RSO-0116-98, SA479 Tp.304	N/A	Replacement	No
Seal Retainer	ABB Combustion Engineering	Ht.# 50265, E-MNSA-228-013-3	N/A	RSO-0116-98, SA479 Tp.304	N/A	Replacement	No
Compression Collar	ABB Combustion Engineering	Ht.# 46236, E-MNSA-228-013-4	N/A	RSO-0116-98, SA479 Tp.304	N/A	Replacement	No
Top Plate	ABB Combustion Engineering	Ht.# 9J050-80, E-MNSA-228-013-6	N/A	RSO-0116-98, SA479 Tp.304	N/A	Replacement	No
Tie Rods (4 per assembly)	ABB Combustion Engineering	Ht.# 515422, E-MNSA-228-013-1	N/A	RSO-0116-98, SA453 Gr.660	N/A	Replacement	No
Socket Head Shoulder Screws (2 per assembly)	ABB Combustion Engineering	Ht.# 519162, E-MNSA-228-013-7	N/A	RSO-0116-98, SA453 Gr.660	N/A	Replacement	No
Hex Head Bolts 3.25" Long (2 per assembly)	ABB Combustion Engineering	Ht.# 517742, E-MNSA-228-013-8	N/A	RSO-0116-98, SA453 Gr.660	N/A	Replacement	No
Hex Head Bolts 2.56" Long (2 per assembly)	ABB Combustion Engineering	Ht.# 517742, E-MNSA-228-013-9	N/A	RSO-0116-98, SA453 Gr.660	N/A	Replacement	No
Hex Nuts (12 per assembly)	ABB Combustion Engineering	Ht.# 518635, E-MNSA-228-004-27	N/A	RSO-0116-98, SA453 Gr.660	N/A	Replacement	No

7. Description of Work:

Mechanical Nozzle Seal Assemblies (MNSAs) Part No. E-MNSA-228-014-1, were installed on steam generator E-089 (S21301ME089P) for 2PDT-0978-1 and 2PDT-0978-2 in accordance with Repair Specification 033-98 and per FCNs F14493M and F14508M. A VT-1 examination was performed on the replacement bolting and tie rods with satisfactory results. (Reference: NCR 980101568)

8. Tests Conducted: System Leakage Pressure Test Pres: NOP Temp: NOT
See: AR 980100396-14

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 Authorization No: N/A

Expiration Date: N/A

Signed: [Signature] Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 3/16/98

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 2/4/98 to 3/16/98, 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.

James C. Keenan
Inspector's Signature

Commissions

1300

California

National Board, State, Province, and Endorsements

Date

3/16/98

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)**
5. (a) Applicable Construction Code: **ASME Section III, Class 1, 1971 Edition, S'71 Addenda, Code Cases: N/A**
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: **1989 Edition, No Addenda**
6. Identification of Components Repaired or Replaced and Replacement Components:

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped Yes/No
Steam Generator	ABB C.E.	71270-1	22218	S21301ME089P	1976	REPAIRED	YES
Instrument Nozzle	ABB C.E.	N/A	N/A	Nozzle for 2PDT0978-2	N/A	NO

7. Description of Work:
- The Instrument Nozzle for 2PDT-0978-2 was cut to rotate valve S21201MR182 to facilitate installation of a Mechanical Nozzle Seal Assembly (MNSA) in accordance with FCN F14784M and Repair Spec. 040-98 Rev. 0. After nozzle was cut, valve was rotated & rewelded in accordance with weld record WR2-98-071. Note: A system leakage test will be performed after MNSA clamp is installed. See CWO 98013360 (installation) and AR 980100396-14 (VT-2).
8. Tests Conducted: System Leakage ☐ System Functional ☐ System Inservice ☐ Hydrostatic ☐ Pneumatic ☐ Other ☐
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 Authorization No: N/A

Expiration Date: N/A

Signed: [Signature] Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 4/11/98

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 02/05/98 to 04/13/98, 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 [Signature]

Commissions 1862 California
National Board, State, Province, and Endorsements

Date April 13, 1998

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: 98020665000
Rspec: GEN-105
P&ID: 40141A (E5)
N-5: S2-1201-3
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, Class 1, 1971 Edition, Summer 1971 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
Steam Generator	CE	71270-2	22219	S21301ME088P	1976	---	Yes
1 1/2"x 14 1/4" Manway Stud (1)	Crosby Valve & Gage	S/N N93878-0025, Ht.# 95648, Tr. Code V46P	N/A	RSO-1887-85-01, SA540 Gr.B24	N/A	Replacement	No

7. Description of Work:

The bolting on the steam generator manway cover required that (1) stud be replaced. The specific location of the replacement stud was identified by stamping the stud hole number onto the replacement stud. A VT-1 inspection was performed on the replacement stud.

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 : 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
Owner or Owner's Designee, Title

Date: 3/16/98

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 2/13/98 to 3/4/98, 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.

James C Keenan
Inspector's Signature

Commissions

1300 California
National Board, State, Province, and Endorsements

Date

3/16/98

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
2. Plant: San Onofre Nuclear Generating Station
San Clemente, California 92674-0128
3. Work Performed by: Southern California Edison Company
4. Identification of System: Reactor Coolant
- Unit: N
MO: 98021133000 98021133001, 98021269000
Rspec: 055-98
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 1971 Add. Code Case: N474-1
(material: 1989 Edition, No Add.)
(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 Sleeve M/C 027-79932	SCE	055-98	N/A	RSO-1685-97, ht. #NX0643HG1 lot#136501A	N/A	Replacement	No

7. Description of Work:

A partial length pressurizer heater sleeve was machined from SB166-N06690 bar stock for installation into the Unit 3 Pressurizer (S31201ME087) at penetration "F1". Reference: AR 990302182. After final machining, all accessible surfaces were PT examined (see report 3PT-097-99).

Note: Pressure Test will be performed on installation.

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 : 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
Owner or Owner's Designee, Title

Date: 4/20/99

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 2/27/98 to 4/21/99, 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]
Inspector's Signature

Commissions 1862 California
National Board, State, Province, and Endorsements

Date April 21, 1999

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)

Sheet 1 of 1

Unit: 2
CWO: 98031719000, 98041087000,
98041089000
FCN: F13920M, F13924M
Repair Spec: 112-98
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 Nozzle	SCE	212-97	N/A	2PDT0979-1	N/A	Replacement	No
3/8 x 3/4" S160 Pipe/Tube Adapt.	Parker-Hannifin	HT. Code CENZ	N/A	RSO 1628-97, SA479 Gr.316	N/A	Replacement	No
3/4" 1500# S.S. Globe Valve	BW / IP	97ZV1202	N/A	RSO 0424-98, S2-1201-MR-189	1998	Replacement	Yes
Inconel 690 Nozzle	SCE	206-97	N/A	2PDT0979-4	N/A	Replacement	No
3/8 x 3/4" S160 Pipe/Tube Adapt.	Parker-Hannifin	HT. Code CENZ	N/A	RSO 1628-97, SA479 Gr.316	N/A	Replacement	No
3/4" 1500# S.S. Globe Valve	BW / IP	97ZV1208	N/A	S2-1201-MR-195 RSO 0424-98-00	1998	Replacement	Yes

7. Description of Work:
New root valve assemblies for 2PDT0979-1 (S2-1201-MR-189) and 2PDT0979-4 (S2-1201-MR-195) were fabricated with replacement Inconel 690 half nozzles in accordance with weld records WR2-98-180 (2PDT-0979-1 / CWO 98041087000) and WR-98-181 (2PDT0979-4 / CWO 98041089000).

The new root valve assemblies were installed in locations 2PDT0979-1 and 2PDT0979-4 in accordance with weld record WR2-98-199 and Repair Spec. 112-98 Rev. 0. The instrument nozzles are located on Hot Leg 503-03.

8. Tests Conducted: System Leakage ☒ System Functional ☐ System Inservice ☐ Hydrostatic ☐ Pneumatic ☐ Other ☐
Pressure: NOP Temp: NOT

(Reference: AR 930701362-12 for VT-2)

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 to be attached)

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp: N/A

Certificate of Authorization No: N/A

Expiration Date: N/A

Signed: [Signature]
Owner or Owner's Designee, Title

Supervising ASME Codes Engineer

Date: 3/30, 1999

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 6/24/98 to 3/31/99, 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.

Inspector's Signature

Commissions 1862 California
(National Board, State, Province, and Endorsements)

Date March 31, 1999

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)
- Sheet 1 of 1
Unit: 2
CWO: 98032390000, 98040033000, 98040033001, 98040031000, 98040031001
FCN: F13912M, F13916M
Repair Spec: 111-98
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 Nozzle	SCE	214-97	N/A	2PDT0978-3	N/A	Replacement	No
3/8 x 3/4" S160 Pipe/Tube Adapt.	Parker-Hannifin	HT. CENZ	N/A	RSO 1628-97, SA479 Gr.316	N/A	Replacement	No
3/4" 1500# S.S. Globe Valve	BW / IP	97ZV1203	N/A	RSO 0424-98, S2-1201-MR-185	1998	Replacement	Yes
Inconel 690 Nozzle	SCE	207-97	N/A	2PDT0978-4	N/A	Replacement	No
3/8 x 3/4" S160 Pipe/Tube Adapt.	Parker-Hannifin	HT. CENZ	N/A	RSO 1628-97, SA479 Gr.316	N/A	Replacement	No
3/4" 1500# S.S. Globe Valve	BW / IP	97ZV1207	N/A	RSO 0424-98, S2-1201-MR-187	1998	Replacement	Yes

7. Description of Work:
New root valve assemblies for 2PDT0978-3 (S2-1201-MR-185) and 2PDT0978-4 (S2-1201-MR-187) were fabricated with replacement Inconel 690 half nozzles in accordance with weld records WR2-98-182 (2PDT-0978-3 / CWO 98040033000/001) and WR-98-183 (2PDT0978-4 / CWO 98040031000/001).
The new root valve assemblies were installed in instrument locations 2PDT0978-3 and 2PDT0978-4 in accordance with weld record WR2-98-198 and Repair Spec. 111-98. The instrument nozzles are located on Hot Leg 503-01.
8. Tests Conducted: System Leakage ☒ System Functional ☐ System Inservice ☐ Hydrostatic ☐ Pneumatic ☐ Other ☐
Pressure: NOP Temp: NOT
(Reference: AR 980701362-11 for VT-2)

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 to be attached)

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp: N/A

Certificate of Authorization No: N/A

Expiration Date: N/A

Signed: [Signature] Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 4/2, 1999

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 06/25/98 to 04/05/99, 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.

Inspector's Signature [Signature]

Commissions 1862 California
(National Board, State, Province, and Endorsements)

Date April 5, 1999

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

As Required by the Provisions of the ASME Code Section XI

Sheet 1 of 1

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

Unit: 2
MO: 98040284001 98040284000
FCN: F15282M, F15283M
Rspec: ASME SECTION XI DATA-0176,
970200868-12
P&ID: 40124A (H6)
N-5: S2-1208-11

4. Identification of System: Chemical and Volume Control

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

5. (a) Applicable Construction Code: ASME Section III, Class 2, 1971 Ed., S'73 Add. (valve), 1974 Ed., S'74 Add. (piping & installation); Code Case: None
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements: 1989 Edition, No Addenda; 1992 Edition, No Addenda (NDE & 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# Flow Diverting Valve	ITT Hammel-Dahl	74/5797/018	N/A	2LV0227A	1978	Replaced	Yes
3" 150# 3-way Valve	Fisher Controls	14929451	N/A	RSO-1453-98, SA351 Gr.CF8M	1998	Replacement	Yes
3" NPS Sch. 40s Seamless Pipe	Al Tech Specialty	Ht.# AH9998	N/A	RSO-1637-96, SA376 Gr.304	N/A	Replacement	No
3" Sch. 40s Pipe Elbow	Energy & Process Corp.	Ht.# 00091	N/A	RSO-1456-98, SA403 Gr.304	N/A	Replacement	No
3" 150# Pipe Flange	Tioga Pipe Supply Co.	Ht. Code C4600	N/A	RSO-1631-98, SA182 Gr. F304	N/A	Replacement	No
3" Sch. 10 Pipe	Dubose National Energy Svcs.	Ht.# 770223, Tr. Code 12945	N/A	RSO-0173-99, SA376 Gr.TP304	N/A	Replacement	No

7. Description of Work:

Replaced the existing ITT Hammel Dahl 3-way valve in plant location 2LV0227A with a Fisher 3-way valve in accordance with FCN's F15282M, F15283M, F15279M, F15280M, F15284M, F15285M, Repair Specification 970200868-12, and ASME XI DATA-0176. All welding was performed in accordance with weld records WR2-98-388, WR2-98-389, WR2-98-390, WR2-98-391, WR2-99-125 and WR2-99-127. NDE examinations (2RT-013-99, 2RT-014-99, 2RT-015-99, 2RT-016-99, 2RT-025-99 and 2RT-026-99) were performed with satisfactory results. Note: NDE examinations (2RT-021-99 and 2RT-022-99) performed in accordance with weld records WR2-98-382 Rev. 0 and Rev. 1 were rejected.

8. Tests Conducted: System Leakage Pressure Test
See: AR 970200868-13

Pres: NOP

Temp: NOT

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

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

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 Authorization No: N/A

Expiration Date: N/A

Signed: [Signature] Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 4/24/99

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 12/22/98 to 4/26/99, 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]
Inspector's Signature

Commissions 1862 California
National Board, State, Province, and Endorsements

Date April 26, 1999

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)
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:

Sheet 1 of 1

Unit: 2
CWO: 98040973000
FCN: F13968M, F13973M, F13978M
Repair Spec: 104-98, Rev. 1
P&ID: 40111A
N-5: S2-1201-3

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

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 Nozzle	SCE	238-97	N/A	2TE0112-1	N/A	Replacement	No
Inconel 690 Nozzle	SCE	245-97	N/A	2TE0112-4	N/A	Replacement	No
Inconel 690 Nozzle	SCE	248-97	N/A	2TE0111-X1	N/A	Replacement	No
Inconel 690 Thermowell	WEED	N12967	N/A	2TE0112-1	N/A	Replacement	No
Inconel 690 Thermowell	WEED	N12966	N/A	2TE0112-4	N/A	Replacement	No
Inconel 690 Thermowell	WEED	N12969	N/A	2TE0111-X1	N/A	Replacement	No

7. Description of Work:

Inconel 690 nozzles were installed (Line No. S2-1201-ML-001, Spool 503-01/717-01) at instrument locations 2TE0112-1, 2TE0112-4, and 2TE0111-X1 to replace existing Inconel 600 nozzles in accordance with weld record WR2-98-184 and Repair Spec. 104-98 Rev. 1. Replacement Inconel 690 thermowells were then installed in accordance with weld record WR2-98-185 and Repair Spec. 104-98 Rev. 1. All NDE examinations were performed in accordance with weld records WR2-98-184, WR2-98-185 and Repair Spec. 104-98 Rev. 1.

8. Tests Conducted: System Leakage ☒ System Functional ☐ System Inservice ☐ Hydrostatic ☐ Pneumatic ☐ Other ☐
Pressure: NOP Temp: NOT

(Reference: AR #980701362-11 for VT-2)

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 to be attached)

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp: N/A

Certificate of Authorization No.: N/A

Expiration Date: N/A

Signed: [Signature]
Owner or Owner's Designee, Title

Supervising ASME Codes Engineer

Date: 4/9, 1999

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 7/21/98 to 4/9/99, 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.

Inspector's Signature

Commissions 1862 California
(National Board, State, Province, and Endorsements)

Date April 9, 1999

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 92674-0123

3. Work Performed by: Southern California Edison
P.O. Box 128
San Clemente, CA 92674-0123

4. Identification of System: REACTOR COOLANT (1201)

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 Nozzle	SCE	241-97	N/A	2TE0121-X2	N/A	Replacement	No
Inconel 690 Nozzle	SCE	247-97	N/A	2TE0122-1	N/A	Replacement	No
Inconel 690 Nozzle	SCE	001-99	N/A	2TE0122-4	N/A	Replacement	No
Inconel 690 Thermowell	WEED	N12970	N/A	2TE0121-X2	N/A	Replacement	No
Inconel 690 Thermowell	WEED	N12972	N/A	2TE0122-1	N/A	Replacement	No
Inconel 690 Thermowell	WEED	N12965	N/A	2TE0122-4	N/A	Replacement	No

7. Description of Work:

Inconel 690 nozzles were installed (Line No. S2-1201-ML-002, Spool 503-03/717-05) at instrument locations 2TE0121-X2, 2TE0122-1, and 2TE0122-4 to replace existing Inconel 600 nozzles in accordance with weld record WR2-98-186 and Repair Spec. 105-98 Rev. 1. Replacement Inconel 690 thermowells were then installed in accordance with weld record WR2-98-187. All NDE examinations were performed in accordance with weld records WR2-98-186, WR2-98-187 and Repair Spec. 105-98 Rev. 1. The MNSA clamp at location 2TE0122-4 was removed.

8. Tests Conducted: System Leakage ☒ System Functional ☐ System Inservice ☐ Hydrostatic ☐ Pneumatic ☐ Other ☐
Pressure: NOP Temp: NOT

(Reference: AR #980701362-12 for VT-2)

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 to be attached)

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp: N/A

Certificate of Authorization No: N/A

Expiration Date: N/A

Signed: [Signature]
Owner or Owner's Designee, Title

Supervising ASME Codes Engineer

Date: 4/8, 1999

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 11/30/98 to 4/9/99, 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.

Inspector's Signature

Commissions 1862 California
(National Board, State, Province, and Endorsements)

Date: April 9, 1999

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)

Sheet 1 of 1

Unit: 2
CWO: 98041018000
FCN: F14681M, F14684M,
F14687M, F14690M
Repair Spec: 107-98
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 Nozzle Plug	SCE	065-98	N/A	2TW-0138B	N/A	Replacement	No
Inconel 690 Nozzle Plug	SCE	064-98	N/A	2TW-0138C	N/A	Replacement	No
Inconel 690 Nozzle Plug	SCE	063-98	N/A	2TW-0138E	N/A	Replacement	No
Inconel 690 Nozzle Plug	SCE	058-98	N/A	2TW-0138F	N/A	Replacement	No

7. Description of Work:
Inconel 690 nozzle plugs were installed in plant instrument locations 2TW-0138B, 2TW-0138C, 2TW-0138E and 2TW-0138F (Line No. S21201.ML001 and Spool No. 503-01/717-01) to replace the existing Inconel 600 nozzles in accordance with weld record WR2-98-190 and Repair Spec. 107-98.

8. Tests Conducted: System Leakage ☒ System Functional ☐ System Inservice ☐ Hydrostatic ☐ Pneumatic ☐ Other ☐
Pressure: NOP Temp: NOT

(Reference: AR #980701362-11 for VT-2)

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 to be attached)

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp: N/A

Certificate of Authorization No: N/A

Expiration Date: N/A

Signed: [Signature] Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 4/9, 1999

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 10/21/98 to 4/9/99, 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]
Inspector's Signature

Commissions 1862 California
(National Board, State, Province, and Endorsements)

Date April 9, 1999

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)

Sheet 1 of 1

Unit: 2
CWO: 98041020000
FCN: F14693M, F14696M,
F14699M, F14702M
Repair Spec: 108-98
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 Nozzle Plug	SCE	068-98	N/A	2TW-0139B	N/A	Replacement	No
Inconel 690 Nozzle Plug	SCE	070-98	N/A	2TW-0139C	N/A	Replacement	No
Inconel 690 Nozzle Plug	SCE	072-98	N/A	2TW-0139E	N/A	Replacement	No
Inconel 690 Nozzle Plug	SCE	069-98	N/A	2TW-0139F	N/A	Replacement	No

7. Description of Work:
Inconel 690 nozzle plugs were installed in plant instrument locations 2TW-0139B, 2TW-0139C, 2TW-0139E and 2TW-0139F (Line No. S21201ML002 and Spool No. 503-03/717-05) to replace the existing Inconel 600 nozzles in accordance with weld record WR2-98-191 and Repair Spec. 108-98.

8. Tests Conducted: System Leakage ☒ System Functional ☐ System Inservice ☐ Hydrostatic ☐ Pneumatic ☐ Other ☐
Pressure: NOP Temp: NOT

(Reference: AR #980701362-12 for VT-2)

Note: Supplemental sheets in the form of lists, sketches, or drawings may be used provided (1) size is 3 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: None.

(Applicable Manufacturer's Data Reports to be attached)

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp: N/A

Certificate of Authorization No: N/A

Expiration Date: N/A

Signed: [Signature] Supervising ASME Codes Engineer
Owner or Owner's Designee, Title

Date: 4/8, 1999

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 1/30/98 to 4/9/99, 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.

Inspector's Signature

Commissions 1862 California
(National Board, State, Province, and Endorsements)

Date April 9, 1999

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)
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:

Sheet 1 of 1

Unit: 2

CWO: 98041092000, 98061004000

FCN: F14103M, F14104M,

F14105M, F14106M,

F14107M, F14503M, F14266M

Repair Spec: 110-98

P&ID: 40111A

N-5: S2-1201-3

Type Code Symbol Stamp: N/A

Authorization No: N/A

Expiration Date: N/A

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
Sample Line Nozzle	SCE	007-98	N/A	S2-1201-ML-002	N/A	Replacement	No
3/4" Sch. 160 SS 90° Ell	Consolidated	HT. F8406	N/A	RSO 0989-98, SA403 GR 316	N/A	Replacement	No
3/4" Sch. 160 SS Pipe	Tioga Pipe	HT. TRZ	N/A	RSO 0919-98, SA376 GR 316	N/A	Replacement	No
3/4" 1500# SS Globe Valve	BW IP	97ZV1209	NA	RSO 0424-98, S21201ML034	1998	Replacement	Yes
3/4" Sch. 160 SS Pipe	Sumitomo	HT. C08A029	N/A	RSO 1410-91, SA376 GR 316	N/A	Replacement	No

7. Description of Work:

Sample line S21201ML065/S21212ML167 was fabricated using a new valve and replacement Inconel 690 nozzle in accordance with weld records WR2-98-220, WR2-98-221, WR2-98-222 and WR2-98-223. (Reference: CWO 98061004000)

Sample Line S21201ML065/S21212ML167 was installed on spool 503-03 and tied into line S21212ML167 in accordance with Repair Specification 110-98 and weld records WR2-98-197 and WR2-98-224. (Reference: CWO 98041092000).

8. Tests Conducted: System Leakage ☒ System Functional ☐ System Inservice ☐ Hydrostatic ☐ Pneumatic ☐ Other ☐
Pressure: NOP Temp: NOT

(Reference: AR #980701362-12 for VT-2)

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: None.

(Applicable Manufacturer's Data Reports to be attached)

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp: N/A

Certificate of Authorization No: N/A

Expiration Date: N/A

Signed: [Signature]
Owner or Owner's Designee, Title

Supervising ASME Codes Engineer

Date: 4/8, 1999

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 11/30/98 to 4/9/99, 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.

Inspector's Signature

Commissions 1862 California
(National Board, State, Province, and Endorsements)

Date April 9, 1999

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)**

Sheet 1 of 1
Unit: 2
CWO: 98041093000, 98061003000
FCN: F13983M, F13984M,
F13985M, F13986M,
F13987M, F14265M
Repair Spec: 109-98
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
Sample Line Nozzle	SCE	006-98	N/A	N/A	N/A	Replacement	No
3/4" Sch. 160 SS 90° Ell.	Consolidated	El. F8406	N/A	RSO 0989-98, SA403 GR 316	N/A	Replacement	No
3/4" Sch. 160 SS Pipe	Tioga Pipe	HT. TRZ	N/A	RSO 0919-98, SA376 GR 316	N/A	Replacement	No
3/4" 1500# SS Globe Valve	BW / IP	97ZY1201	N/A	RSO 0424-98, S21201ML006	1998	Replacement	Yes
3/4" Sch. 160 SS Pipe	Sumitomo	HL C08A029	N/A	RSO 1410-91, SA376 GR 316	N/A	Replacement	No

7. Description of Work:

Sample line S21201ML023/S21212ML030 was fabricated using a new valve and replacement Inconel 690 nozzle in accordance with weld records WR2-98-215, WR2-98-216, WR2-98-217 and WR2-98-218. (Reference: CWO 98061003000)

Sample line S21201ML023/S21212ML030 was installed on spool 503-01 and tied into line S21212ML030 in accordance with Repair Specification 109-98 and weld records WR2-98-196 and WR2-98-219. (Reference: CWO 98041093000)

8. Tests Conducted: System Leakage ☒ System Functional ☐ System Inservice ☐ Hydrostatic ☐ Pneumatic ☐ Other ☐
Pressure: NOP Temp: NOT

(Reference: AR #980701362-11 for VT-2)

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 to be attached)

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp: N/A

Certificate of Authorization No: N/A

Expiration Date: N/A

Signed: [Signature] Supervising ASME Codes Engineer Date: 4/6, 19 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 11/25/98 to 4/9/99, 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 April 9, 19 99

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)

5. (a) Applicable Construction Code: ASME Section III, Class 1, 1971 Edition, S' 71 Addenda, Code Cases: 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
Steam Generator	Combustion Engineering	71270-1	22218	S21301ME089	1976	N/A	Yes
1½" Manway Stud	Combustion Engineering	HT #40545	N/A	RSO 3522-90, SA-540 Grade B24	N/A	Replacement	No
1½" Manway Stud Nut	Combustion Engineering	Ht. Code Z17	N/A	RSO 1596-98, SA-193 Grade B7	N/A	Replacement	No

7. Description of Work: Removed and reinstalled east S/G secondary manway cover on S21301ME089. (1) manway cover stud (# 7) and (1) manway cover nut (# 7) were replaced with in-kind replacements.

8. Tests Conducted: System Leakage ☐ System Functional ☐ System Inservice ☒ Hydrostatic ☐ Pneumatic ☐ Other ☐
Pressure: NOP Temp: NOT

(Ref.: AR #980701362-29 for VT-2)

Sheet 1 of 1

Unit: 2
CWO: 98041975000
Repair Spec. GEN-105s
P&ID: 40141A (FS)
N-5: S2-1201-3

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

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 to be attached)

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp: N/A

Certificate of Authorization No: N/A

Expiration Date: N/A

Signed: [Signature]
Owner or Owner's Designee, Title

Supervising ASME Codes Engineer

Date: 4/8, 1999

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 11/25/98 to 4/9/99, 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.

Inspector's Signature

Commissions 1862 California
(National Board, State, Province, and Endorsements)

Date April 9, 1999

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: 98050309000
Rspec: GEN-105P R1
P&ID: 40141A
N-5: S2-1201-3

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, Class 1, 1971 Edition, Summer 1971 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
Steam Generator	CE	71270-2	22219	S21301ME088P	1976	---	Yes
Cold Leg Manway Hex Nuts (20)	ABB Combustion Engineering	Ht.#Y12	N/A	RSO-1244-98, SA193 Gr.B7	N/A	Replacement	No
Hot Leg Manway Hex Nuts (20)	ABB Combustion Engineering	Ht.#Y12	N/A	RSO-1244-98, SA193 Gr.B7	N/A	Replacement	No

7. Description of Work:

The steam generator manway studs and nuts were removed and examined. All manway studs were acceptable for reuse and all manway nuts (20 ea. hot leg and 20 ea. cold leg) were replaced. A VT-1 examination was performed on the replacement bolting with satisfactory results.

8. Tests Conducted: System Leakage Pressure Test

Pressure: NOP

Temp: N/A

See: AR 981200046-9

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 : 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
Owner or Owner's Designee, Title

Date: 4/1/99

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 12/23/98 to 04/02/99, 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]
Inspector's Signature

Commissions

1862 California
National Board, State, Province, and Endorsements

Date

April 2, 1999