

December 22, 1997

Mr. Harold B. Ray  
Executive Vice President  
Southern California Edison Company  
San Onofre Nuclear Generating Station  
P.O. Box 128  
San Clemente, California 92674-0128

SUBJECT: ISSUANCE OF AMENDMENT FOR SAN ONOFRE NUCLEAR GENERATING STATION, UNIT NO. 2 (TAC NO. MA0236) AND UNIT NO. 3 (TAC NO. MA0237)

Dear Mr. Ray:

The Commission has issued the enclosed Amendment No. 147 to Facility Operating License No. NPF-10 and Amendment No. 139 to Facility Operating License No. NPF-15 for San Onofre Nuclear Generating Station, (SONGS) Unit Nos. 2 and 3. The amendments consist of changes to the operating license for SONGS Unit 2 and the technical specifications (TS) for both SONGS units in response to your application dated June 30, 1997.

These amendments delete License Condition 2.C.(19)b for SONGS Unit 2 and revise TS 3.3.1, 3.3.2, 3.3.5, 3.3.10, 3.3.11, 3.4.7, 3.4.12.1, 3.7.5, 5.5.2.10, and 5.5.2.11 for both SONGS units. These changes either reinstate provisions of the SONGS Units 2 and 3 TS previously revised as part of NRC Amendment Numbers 127 and 116, make corrections to the TS, or remove information inadvertently added to the TS that are not applicable to the SONGS units design.

Please note that the staff has deferred consideration of the proposed change to TS 3.3.10.2 and understands that Southern California Edison Company will evaluate resubmitting the requested change after a future refueling outage.

A copy of our related Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's next biweekly Federal Register notice.

Sincerely,

Original Signed By  
James W. Clifford, Senior Project Manager  
Project Directorate IV-2  
Division of Reactor Projects III/IV  
Office of Nuclear Reactor Regulation

9901110347 981222  
PDR ADOCK 05000361  
P PDR

Docket Nos. 50-361  
and 50-362

Enclosures: 1. Amendment No147to NPF-10  
2. Amendment No139to NPF-15  
3. Safety Evaluation

cc w/encls: See next page

110033

DISTRIBUTION

Docket File	EPeyton
PUBLIC	EAdensam
PDIV-2 Reading	GHill, (8) T5C3
ACRS, T2E26	JKilcrease, RIV
WBateman	OGC
JClifford	TLH1 (SE)
WBeckner, O11E22	JFoster
LHurley, RIV	
GPick, Region IV	

DOCUMENT NAME: SO0236.AMD

OFC	PDIV-2/PM	PDIV-2/LA	TSB	OGC
NAME	JClifford	EPeyton	WBeckner	Cmarco
DATE	12/7/98	12/7/98	12/7/98	12/16/98

OFFICIAL RECORD COPY

cc w/encls:

Mr. R. W. Krieger, Vice President  
Southern California Edison Company  
San Onofre Nuclear Generating Station  
P. O. Box 128  
San Clemente, California 92674-0128

Chairman, Board of Supervisors  
County of San Diego  
1600 Pacific Highway, Room 335  
San Diego, California 92101

Alan R. Watts, Esq.  
Woodruff, Spradlin & Smart  
701 S. Parker St. No. 7000  
Orange, California 92668-4702

Mr. Sherwin Harris  
Resource Project Manager  
Public Utilities Department  
City of Riverside  
3900 Main Street  
Riverside, California 92522

Regional Administrator, Region IV  
U.S. Nuclear Regulatory Commission  
Harris Tower & Pavilion  
611 Ryan Plaza Drive, Suite 400  
Arlington, Texas 76011-8064

Mr. Michael Olson  
San Onofre Liaison  
San Diego Gas & Electric Company  
P.O. Box 1831  
San Diego, California 92112-4150

Mr. Steve Hsu  
Radiologic Health Branch  
State Department of Health Services  
Post Office Box 942732  
Sacramento, California 94234

Resident Inspector/San Onofre NPS  
c/o U.S. Nuclear Regulatory Commission  
Post Office Box 4329  
San Clemente, California 92674

Mayor  
City of San Clemente  
100 Avenida Presidio  
San Clemente, California 92672

Mr. Dwight E. Nunn, Vice President  
Southern California Edison Company  
San Onofre Nuclear Generating Station  
P.O. Box 128  
San Clemente, California 92674-0128



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SOUTHERN CALIFORNIA EDISON COMPANY

SAN DIEGO GAS AND ELECTRIC COMPANY

THE CITY OF RIVERSIDE, CALIFORNIA

THE CITY OF ANAHEIM, CALIFORNIA

DOCKET NO. 50-361

SAN ONOFRE NUCLEAR GENERATING STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 147  
License No. NPF-10

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Southern California Edison Company, et al. (SCE or the licensee) dated June 30, 1997, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

9901110356 981222  
PDR ADOCK 05000361  
P PDR

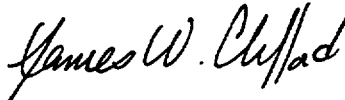
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C(2) of Facility Operating License No. NPF-10 is hereby amended to read as follows:

2. Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 147 , are hereby incorporated in the license. Southern California Edison Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. Also, the license is amended by deleting paragraph 2.C.(19)b, "Shift Manning."
4. This license amendment is effective as of the date of its issuance and is to be implemented within 30 days of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



James W. Clifford, Senior Project Manager  
Project Directorate IV-2  
Division of Reactor Projects III/IV  
Office of Nuclear Reactor Regulation

Attachments: 1. Changes to the Technical  
Specifications  
2. Pages 7 and 8 of Facility  
Operating License No. NPF-10

Date of Issuance: December 22, 1998

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 147 TO FACILITY OPERATING LICENSE NO. NPF-10

DOCKET NO. 50-361

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by Amendment number and contain marginal lines indicating the areas of change.

REMOVE

3.3-6  
3.3-13  
3.3-25  
3.3-43  
3.3-47  
3.4-23  
3.4-30  
3.7-14  
3.7-15  
5.0-13  
5.0-19a

INSERT

3.3-6  
3.3-13  
3.3-25  
3.3-43  
3.3-47  
3.4-23  
3.4-30  
3.7-14  
3.7-15  
5.0-13  
5.0-19a

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.3.1.6 -----NOTE-----            Not required to be performed until 12 hours after THERMAL POWER <math>\geq</math> 15% RTP.            -----</p> <p>Verify linear power subchannel gains of the excore detectors are consistent with the values used to establish the shape annealing matrix elements in the CPCs.</p>	<p>120 days</p>
<p>SR 3.3.1.7 -----NOTES-----</p> <ol style="list-style-type: none"> <li>1. The CPC CHANNEL FUNCTIONAL TEST shall include verification that the correct values of addressable constants are installed in each OPERABLE CPC.</li> <li>2. Not required to be performed for logarithmic power level channels until 2 hours after reducing THERMAL POWER below 1E-4% RTP and only if reactor trip circuit breakers (RTCBs) are closed.</li> </ol> <p>-----</p> <p>Perform CHANNEL FUNCTIONAL TEST on each channel.</p>	<p>30 days on a STAGGERED TEST BASIS</p>
<p>SR 3.3.1.8 -----NOTE-----            Neutron detectors are excluded from the CHANNEL CALIBRATION.            -----</p> <p>Perform CHANNEL CALIBRATION of the power range neutron flux channels.</p>	<p>120 days</p>

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.3.2.4 -----NOTE-----            - Neutron detectors are excluded from CHANNEL CALIBRATION.            -----</p> <p>Perform a CHANNEL CALIBRATION on each logarithmic power channel, including bypass removal function.</p>	<p>24 months</p>
<p>SR 3.3.2.5 -----NOTE-----            Neutron detectors are excluded.            -----</p> <p>Verify RPS RESPONSE TIME is within limits.</p>	<p>24 months on a STAGGERED TEST BASIS</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.3.5.2 Perform a CHANNEL FUNCTIONAL TEST of each ESFAS channel.	30 days on a STAGGERED TEST BASIS
SR 3.3.5.3 Perform a CHANNEL FUNCTIONAL TEST of each ESFAS channel bypass removal function.	120 days
SR 3.3.5.4 Perform a CHANNEL CALIBRATION of Function 5, Recirculation Actuation Signal.	18 months
SR 3.3.5.5 Perform a CHANNEL CALIBRATION of each ESFAS channel, with the exception of Function 5, including bypass removal functions.	24 months
SR 3.3.5.6 Verify ESF RESPONSE TIME is within limits.	24 months on a STAGGERED TEST BASIS
SR 3.3.5.7 Perform a CHANNEL FUNCTIONAL TEST on each automatic bypass removal channel.	Once within 120 days prior to each reactor startup



# SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.3.10.1	Perform a CHANNEL CHECK on required FHIS radiation monitor channel.	12 hours
SR 3.3.10.2	Perform a CHANNEL FUNCTIONAL TEST on required FHIS radiation monitor channel. Verify radiation monitor setpoint Allowable Values:  Airborne Gaseous: $\leq 6E4$ cpm above background.	92 days
SR 3.3.10.3	<p>-----NOTE-----</p> <p>Testing of Actuation Logic shall include the actuation of each initiation relay and verification of the proper operation of each initiation relay.</p> <p>-----</p> <p>Perform a CHANNEL FUNCTIONAL TEST on required FHIS Actuation Logic channel.</p>	18 months
SR 3.3.10.4	Perform a CHANNEL FUNCTIONAL TEST on required FHIS Manual Trip logic.	18 months
SR 3.3.10.5	Perform a CHANNEL CALIBRATION on required FHIS radiation monitor channel.	18 months

Table 3.3.11-1 (page 1 of 1)  
Post Accident Monitoring Instrumentation

FUNCTION	REQUIRED CHANNELS	CONDITIONS REFERENCED FROM REQUIRED ACTION F.1
1. Excore Neutron Flux	2	G
2. Reactor Coolant System Hot Leg Temperature	2 (1 per steam generator)	G
3. Reactor Coolant System Cold Leg Temperature	2 (1 per steam generator)	G
4. Reactor Coolant System Pressure (wide range)	2	G
5. Reactor Vessel Water Level	2(d)	H
6. Containment Water Level (wide range)	2	G
7. Containment Pressure (wide range)	2	G
8. Containment Isolation Valve Position	2 per penetration flow path(a)(b)	G
9. Containment Area Radiation (high range)	2	H
10. Containment Hydrogen Monitors	2	G
11. Pressurizer Level	2	G
12. Steam Generator Water Level (wide range)	2 per steam generator	G
13. Condensate Storage Tank Level	2	G
14. Core Exit Temperature - Quadrant 1	2(c)	G
15. Core Exit Temperature - Quadrant 2	2(c)	G
16. Core Exit Temperature - Quadrant 3	2(c)	G
17. Core Exit Temperature - Quadrant 4	2(c)	G
18. Auxiliary Feedwater Flow	1 per steam generator	G
19. Containment Pressure (narrow range)	2	G
20. Reactor Coolant System Subcooling Margin Monitor	2	G
21. Pressurizer Safety Valve Position Indication	1 per valve	G
22. Containment Temperature	2	G
23. Containment Water Level (narrow range)	2	G
24. HPSI Flow Cold Leg	1 per cold leg	G
25. HPSI Flow Hot Leg	1 per hot leg	G
26. Steam Line Pressure	2 per steam generator	G
27. Refueling Water Storage Tank Level	2	G

(a) Not required for isolation valves whose associated penetration is isolated by at least one closed and de-activated automatic valve, closed manual valve, blind flange, or check valve with flow through the valve secured.

(b) Only one position indication channel is required for penetration flow paths with only one installed control room indication channel.

(c) A channel consists of two or more core exit thermocouples.

(d) A channel consists of eight sensors in a probe. A channel is OPERABLE if four or more sensors, one sensor in the upper head and three sensors in the lower head are OPERABLE.

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. No SDC train/RCS loop in operation.	B.1 Suspend all operations involving reduction in RCS boron concentration.	Immediately
	<u>AND</u> B.2 Initiate action to restore required SDC train/RCS loop to operation.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.4.7.1 Verify at least one RCS loop or SDC train is in operation.	12 hours
SR 3.4.7.2 Verify required SG secondary side water level is > 50% (wide range).	12 hours
SR 3.4.7.3 Verify the second required RCS loop, SDC train or steam generator secondary is OPERABLE.	7 days

### 3.4 REACTOR COOLANT SYSTEM (RCS)

#### 3.4.12.1 Low Temperature Overpressure Protection (LTOP) System

RCS Temperature  $\leq 256^{\circ}\text{F}$

LCO 3.4.12.1 No more than two high pressure safety injection pumps shall be OPERABLE, the safety injection tanks shall be isolated or depressurized to less than the limit specified in Figure 3.4.3-2 and at least one of the following overpressure protection systems shall be OPERABLE:

- a. The Shutdown Cooling System Relief Valve (PSV9349) with:
  - 1) A lift setting of  $406 \pm 10$  psig,
  - 2) Relief Valve isolation valves 2HV9337, 2HV9339, 2HV9377, and 2HV9378 open,
- or,
- b. The Reactor Coolant System depressurized with an RCS vent of greater than or equal to 5.6 square inches.

APPLICABILITY: MODE 4 when the temperature of any one RCS cold leg is less than or equal to the enable temperatures specified in Table 3.4.3-1,

MODE 5, and

MODE 6 when the head is on the reactor vessel and the RCS is not vented.

-----NOTE-----

SIT isolation or depressurization to less than the Figure 3.4.3-2 limit is only required when SIT pressure is greater than or equal to the maximum RCS pressure for the existing RCS cold leg temperature allowed by the P/T limit curves provided in Figure 3.4.3-1 and Figure 3.4.3-2.

-----

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.7.5.1     Verify each AFW manual, power operated, and automatic valve in each water flow path and in both steam supply flow paths to the steam turbine driven pump, that is not locked, sealed, or otherwise secured in position, is in the correct position.</p>	<p>31 days</p>
<p>SR 3.7.5.2     -----NOTE----- Not required to be performed for the turbine driven AFW pump until 72 hours after reaching 800 psig in the steam generators. ----- Verify the developed head of each AFW pump at the flow test point is greater than or equal to the required developed head.</p>	<p>31 days on a STAGGERED TEST BASIS</p>
<p>SR 3.7.5.3     -----NOTE----- Not required to be performed for the turbine driven AFW pump until 72 hours after reaching 800 psig in the steam generators. ----- Verify each AFW automatic valve actuates to the correct position on an actual or simulated actuation signal, except valves HV-8200 and HV-8201.</p>	<p>24 months</p>

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.7.5.4 -----NOTE-----            Not required to be performed for the turbine driven AFW pump until 72 hours after reaching 800 psig in the steam generators.            -----            Verify each AFW pump starts automatically on an actual or simulated actuation signal.</p>	<p>24 months</p>
<p>SR 3.7.5.5 Verify the proper alignment of the required AFW flow paths by verifying flow from the condensate storage tank to each steam generator.</p>	<p>Prior to entering MODE 2 whenever unit has been in MODE 5 or 6 for &gt; 30 days</p>

5.5 Procedures, Programs, and Manuals (continued)

---

5.5.2.8 Primary Coolant Sources Outside Containment Program (continued)

system (post-accident sampling return piping only). The program shall include the following:

- a.. Preventive maintenance and periodic visual inspection requirements; and
- b. Integrated leak test requirements for each system at refueling cycle intervals or less.

5.5.2.9 Pre-Stressed Concrete Containment Tendon Surveillance Program

This program provides controls for monitoring any tendon degradation in pre-stressed concrete containment, including effectiveness of its corrosion protection medium, to ensure containment structural integrity. Program itself is relocated to the LCS.

5.5.2.10 Inservice Inspection and Testing Program

This program provides controls for the inservice inspection and testing of ASME Code Class 1, 2, and 3 components including applicable supports. The program itself is located in the LCS.

5.5.2.11 Steam Generator (SG) Tube Surveillance Program

This program provides controls for monitoring SG tube degradation. Each SG shall be demonstrated OPERABLE by meeting the requirements of Specification 5.5.2.11 and by meeting an augmented inservice inspection program based on a modification of Regulatory Guide 1.83, Revision 1, which includes at least the following:

a. SG Sample Selection and Inspection

Each SG shall be determined OPERABLE during shutdown by selecting and inspecting at least the minimum number of SG specified in Table 5.5.2.11-1 and 5.5.2.11-2.

b. SG Tube Sample Selection and Inspection

The SG tube and sleeve minimum sample size, inspection result classification, and the corresponding action required shall be as specified in Table 5.5.2.11-1 and 5.5.2.11-2. The inservice inspection of SG tubes and sleeves shall be performed at the frequencies specified in Specification 5.5.2.11.e and the inspected tubes shall be verified acceptable per the acceptance criteria of Specification 5.5.2.11.f. The tubes selected for each inservice inspection shall include at least 3% of the total

(continued)

5.5 Procedures, Programs, and Manuals (continued)

5.5.2.11 Steam Generator Tube Surveillance Program

TABLE 5.5.2.11-1 (page 1 of 1)

STEAM GENERATOR TUBE INSPECTION  
SUPPLEMENTAL SAMPLING REQUIREMENTS

1st Sample Inspection			2nd Sample Inspection		3rd Sample Inspection	
Sample Size	Result	Action Required	Result	Action Required	Result	Action Required
A minimum of S tubes per SG	C-1	None	N/A	N/A	N/A	N/A
	C-2	Plug or repair by sleeving defective tubes and inspect an additional 2S tubes in this SG.	C-1	None	N/A	N/A
					N/A	N/A
					C-1	N/A
					C-2	Plug or repair by sleeving defective tubes.
					C-3	Perform action for C-3 result of first sample.
	C-3	Inspect all tubes in this SG, plug or repair by sleeving defective tubes and inspect 2S tubes in each other SG. Notification to NRC pursuant to 10CFR50.73	C-3	Perform action for C-3 result of first sample.	N/A	N/A
			All other SGs C-1	None	N/A	N/A
			Some SGs C-2 but no other is C-3	Perform action for C-2 result of second sample.	N/A	N/A
			Additional SG is C-3	Inspect all tubes in each SG and plug or repair by sleeving defective tubes. Notification to NRC pursuant to 10CFR50.73.	N/A	N/A

$S = 3 N/n$  % Where N is the number of SGs in the unit and n is the number of SGs inspected during inspection period.

(continued)



(18) Initial Test Program (Section 14. SER)

SCE shall conduct the post-fuel loading initial test program (set forth in Section 14 of the San Onofre Units 2 and 3 Final Safety Analysis Report, as amended) without making any major modifications to this program unless such modifications have been identified and have received prior NRC approval. Major modifications are defined as:

- a. Elimination of any test identified in Section 14 of the Final Safety Analysis Report, as amended, as being essential.
- b. Modification of test objectives, methods, or acceptance criteria for any test identified in Section 14 of the Final Safety Analysis Report, as amended, as being essential.
- c. Performance of any test at a power level different than that described in the test procedure.
- d. Failure to complete any tests included in the described program (planned or scheduled for power levels up to the authorized power level).

(19) NUREG-0737 Conditions (Section 22)

Each of the following conditions shall be completed to the satisfaction of the NRC. Each item references the related subpart of Section 22 of the SER and/or its supplements.

a. Shift Technical Advisor (I.A.1.1. SSER #1)

SCE shall provide a fully trained on-shift technical advisor to the shift supervisor (watch engineer).

b. Shift Manning (I.A.1.3. SSER #1, SSER #5)

Deleted.

c. Independent Safety Engineering Group (I.B.1.2. SSER #1)

SCE shall have an on-site independent safety engineering group.

d. Procedures for Transients and Accidents (I.C.1. SSER #1, SSER #2, SSER #5)

By May 1, 1982, SCE shall provide emergency procedure guidelines. Emergency procedures based on guidelines approved by the NRC shall be implemented prior to startup following the first refueling outage.

e. Procedures for Verifying Correct Performance of Operating Activities (I.C.6. SSER #1)

Prior to fuel loading, SCE shall implement a system for verifying the correct performance of operating activities, and shall keep the system in effect thereafter.

f. Control Room Design Review (I.D.1. SSER #1)

Prior to exceeding five (5) percent power, SCE shall:

1. Prioritize the control room annunciator windows.



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
WASHINGTON, D.C. 20555-0001

SOUTHERN CALIFORNIA EDISON COMPANY

SAN DIEGO GAS AND ELECTRIC COMPANY

THE CITY OF RIVERSIDE, CALIFORNIA

THE CITY OF ANAHEIM, CALIFORNIA

DOCKET NO. 50-362

SAN ONOFRE NUCLEAR GENERATING STATION, UNIT NO. 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 139  
License No. NPF-15

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Southern California Edison Company, et al. (SCE or the licensee) dated June 30, 1997, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

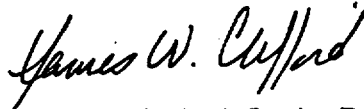
2. Accordingly, the license is amended changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C(2) of Facility Operating License No. NPF-15 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 139 , are hereby incorporated in the license. Southern California Edison Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance and is to be implemented within 30 days of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



James W. Clifford, Senior Project Manager  
Project Directorate IV-2  
Division of Reactor Projects III/IV  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical  
Specifications

Date of Issuance: December 22, 1998

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 139 TO FACILITY OPERATING LICENSE NO. NPF-15

DOCKET NO. 50-362

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by Amendment number and contain marginal lines indicating the areas of change.

REMOVE

3.3-6  
3.3-13  
3.3-25  
3.3-43  
3.3-47  
3.4-23  
3.4-30  
3.7-14  
3.7-15  
5.0-13  
5.0-19a

INSERT

3.3-6  
3.3-13  
3.3-25  
3.3-43  
3.3-47  
3.4-23  
3.4-30  
3.7-14  
3.7-15  
5.0-13  
5.0-19a

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.3.1.6</p> <p>-----NOTE----- Not required to be performed until 12 hours after THERMAL POWER <math>\geq</math> 15% RTP. -----</p> <p>Verify linear power subchannel gains of the excore detectors are consistent with the values used to establish the shape annealing matrix elements in the CPCs.</p>	<p>120 days</p>
<p>SR 3.3.1.7</p> <p>-----NOTES-----</p> <ol style="list-style-type: none"> <li>1. The CPC CHANNEL FUNCTIONAL TEST shall include verification that the correct values of addressable constants are installed in each OPERABLE CPC.</li> <li>2. Not required to be performed for logarithmic power level channels until 2 hours after reducing THERMAL POWER below 1E-4% RTP and only if reactor trip circuit breakers (RTCBs) are closed.</li> </ol> <p>-----</p> <p>Perform CHANNEL FUNCTIONAL TEST on each channel.</p>	<p>30 days on a STAGGERED TEST BASIS</p>
<p>SR 3.3.1.8</p> <p>-----NOTE----- Neutron detectors are excluded from the CHANNEL CALIBRATION. -----</p> <p>Perform CHANNEL CALIBRATION of the power range neutron flux channels.</p>	<p>120 days</p>

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.3.2.4      -----NOTE-----  Neutron detectors are excluded from  CHANNEL CALIBRATION.  -----</p> <p>Perform a CHANNEL CALIBRATION on each  logarithmic power channel, including  bypass removal function.</p>	<p>24 months</p>
<p>SR 3.3.2.5      -----NOTE-----  Neutron detectors are excluded.  -----</p> <p>Verify RPS RESPONSE TIME is within  limits.</p>	<p>24 months on a  STAGGERED TEST  BASIS</p>

## SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.5.2	Perform a CHANNEL FUNCTIONAL TEST of each ESFAS channel.	30 days on a STAGGERED TEST BASIS
SR 3.3.5.3	Perform a CHANNEL FUNCTIONAL TEST of each ESFAS channel bypass removal function.	120 days
SR 3.3.5.4	Perform a CHANNEL CALIBRATION of Function 5, Recirculation Actuation Signal.	18 months
SR 3.3.5.5	Perform a CHANNEL CALIBRATION of each ESFAS channel, with the exception of Function 5, including bypass removal functions.	24 months
SR 3.3.5.6	Verify ESF RESPONSE TIME is within limits.*	24 months on a STAGGERED TEST BASIS
SR 3.3.5.7	Perform a CHANNEL FUNCTIONAL TEST on each automatic bypass removal channel.	Once within 120 days prior to each reactor startup

\*Verification of the RESPONSE TIME of the 30 subgroup relays identified in the February 18, 1997 Edison letter is not applicable until return to Mode 4 from the Unit 3 Cycle 9 refueling outage, with the additional commitments made in the February 18, 1997 letter. The safety justification for not performing this testing is also included in the February 18, 1997 letter.



# **SURVEILLANCE REQUIREMENTS**

SURVEILLANCE		FREQUENCY
SR 3.3.10.1	Perform a CHANNEL CHECK on required FHIS radiation monitor channel.	12 hours
SR 3.3.10.2	Perform a CHANNEL FUNCTIONAL TEST on required FHIS radiation monitor channel. Verify radiation monitor setpoint Allowable Values:  Airborne Gaseous: $\leq 6E4$ cpm above background.	92 days
SR 3.3.10.3	<p>-----NOTE-----  Testing of Actuation Logic shall include the actuation of each initiation relay and verification of the proper operation of each initiation relay.  -----</p> <p>Perform a CHANNEL FUNCTIONAL TEST on required FHIS Actuation Logic channel.</p>	18 months
SR 3.3.10.4	Perform a CHANNEL FUNCTIONAL TEST on required FHIS Manual Trip logic.	18 months
SR 3.3.10.5	Perform a CHANNEL CALIBRATION on required FHIS radiation monitor channel.	18 months

Table 3.3.11-1 (page 1 of 1)  
Post Accident Monitoring Instrumentation

FUNCTION	REQUIRED CHANNELS	CONDITIONS REFERENCED FROM REQUIRED ACTION F.1
1. Excore Neutron Flux	2	G
2. Reactor Coolant System Hot Leg Temperature	2 (1 per steam generator)	G
3. Reactor Coolant System Cold Leg Temperature	2 (1 per steam generator)	G
4. Reactor Coolant System Pressure (wide range)	2	G
5. Reactor Vessel Water Level	2(d)	H
6. Containment Water Level (wide range)	2	G
7. Containment Pressure (wide range)	2	G
8. Containment Isolation Valve Position	2 per penetration flow path (a)(b)	G
9. Containment Area Radiation (high range)	2	H
10. Containment Hydrogen Monitors	2	G
11. Pressurizer Level	2	G
12. Steam Generator Water Level (wide range)	2 per steam generator	G
13. Condensate Storage Tank Level	2	G
14. Core Exit Temperature - Quadrant 1	2(c)	G
15. Core Exit Temperature - Quadrant 2	2(c)	G
16. Core Exit Temperature - Quadrant 3	2(c)	G
17. Core Exit Temperature - Quadrant 4	2(c)	G
18. Auxiliary Feedwater Flow	1 per steam generator	G
19. Containment Pressure (narrow range)	2	G
20. Reactor Coolant System Subcooling Margin Monitor	2	G
21. Pressurizer Safety Valve Position Indication	1 per valve	G
22. Containment Temperature	2	G
23. Containment Water Level (narrow range)	2	G
24. HPSI Flow Cold Leg	1 per cold leg	G
25. HPSI Flow Hot Leg	1 per hot leg	G
26. Steam Line Pressure	2 per steam generator	G
27. Refueling Water Storage Tank Level	2	G

(a) Not required for isolation valves whose associated penetration is isolated by at least one closed and de-activated automatic valve, closed manual valve, blind flange, or check valve with flow through the valve secured.

(b) Only one position indication channel is required for penetration flow paths with only one installed control room indication channel.

(c) A channel consists of two or more core exit thermocouples.

(d) A channel consists of eight sensors in a probe. A channel is OPERABLE if four or more sensors, one sensor in the upper head and three sensors in the lower head are OPERABLE.

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. No SDC train/RCS loop in operation.	B.1 Suspend all operations involving reduction in RCS boron concentration.	Immediately
	AND B.2 Initiate action to restore required SDC train/RCS loop to operation.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.4.7.1 Verify at least one RCS loop or SDC train is in operation.	12 hours
SR 3.4.7.2 Verify required SG secondary side water level is > 50% (wide range).	12 hours
SR 3.4.7.3 Verify the second required RCS loop, SDC train or steam generator secondary is OPERABLE.	7 days

### 3.4 REACTOR COOLANT SYSTEM (RCS)

#### 3.4.12.1 Low Temperature Overpressure Protection (LTOP) System

RCS Temperature  $\leq 246^{\circ}\text{F}$

LCO 3.4.12.1 No more than two high pressure safety injection pumps shall be OPERABLE, the safety injection tanks shall be isolated or depressurized to less than the limit specified in Figure 3.4.3-2 and at least one of the following overpressure protection systems shall be OPERABLE:

- a. The Shutdown Cooling System Relief Valve (PSV9349) with:
  - 1) A lift setting of  $406 \pm 10$  psig,
  - 2) Relief Valve isolation valves 3HV9337, 3HV9339, 3HV9377, and 3HV9378 open,
- or,
- b. The Reactor Coolant System depressurized with an RCS vent of greater than or equal to 5.6 square inches.

APPLICABILITY: MODE 4 when the temperature of any one RCS cold leg is less than or equal to the enable temperatures specified in Table 3.4.3-1,

MODE 5, and

MODE 6 when the head is on the reactor vessel and the RCS is not vented.

-----NOTE-----

SIT isolation or depressurization to less than the Figure 3.4.3-2 limit is only required when SIT pressure is greater than or equal to the maximum RCS pressure for the existing RCS cold leg temperature allowed by the P/T limit curves provided in Figure 3.4.3-1 and Figure 3.4.3-2.

-----

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.5.1    Verify each AFW manual, power operated, and automatic valve in each water flow path and in both steam supply flow paths to the steam turbine driven pump, that is not locked, sealed, or otherwise secured in position, is in the correct position.	31 days
SR 3.7.5.2    -----NOTE----- Not required to be performed for the turbine driven AFW pump until 72 hours after reaching 800 psig in the steam generators. ----- Verify the developed head of each AFW pump at the flow test point is greater than or equal to the required developed head.	31 days on a STAGGERED TEST BASIS
SR 3.7.5.3    -----NOTE----- Not required to be performed for the turbine driven AFW pump until 72 hours after reaching 800 psig in the steam generators. ----- Verify each AFW automatic valve actuates to the correct position on an actual or simulated actuation signal, except valves HV-8200 and HV-8201.	24 months

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.7.5.4 -----NOTE-----            . Not required to be performed for the turbine driven AFW pump until 72 hours after reaching 800 psig in the steam generators.            -----            Verify each AFW pump starts automatically on an actual or simulated actuation signal.</p>	<p>24 months</p>
<p>SR 3.7.5.5 Verify the proper alignment of the required AFW flow paths by verifying flow from the condensate storage tank to each steam generator.</p>	<p>Prior to entering MODE 2 whenever unit has been in MODE 5 or 6 for &gt; 30 days</p>

## 5.5 Procedures, Programs, and Manuals (continued)

---

### 5.5.2.8 Primary Coolant Sources Outside Containment Program (continued)

system (post-accident sampling return piping only). The program shall include the following:

- a. Preventive maintenance and periodic visual inspection requirements; and
- b. Integrated leak test requirements for each system at refueling cycle intervals or less.

### 5.5.2.9 Pre-Stressed Concrete Containment Tendon Surveillance Program

This program provides controls for monitoring any tendon degradation in pre-stressed concrete containment, including effectiveness of its corrosion protection medium, to ensure containment structural integrity. Program itself is relocated to the LCS.

### 5.5.2.10 Inservice Inspection and Testing Program

This program provides controls for the inservice inspection and testing of ASME Code Class 1, 2, and 3 components including applicable supports. The program itself is located in the LCS.

### 5.5.2.11 Steam Generator (SG) Tube Surveillance Program

This program provides controls for monitoring SG tube degradation. Each SG shall be demonstrated OPERABLE by meeting the requirements of Specification 5.5.2.11 and by meeting an augmented inservice inspection program based on a modification of Regulatory Guide 1.83, Revision 1, which includes at least the following:

#### a. SG Sample Selection and Inspection

Each SG shall be determined OPERABLE during shutdown by selecting and inspecting at least the minimum number of SG specified in Table 5.5.2.11-1 and 5.5.2.11-2.

#### b. SG Tube Sample Selection and Inspection

The SG tube and sleeve minimum sample size, inspection result classification, and the corresponding action required shall be as specified in Table 5.5.2.11-1 and 5.5.2.11-2. The inservice inspection of SG tubes and sleeves shall be performed at the frequencies specified in Specification 5.5.2.11.e and the inspected tubes shall be verified acceptable per the acceptance criteria of Specification 5.5.2.11.f. The tubes selected for each inservice inspection shall include at least 3% of the total

(continued)

5.5 Procedures, Programs, and Manuals (continued)

5.5.2.11 Steam Generator Tube Surveillance Program

TABLE 5.5.2.11-1 (page 1 of 1)

STEAM GENERATOR TUBE INSPECTION  
SUPPLEMENTAL SAMPLING REQUIREMENTS

1st Sample Inspection			2nd Sample Inspection		3rd Sample Inspection	
Sample Size	Result	Action Required	Result	Action Required	Result	Action Required
A minimum of S tubes per SG	C-1	None	N/A	N/A	N/A	N/A
	C-2	Plug or repair by sleeving defective tubes and inspect an additional 2S tubes in this SG.	C-1	None	N/A	N/A
				Plug or repair by sleeving defective tubes and inspection an additional 4S tubes in this SG.	N/A	N/A
					C-1	N/A
					C-2	Plug or repair by sleeving defective tubes.
					C-3	Perform action for C-3 result of first sample.
			C-3	Perform action for C-3 result of first sample.	N/A	N/A
	C-3	Inspect all tubes in this SG, plug or repair by sleeving defective tubes and inspect 2S tubes in each other SG. Notification to NRC pursuant to 10CFR50.73	All other SGs C-1	None	N/A	N/A
			Some SGs C-2 but no other is C-3	Perform action for C-2 result of second sample.	N/A	N/A
			Additional SG is C-3	Inspect all tubes in each SG and plug or repair by sleeving defective tubes. Notification to NRC pursuant to 10CFR50.73.	N/A	N/A

$S = 3 N/n \%$  Where N is the number of SGs in the unit and n is the number of SGs inspected during inspection period.

(continued)





UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 147 TO FACILITY OPERATING LICENSE NO. NPF-10  
AND AMENDMENT NO. 139 TO FACILITY OPERATING LICENSE NO. NPF-15  
SOUTHERN CALIFORNIA EDISON COMPANY  
SAN DIEGO GAS AND ELECTRIC COMPANY  
THE CITY OF RIVERSIDE, CALIFORNIA  
THE CITY OF ANAHEIM, CALIFORNIA  
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3  
DOCKET NOS. 50-361 AND 50-362

1.0 INTRODUCTION

By application dated June 30, 1997, Southern California Edison Company, et al. (SCE or the licensee) requested changes to the operating license for San Onofre Nuclear Generating Station Unit No. 2 and the Technical Specifications (Appendix A to Facility Operating License Nos. NPF-10 and NPF-15) for San Onofre Nuclear Generating Station, Unit Nos. 2 and 3 (SONGS). The proposed changes would delete License Condition 2.C.(19)b for SONGS Unit 2, "Shift Manning," and revise TS 3.3.1, 3.3.2, 3.3.5, 3.3.10, 3.3.11, 3.4.7, 3.4.12.1, 3.7.5, 5.5.2.10, and 5.5.2.11 for both SONGS units. The specific changes are discussed in the evaluation below. The proposed changes are required to either reinstate provisions of the original SONGS Units 2 and 3 TS which had been revised as part of NRC Amendments No. 127 and 116, make corrections to the current TS, or remove information inadvertently added that is not applicable to the design of the units.

2.0 EVALUATION

2.1 Deletion of SONGS Unit 2 License Condition 2.C.(19)b, "Shift Manning"

The current license condition states that the licensee shall develop and implement administrative procedures to limit operating staff working hours. Also, this condition lists guidelines to be followed in the event of the need to require substantial amounts of overtime. The licensee in its submittal stated that the information included in this license condition conflicts with that which is included in the SONGS Topical Report that has been implemented as part of the licensee's adoption of the Improved Technical Specifications (ITS). Further, the staff in its safety evaluation approving the ITS for SONGS noted that specific overtime limits

need not be included in the TS but may be controlled by administrative procedures. This change does not affect the current staffing policies, commitments, or implementation at the site. Since this license condition serves no purpose and the staffing requirements and guidelines are included in the SONGS Topical Report which provided the appropriate level of administrative control for the issue of staff manning, the staff hereby approves deletion of SONGS Unit 2 License Condition 2.C.(19)b.

## 2.2 TS 3.3.1, "Reactor Protective Instrumentation (RPS)-Operating."

The licensee proposed a change to TS 3.3.1 that would delete the exception of the power range neutron flux channels from Surveillance Requirement (SR) 3.3.1.7. Currently, SR 3.3.1.7 requires that a channel functional test be performed on each RPS channel except for the power range neutron flux channels. Deleting the exception results in increasing the number of channels that would be tested and makes this TS conform to the surveillance specification that was included in the previous version of the TS prior to approval of the ITS amendments. The staff finds that this change results in a TS that is more conservative and is therefore acceptable.

## 2.3 TS 3.3.2, "Reactor Protective Instrumentation (RPS)-Shutdown"

The licensee proposed adding a footnote to SR 3.3.2.5 that would exclude neutron detectors from the response time testing requirement. This staff finds that this change is consistent with the previous version of the TS in Table 3.3-2, which was in effect prior to the ITS amendments, is consistent with staff policy, and is acceptable.

## 2.4 TS 3.3.5 "Engineered Safety Features Actuation System (ESFAS) Instrumentation"

The licensee proposed deleting the reference to the requirement to calibrate bypass removal function of the recirculation action signal (RAS) in SR 3.3.5.4. In the June 30, 1997, submittal, the licensee noted that the bypass removal function is not part of the units' RAS design. The staff finds that this change is editorial and administrative in nature and is therefore acceptable.

## 2.5 TS 3.3.10, "Fuel Handling Isolation Signal (FHIS)"

The licensee proposed a typographical change to replace the word "ignition" with the word "initiation" in the Note to SR 3.3.10.3. This change is editorial and administrative in nature and the staff finds it acceptable. The second change the licensee proposed is to replace the requirement to perform a channel functional test to verify that the setpoint of the fuel handling isolation signal radiation monitor is less than or equal to 6E4 counts per minute (cpm) above background with the following: "the allowable value of the setpoint is sufficiently high to prevent spurious alarms/trips, yet sufficiently low to assure an alarm/trip should an inadvertent release occur." The proposed wording is that which existed in the previous version of the TS prior to the ITS amendments. The licensee suggests that the change would allow it to administratively propose more conservative setpoints under certain conditions which would be established by the current version of the SR. The staff has deferred consideration of this proposed change at this time. During discussions with the licensee, it was noted that the licensee will evaluate measured radiation levels during upcoming refueling outages to determine the potential for

spurious alarms/trips. The licensee will then determine if this change is still needed, and will revise and resubmit this change if appropriate.

#### 2.6 TS 3.3.11, "Post Accident Monitoring Instrumentation"

The licensee proposed to change the title for Function 6 of Table 3.3.11-1 from "Containment Sump Water Level (wide range)" to "Containment Water Level (wide range)". This change is made to reflect plant specific design information. The staff finds that this change is for clarification, is administrative in nature, and is therefore acceptable.

#### 2.7 TS 3.4.7, "RCS Loops--Mode 5, Loops Filled"

The licensee proposed changing the current SR 3.7.2 from "Verify required SG secondary side water level is  $\geq$  50% (wide range)." to "Verify required SG secondary side water level is  $>$  50% (wide range)." Limiting Condition for Operation (LCO) 3.4.7 uses "greater than". This change makes the surveillance consistent with the LCO. The staff finds that this change clarifies and corrects the TS surveillance and is therefore acceptable.

#### 2.8 TS 3.4.12.1, "Low Temperature Overpressure Protection (LTOP) System"

The licensee proposed changing the APPLICABILITY statement for LCO 3.4.12.1 for MODE 6 from "when the head is on the reactor vessel" to "when the head is on the reactor vessel and the RCS is not vented." This change provides clarification and is consistent with the wording included in the previous version of the TS prior to the approval of the ITS amendments. The staff finds that this change is administrative in nature and is therefore acceptable.

#### 2.9 TS 3.7.5, "Auxiliary Feedwater (AFW) System"

The licensee proposed deleting from SR 3.7.5.3 and SR 3.7.5.4, the phrase "when in MODE 1, 2, or 3," relating to when the surveillance for the AFW automatic valve actuation and positioning should be performed. The Bases for these two surveillances indicate that they should be performed during shutdown conditions. The staff finds that this change corrects inconsistencies in the TS and is therefore acceptable.

#### 2.10 Section 5.5.2.10, "Inservice Testing Program"

The licensee proposes a revision to Section 5.5.2.10 to change the title to include the inservice inspection program and to reflect the fact that the programs have been relocated to other licensee controlled specifications. The staff finds these changes to be administrative in nature and are therefore acceptable.

#### 2.11 Section 5.5.2.11, "Steam Generator (SG) Tube Surveillance Program"

The licensee proposed to renumber the table in this section from 5.2.11 to 5.5.2.11-1 to correct a typographical error. This change was made by Amendment No. 140. Also, a reference to 10 CFR 50.72 is proposed to be changed to 10 CFR 50.73 to reflect the proper regulation related to providing a licensee event report for NRC notification. Lastly, the phrase "Plug defective tubes and inspect an additional 25 tubes in this SG" is proposed to read, "Plug defective tubes

and inspect an additional 2S tubes in this SG." This change was made by Amendment No. 140. The staff finds that these changes correct typographical errors and provide clarification and are therefore acceptable.

### 3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the California State official was notified of the proposed issuance of the amendments. The State official had no comments.

### 4.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and change surveillance requirements. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (63 FR 11921). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

### 5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: Chet Poslusny

Date: December 22, 1998