

November 18, 1996

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

SUBJECT: ISSUANCE OF AMENDMENT FOR SAN ONOFRE NUCLEAR GENERATING STATION,
UNIT NO. 2 (TAC NO. M92941) AND UNIT NO. 3 (TAC NO. M92942)

Dear Mr. Ray:

The Commission has issued the enclosed Amendment No. 133 to Facility Operating License No. NPF-10 and Amendment No. 122 to Facility Operating License No. NPF-15 for San Onofre Nuclear Generating Station, Unit Nos. 2 and 3. The amendments consist of changes to the Technical Specifications (TS) in response to your application dated July 17, 1995.

These amendments revise the frequency of surveillance requirements for certain plant protective system instrumentation contained in Technical Specifications (TS) 3.3.1, "Reactor Protective System (RPS) Instrumentation - Operating," TS 3.3.2, "Reactor Protective System (RPS) Instrumentation - Shutdown," TS 3.3.3, "Control Element Assembly Calculators (CEACs)," TS 3.3.4, "Reactor Protective System (RPS) Logic and Trip Initiation," TS 3.3.5, "Engineered Safety Features Actuation System (ESFAS) Instrumentation," and TS 3.3.6, "Engineered Safety Features Actuation System (ESFAS) Logic and Manual Trip."

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

Mel B. Fields, Project Manager
Project Directorate IV-2
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket Nos. 50-361
and 50-362

Enclosures: 1. Amendment No. 133 to NPF-10
2. Amendment No. 122 to NPF-15
3. Safety Evaluation

cc w/encls: See next page

DISTRIBUTION

Docket File	EPeyton
PUBLIC	JRoe
PDIV-2 Reading	GHill, T5C3
EGAl	ACRS, T2E26
WBateman	JBianchi, WCFO (2)
MFields	OGC, 015B18
CGrimes, 011E22	TLH3 (SE)
LHurley, RIV	KPerkins, WCFO
JWermiel	JKilcrease, RIV

DOCUMENT NAME: S092941.AMD

OFC	PDIV-2/PM	PDIV-2/LA	NRR:HICB	OGC <i>RB</i>
NAME	<i>ME</i> <i>Leads:ye</i>	<i>EPeyton</i>	<i>JWermiel</i>	<i>R Bachmann</i>
DATE	11/15/96	10/30/96	11/4/96	11/8/96

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Original Signed By

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Docket Nos. 50-361
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cc w/encls: See next page

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CGrimes, 011E22	TLH3 (SE)
LHurley, RIV	KPerkins, WCFO
JWermiel	JKilcrease, RIV

DOCUMENT NAME: S092941.AMD

OFC	PDIV-2/PM	PDIV-2/LA	NRR:HICB	OGC <i>RB</i>
NAME	<i>ME</i> Lewis:ye	<i>EPeyton</i>	<i>JWermiel</i>	<i>R Bachmann</i>
DATE	11/15/96	10/30/96	11/4/96	11/8/96

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

November 18, 1996

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

SUBJECT: ISSUANCE OF AMENDMENT FOR SAN ONOFRE NUCLEAR GENERATING STATION,
UNIT NO. 2 (TAC NO. M92941) AND UNIT NO. 3 (TAC NO. M92942)

Dear Mr. Ray:

The Commission has issued the enclosed Amendment No. 133 to Facility Operating License No. NPF-10 and Amendment No. 122 to Facility Operating License No. NPF-15 for San Onofre Nuclear Generating Station, Unit Nos. 2 and 3. The amendments consist of changes to the Technical Specifications (TS) in response to your application dated July 17, 1995.

These amendments revise the frequency of surveillance requirements for certain plant protective system instrumentation contained in Technical Specifications (TS) 3.3.1, "Reactor Protective System (RPS) Instrumentation - Operating," TS 3.3.2, "Reactor Protective System (RPS) Instrumentation - Shutdown," TS 3.3.3, "Control Element Assembly Calculators (CEACs)," TS 3.3.4, "Reactor Protective System (RPS) Logic and Trip Initiation," TS 3.3.5, "Engineered Safety Features Actuation System (ESFAS) Instrumentation," and TS 3.3.6, "Engineered Safety Features Actuation System (ESFAS) Logic and Manual Trip."

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,

A handwritten signature in cursive script, reading "Mel B. Fields", is written over a horizontal line.

Mel B. Fields, Project Manager
Project Directorate IV-2
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket Nos. 50-361
and 50-362

Enclosures: 1. Amendment No. 133 to NPF-10
2. Amendment No. 122 to NPF-15
3. Safety Evaluation

cc w/encls: See next page

Mr. Harold B. Ray

- 2 -

November 18, 1996

cc w/encls:

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San Clemente, California 92674-0128

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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. 133
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 July 17, 1995, 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 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. 133, 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 to be implemented within 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Mel B. Fields, 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: November 18, 1996

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 133 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
3.3-7
3.3-12
3.3-16
3.3-20
3.3-25
3.3-29

INSERT

3.3-6
3.3-7
3.3-12
3.3-16
3.3-20
3.3-25
3.3-29

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.3.1.6 -----NOTE----- Not required to be performed until 12 hours after THERMAL POWER \geq 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>	120 days
<p>SR 3.3.1.7 -----NOTES-----</p> <ol style="list-style-type: none"> 1. The CPC CHANNEL FUNCTIONAL TEST shall include verification that the correct values of addressable constants are installed in each OPERABLE CPC. 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. <p>-----</p> <p>Perform CHANNEL FUNCTIONAL TEST on each channel except power range neutron flux.</p>	30 days on a STAGGERED TEST BASIS
<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>	120 days

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.3.1.9 -----NOTE----- Neutron detectors are excluded from CHANNEL CALIBRATION. -----</p> <p>Perform CHANNEL CALIBRATION on each channel, including bypass removal functions.</p>	24 months
<p>SR 3.3.1.10 Perform a CHANNEL FUNCTIONAL TEST on each CPC channel.</p>	24 months
<p>SR 3.3.1.11 Using the incore detectors, verify the shape annealing matrix elements to be used by the CPCs.</p>	Once after each refueling prior to exceeding 85% RTP
<p>SR 3.3.1.12 Perform a CHANNEL FUNCTIONAL TEST on each operating bypass removal function.</p>	Once within 120 days prior to each reactor startup
<p>SR 3.3.1.13 -----NOTE----- Neutron detectors are excluded. -----</p> <p>Verify RPS RESPONSE TIME is within limits.</p>	24 months on a STAGGERED TEST BASIS

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. (continued)	D.2 Place one affected automatic trip channel in bypass and place the other in trip.	1 hour
E. Required Action and associated Completion Time not met.	E.1 Open all RTCBs.	1 hour

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.3.2.1 Perform a CHANNEL CHECK of each logarithmic power channel.	12 hours
SR 3.3.2.2 Perform a CHANNEL FUNCTIONAL TEST on each logarithmic power channel.	30 days on a STAGGERED TEST BASIS
SR 3.3.2.3 Perform a CHANNEL FUNCTIONAL TEST on each operating bypass removal function.	Once within 120 days prior to each reactor startup

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Receipt of a CPC channel B or C cabinet high temperature alarm.	C.1 Perform CHANNEL FUNCTIONAL TEST on affected CEAC(s).	12 hours <u>AND</u> Once per 12 hours until high temperature alarm is cleared
D. One or two CEACs with three or more autorestarts during a 12 hour period.	D.1 Perform CHANNEL FUNCTIONAL TEST on affected CEAC.	24 hours
E. Required Action and associated Completion Time of Condition B, C, or D not met.	E.1 Be in MODE 3.	6 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.3.3.1 Perform a CHANNEL CHECK.	12 hours
SR 3.3.3.2 Check the CEAC autorestart count.	12 hours
SR 3.3.3.3 Perform a CHANNEL FUNCTIONAL TEST.	60 days on a STAGGERED TEST BASIS

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. Required Action and associated Completion Time of Condition A, B, or D not met. <u>OR</u> One or more Functions with more than one Manual Trip, Matrix Logic, Initiation Logic, or RTCB channel inoperable for reasons other than Condition A or D.	E.1 Be in MODE 3.	6 hours
	<u>AND</u> E.2 Open all RTCBs.	6 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.3.4.1 Perform a CHANNEL FUNCTIONAL TEST on each RTCB channel.	31 days
SR 3.3.4.2 Perform a CHANNEL FUNCTIONAL TEST on each RPS Logic Channel.	120 days
SR 3.3.4.3 Perform a CHANNEL FUNCTIONAL TEST, including separate verification of the undervoltage and shunt trips, on each RTCB.	18 months

(continued)

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, including bypass removal functions.	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

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
F. Required Action and associated Completion Time of Conditions for Safety Injection Actuation Signal, Containment Isolation Actuation Signal, Recirculation Actuation Signal, or Containment Cooling Actuation Signal not met.	F.1 Be in MODE 3.	6 hours
	<u>AND</u> F.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.3.6.1 -----NOTE----- Testing of Actuation Logic shall include the verification of the proper operation of each initiation relay. ----- Perform a CHANNEL FUNCTIONAL TEST on each ESFAS logic channel.	120 days

(continued)



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. 122
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 July 17, 1995, 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 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-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. 122, 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 to be implemented within 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Mel B. Fields, 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: November 18, 1996

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 122 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
3.3-7
3.3-12
3.3-16
3.3-20
3.3-25
3.3-29

INSERT

3.3-6
3.3-7
3.3-12
3.3-16
3.3-20
3.3-25
3.3-29

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.3.1.6 -----NOTE----- Not required to be performed until 12 hours after THERMAL POWER \geq 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>	120 days
<p>SR 3.3.1.7 -----NOTES-----</p> <ol style="list-style-type: none"> 1. The CPC CHANNEL FUNCTIONAL TEST shall include verification that the correct values of addressable constants are installed in each OPERABLE CPC. 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. <p>-----</p> <p>Perform CHANNEL FUNCTIONAL TEST on each channel except power range neutron flux.</p>	30 days on a STAGGERED TEST BASIS
<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>	120 days

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.1.9	<p>-----NOTE----- Neutron detectors are excluded from CHANNEL CALIBRATION. -----</p> <p>Perform CHANNEL CALIBRATION on each channel, including bypass removal functions.</p>	24 months
SR 3.3.1.10	Perform a CHANNEL FUNCTIONAL TEST on each CPC channel.	24 months
SR 3.3.1.11	Using the incore detectors, verify the shape annealing matrix elements to be used by the CPCs.	Once after each refueling prior to exceeding 85% RTP
SR 3.3.1.12	Perform a CHANNEL FUNCTIONAL TEST on each operating bypass removal function.	Once within 120 days prior to each reactor startup
SR 3.3.1.13	<p>-----NOTE----- Neutron detectors are excluded. -----</p> <p>Verify RPS RESPONSE TIME is within limits.</p>	24 months on a STAGGERED TEST BASIS

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. (continued)	D.2 Place one affected automatic trip channel in bypass and place the other in trip.	1 hour
E. Required Action and associated Completion Time not met.	E.1 Open all RTCBs.	1 hour

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.3.2.1 Perform a CHANNEL CHECK of each logarithmic power channel.	12 hours
SR 3.3.2.2 Perform a CHANNEL FUNCTIONAL TEST on each logarithmic power channel.	30 days on a STAGGERED TEST BASIS
SR 3.3.2.3 Perform a CHANNEL FUNCTIONAL TEST on each operating bypass removal function.	Once within 120 days prior to each reactor startup

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Receipt of a CPC channel B or C cabinet high temperature alarm.	C.1 Perform CHANNEL FUNCTIONAL TEST on affected CEAC(s).	12 hours <u>AND</u> Once per 12 hours until high temperature alarm is cleared
D. One or two CEACs with three or more autorestarts during a 12 hour period.	D.1 Perform CHANNEL FUNCTIONAL TEST on affected CEAC.	24 hours
E. Required Action and associated Completion Time of Condition B, C, or D not met.	E.1 Be in MODE 3.	6 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.3.3.1 Perform a CHANNEL CHECK.	12 hours
SR 3.3.3.2 Check the CEAC autorestart count.	12 hours
SR 3.3.3.3 Perform a CHANNEL FUNCTIONAL TEST.	60 days on a STAGGERED TEST BASIS

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. Required Action and associated Completion Time of Condition A, B, or D not met. <u>OR</u> One or more Functions with more than one Manual Trip, Matrix Logic, Initiation Logic, or RTCB channel inoperable for reasons other than Condition A or D.	E.1 Be in MODE 3.	6 hours
	<u>AND</u>	
	E.2 Open all RTCBs.	6 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.3.4.1 Perform a CHANNEL FUNCTIONAL TEST on each RTCB channel.	31 days
SR 3.3.4.2 Perform a CHANNEL FUNCTIONAL TEST on each RPS Logic Channel.	120 days
SR 3.3.4.3 Perform a CHANNEL FUNCTIONAL TEST, including separate verification of the undervoltage and shunt trips, on each RTCB.	18 months

(continued)

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, including bypass removal functions.	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

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
F. Required Action and associated Completion Time of Conditions for Safety Injection Actuation Signal, Containment Isolation Actuation Signal, Recirculation Actuation Signal, or Containment Cooling Actuation Signal not met.	F.1 Be in MODE 3.	6 hours
	<u>AND</u> F.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.3.6.1 -----NOTE----- Testing of Actuation Logic shall include the verification of the proper operation of each initiation relay. ----- Perform a CHANNEL FUNCTIONAL TEST on each ESFAS logic channel.	120 days

(continued)



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 133 TO FACILITY OPERATING LICENSE NO. NPF-10
AND AMENDMENT NO. 122 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 July 17, 1995, Southern California Edison Company (SCE or the licensee) requested changes to 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. The proposed changes would revise the frequency of surveillance requirements for certain plant protective system instrumentation contained in Technical Specifications (TS) 3.3.1, "Reactor Protective System (RPS) Instrumentation - Operating," TS 3.3.2, "Reactor Protective System (RPS) Instrumentation - Shutdown," TS 3.3.3, "Control Element Assembly Calculators (CEACs)," TS 3.3.4, "Reactor Protective System (RPS) Logic and Trip Initiation," TS 3.3.5, "Engineered Safety Features Actuation System (ESFAS) Instrumentation," and TS 3.3.6, "Engineered Safety Features Actuation System (ESFAS) Logic and Manual Trip."

2.0 BACKGROUND

The present surveillance requirements (SRs) in the above listed TS sections require, in part, that certain plant protective system (PPS) instrumentation, which includes the reactor protection system (RPS) and engineered safety feature actuation system (ESFAS) instrumentation, be demonstrated OPERABLE by the performance of a CHANNEL FUNCTIONAL TEST (CFT) at least once in 92 days. This licensee proposes to revise the PPS 92-day surveillance test interval to 30 days on a STAGGERED TEST BASIS (60 days on a STAGGERED TEST BASIS for the two channels of CEACs), and where staggered testing is not applicable, extends the CFTs from 92-day sequential to 120-day sequential. The new test interval will result in each PPS channel being tested at 120-day intervals. In addition, the channel calibration interval for nuclear instrumentation (NI) and several other minor instrumentation system will be extended.

The proposed TS amendment for the change in PPS functional testing interval is based on the reliability analysis presented in topical report CEN-327-A, "RPS/ESFAS Extended Test Interval Evaluation," and Supplement 1 to CEN-327-A prepared by Combustion Engineering for the Combustion Engineering Owners Group (CEOG). This report was previously approved by the staff by letter dated November 6, 1989, for quarterly test intervals and is presently being used by the San Onofre licensee to justify extending the test intervals to 120 days. Probabilistic risk analysis techniques were used to demonstrate that the proposed surveillance interval extensions had a negligible impact on plant risk when compared with current technical specification requirements. The documentation submitted by the licensee verifies that the same methodology and fault tree analysis of topical report CEN-327-A was used in analyzing the present request to extend the PPS surveillance test interval to 120 days. The licensee also conducted a plant specific nuclear instrumentation system unavailability study to support extension of the channel calibration interval for the NI, including the linear subchannel gains settings, which were not included in CEN-327-A.

The analysis presented in topical report CEN-327-A estimated a slight increase in RPS unavailability as a result of extending the functional test interval from monthly to quarterly. The analysis also estimated a reduction in scram and core melt frequency based on the expected reduction in test-induced transients/scrams. The staff's safety evaluation (SE) for CEN-327-A found, therefore, that the overall impact of reduced RPS testing intervals on safety is negligible. The results of the analysis regarding reduced ESFAS testing on core melt frequency was found to be similar to the reduced testing of RPS instruments.

Topical report CEN-327-A does not address the effect of drift in either the instrument strings or sensors. These effects are specific to each individual plant and as a result, the staff required licensees to review plant specific drift data (as found, as left) for each instrument channel involved. The staff's SE for CEN-327-A required the licensee to confirm that the drift occurring over the proposed surveillance interval will not cause the setpoint to exceed the allowable value for that channel as calculated by the licensee setpoint methodology.

3.0 EVALUATION

Topical report CEN-327-A explicitly addressed the proposed 120-day CFT extensions for all the RPS instrumentation listed in TS Table 3.3.1-1, the ESFAS instrumentation listed in TS Table 3.3.5-1, the four RPS logarithmic power channels required by TS 3.3.2 to be operable during plant shutdown, and the control element assembly calculators governed by TS 3.3.3. Specifically, the CFTs are proposed to be changed to a 30-day frequency on a STAGGERED TEST BASIS for SR 3.3.1.7, SR 3.3.2.2, and SR 3.3.5.2, and changed to a 60-day frequency on a STAGGERED TEST BASIS for SR 3.3.3.3. This will result in each channel being tested at a 120-day interval. Also, the CFT frequency for the RPS and ESFAS logic channels will be changed from 92 days to 120 days sequential (SR 3.3.4.2 and SR 3.3.6.1, respectively).

In addition, the CFTs for certain instrument bypass logic checks will be extended by this TS amendment proposal. SR 3.3.1.12, SR 3.3.2.3 and SR 3.3.5.6, (this is SR 3.3.5.7 in the amended TS) which applies to certain RPS and all ESFAS instrumentation, currently requires that the bypass logic be demonstrated operable prior to each reactor startup unless performed during the preceeding 92 days. The licensee proposes to revise this interval to 120 days proceeding each reactor startup. SR 3.3.5.3, which currently requires the CFT frequency for each ESFAS bypass function to be further checked at 92-day intervals, will be changed to a 120-day interval.

The staff confirmed that the licensee evaluation for the proposed CFT extension was derived from the RPS and ESFAS fault tree models developed for and presented in Topical Report CEN-327-A, including Supplement 1. The staff's SE dated November 6, 1989 approving CEN-327-A found the overall impact of reduced PPS functional testing intervals on safety to be negligible. Moreover, the licensee performed a specific evaluation for the San Onofre Units 2 and 3 instrumentation to support the proposed 120-day CFT interval extension. Therefore, the staff finds acceptable the frequency extensions proposed for the above listed SRs.

The calibration interval for the power range neutron flux channels (SR 3.3.1.8) and the verification of the linear power subchannel gains of the excore detectors (SR 3.3.1.6) will also be revised from 92-day to 120-day sequential. The licensee conducted a plant specific nuclear instrumentation system unavailability study to support extension of the channel calibration interval for the NI including the linear subchannel gain settings, since this issue was not included in CEN-327-A. The study determined that because of the high reliability of the NI, the surveillance intervals for the nuclear instrumentation linear power subchannel gain amplifiers and associated nuclear instrumentation can be extended to a 120-day sequential interval with no increase in system unavailability. The staff agrees that the proposed increase in calibration interval will not increase system unavailability, and finds the 120-day calibration interval to be acceptable.

As noted in Section 2.0 of this SE, the effects of drift are plant specific and are to be included with each individual plant analysis, as stated in the staff's November 6, 1989, SE on CEN-327-A. Licensees requesting the CFT interval extension should confirm that they have reviewed drift information, including as-found and as-left values for each instrument channel involved. The review should determine that the drift occurring in that channel will remain bounded by the licensee's setpoint methodology for the extended surveillance interval. Additionally, licensees should maintain on site records of the setpoint calculations and associated data to support planned future staff audits. The San Onofre licensee has provided information on the plant specific drift analysis methodology and the results were demonstrated to be bounded by the current setpoint calculations. The staff concludes, therefore, that the conditions stated in the November 6, 1989 staff SE for CEN-327-A have been met by the licensee, and that the current setpoint calculations are acceptable.

The calibration of transmitters and signal processing equipment continues to be conducted at each refueling interval and is not affected by the proposed increase in the functional test surveillance interval. Also, the margin or error allowances related to the channel calibration interval of 24 months will remain unchanged. Therefore, this amendment request does not compromise the bases for the 24-month calibration interval as stated in San Onofre license Amendment Nos. 88 and 78.

Although not included in the staff's review of the proposed changes to the TS, the licensee has also revised the Bases of the TS to reflect the new surveillance intervals.

4.0 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.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments 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 (60 FR 45185). 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.

6.0 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.

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