

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

Docket File

January 2, 1990

Docket Nos. 50-361
and 50-362

Mr. Harold B. Ray
Vice President
Southern California Edison Co.
Irvine Operations Center
23 Parker Street
Irvine, California 92718

Mr. Gary D. Cotton
Senior Vice President
Engineering and Operations
San Diego Gas and Electric Co.
101 Ash Street
San Diego, California 92112

Gentlemen:

SUBJECT: ISSUANCE OF AMENDMENT NO. 82 TO FACILITY OPERATING LICENSE NO. NPF-10 AND AMENDMENT NO. 72 TO FACILITY OPERATING LICENSE NO. NPF-15 SAN ONOFRE NUCLEAR GENERATING STATION, UNIT NOS. 2 AND 3 (TAC NOS. 71603, 71604, 71794, 71795, 72963, AND 72964)

The Commission has issued the enclosed amendments to Facility Operating Licenses No. NPF-10 and No. NPF-15 for San Onofre Nuclear Generating Station, Unit Nos. 2 and 3, respectively. The amendments consist of changes to the Technical Specifications in response to your applications dated December 19, 1988 (PCN-267), December 30, 1988 (PCN-266), which were supplemented September 5, 1989 and April 7, 1989 (PCN-291), which was supplemented November 6, 1989.

The amendments revise the following sections of the Technical Specifications:

- 3/4.3.2 "Engineered Safety Feature Actuation System Instrumentation"
- 3/4.3.3.1 "Radiation Monitoring Instrumentation"
- 3/4.4.10 "Reactor Coolant Gas Vent System"

Specifically in each case, the surveillance interval has been extended from a nominal 18 months to once per refueling interval, which is nominally every 24 months.

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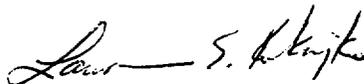
Missrs. Ray and Cotton

- 2 -

January 2, 1990

Copies of our related Safety Evaluation and Notice of Issuance are also enclosed.

Sincerely,



Lawrence E. Kokajko, Project Manager
Project Directorate V
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 82 to
License No. NPF-10
2. Amendment No. 72 to
License No. NPF-15
3. Safety Evaluation
4. Notice of Issuance

cc w/enclosures:
See next page

Copies of our related Safety Evaluation and Notice of Issuance are also enclosed.

Sincerely,

Lawrence E. Kokajko, Project Manager
Project Directorate V
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Amendment No. to License No. NPF-10
- 2. Amendment No. to License No. NPF-15
- 3. Safety Evaluation
- 4. Notice of Issuance

cc w/enclosures:
See next page

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w/addition to SE

OFC	:DRSP/PD5	:DRSP/PD5	:OGC	:DRSP/D:PD5	:	:
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DATE	:12/11/89	:12/12/89	:12/15/89	: 12/17/89	:	:

1/2/90



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

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. 82
License No. NPF-10

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The applications for amendment to the license for San Onofre Nuclear Generating Station, Unit 2 (the facility) filed by Southern California Edison Company (SCE) on behalf of itself and San Diego Gas and Electric Company, the City of Riverside, California and the City of Anaheim, California (licensees) dated December 19, 1988 and December 30, 1988, which were supplemented September 5, 1989; and April 7, 1989, which was supplemented November 6, 1989, comply 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 applications, the provisions of the Act, and the 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.

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Mr. Harold B. Ray
Southern California Edison Company

San Onofre Nuclear Generating
Station, Units 2 and 3

cc:

Charles R. Kocher, Esq.
James A. Beoletto, Esq.
Southern California Edison Company
Irvine Operations Center
23 Parker
Irvine, California 92718

Mr. F. B. Marsh, Project Manager
Bechtel Power Corporation
P.O. Box 60860
Terminal Annex
Los Angeles, California 90060

Orrick, Herrington & Sutcliffe
ATTN: David R. Pigott, Esq.
600 Montgomery Street
San Francisco, California 94111

Mr. Robert G. Lacy
Manager, Nuclear Department
San Diego Gas & Electric Company
P. O. Box 1831
San Diego, California 92112

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

Mr. John Hickman
Senior Health Physicist
Environmental Radioactive Mgmt. Unit
Environmental Management Branch
State Department of Health Services
714 P Street, Room 616
Sacramento, California 95814

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

Resident Inspector, San Onofre NPS
c/o U.S. Nuclear Regulatory Commission
Post Office Box 4329
San Clemente, California 92672

Mr. Charles B. Brinkman
Combustion Engineering, Inc.
12300 Twinbrook Parkway, Suite 330
Rockville, Maryland 20852

Mayor, City of San Clemente
San Clemente, California 92672

Mr. Phil Johnson
U.S. Nuclear Regulatory Commission
Region V
1450 Maria Lane, Suite 210
Walnut Creek, California 94596

Regional Administrator, Region V
U.S. Nuclear Regulatory Commission
1450 Maria Lane/Suite 210
Walnut Creek, California 94596

Mr. Don Womeldorf
Chief Environmental Management Branch
California Department of Health
714 P Street, Room 616
Sacramento, California 95814

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

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 Specification

The Technical Specifications contained in Appendix A, and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 82, are hereby incorporated in the license. SCE 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 must be fully implemented no later than 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



George W. Knighton, Director
Project Directorate V
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: January 2, 1990

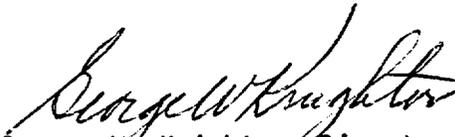
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C(2) of Facility Operating License No. NPF-15 is hereby amended to read as follows:

(2) Technical Specification

The Technical Specifications contained in Appendix A, and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 72, are hereby incorporated in the license. SCE 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 must be fully implemented no later than 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION


George W. Knighton, Director
Project Directorate V
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: January 2, 1990

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u>
11. FUEL HANDLING ISOLATION (FHIS)				
a. Manual (Trip Buttons)	N.A.	N.A.	R	N.A.
b. Airborne Radiation				
i. Gaseous	S	R	M	*
ii. Particulate/Iodine	S	R	M	*
c. Automatic Actuation Logic	N.A.	N.A.	R(3)	*
12. CONTAINMENT PURGE ISOLATION (CPIS)				
a. Manual (Trip Buttons)	N.A.	N.A.	R	N.A.
b. Airborne Radiation				
i. Gaseous	S	R	M	1,2,3,4,6
ii. Particulate	W	R	M	1,2,3,4,6
iii. Iodine	W	R	M	6
c. Containment Area Radiation (Gamma)	S	(6)	M	1,3,3,4,6
d. Automatic Actuation Logic	N.A.	N.A.	R (3)	1,2,3,4,6

TABLE NOTATION

- (1) Each train or logic channel shall be tested at least every 62 days on a STAGGERED TEST BASIS.
 - (2) Deleted.
 - (3) Testing of Automatic Actuation Logic shall include energization/de-energization of each initiation relay and verification of the OPERABILITY of each initiation relay.
 - (4) A subgroup relay test shall be performed which shall include the energization/de-energization of each subgroup relay and verification of the OPERABILITY of each subgroup relay. Relays exempt from testing during plant operation shall be limited to only those relays associated with plant equipment which cannot be operated during plant operation. Relays not testable during plant operation shall be tested during each COLD SHUTDOWN exceeding 24 hours unless tested during the previous 6 months.
 - (5) Actuated equipment only; does not result in CIAS.
 - (6) At least once per refueling interval.
- * With irradiated fuel in the storage pool.

INSTRUMENTATION

3/4.3.3 MONITORING INSTRUMENTATION

RADIATION MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.1 The radiation monitoring instrumentation channels shown in Table 3.3-6 shall be OPERABLE with their alarm/trip setpoints within the specified limits.*

APPLICABILITY: As shown in Table 3.3-6.

ACTION:

- a. With a radiation monitoring channel alarm/trip setpoint exceeding the value shown in Table 3.3-6, adjust the setpoint to within the limit within 4 hours or declare the channel inoperable.
- b. With one or more radiation monitoring channels inoperable, take the ACTION shown in Table 3.3-6.
- c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.1 Each radiation monitoring instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations for the MODES and at the frequencies shown in Table 4.3-3.

*Continuous monitoring and sampling of the containment purge exhaust directly from the purge stack shall be provided for the low and high volume (8-inch and 42-inch) containment purge prior to startup following the first refueling outage. Containment airborne monitor 3RT-7804-1 or 3RT-7807-2 and associated sampling media shall perform these functions prior to initial criticality. From initial criticality to the startup following the first refueling outage containment airborne monitor 3RT-7804-1 and associated sampling media shall perform the above required functions.

TABLE 3.3-6 (Continued)

ACTION STATEMENTS

- ACTION 13 - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, within 1 hour initiate and maintain operation of the control room emergency air cleanup system in the emergency (except as required by ACTIONS 14, 15) mode of operation.
- ACTION 16 - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.9.12.
- ACTION 17 - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, operation may continue provided that the purge valves are maintained closed.
- ACTION 17a - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.4.5.1 (Mode 1, 2, 3, 4 only)
- ACTION 17b - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, close each of the containment purge penetrations providing direct access from the containment atmosphere to the outside atmosphere.
- ACTION 18 - With the number of channels OPERABLE one less than Minimum Channels OPERABLE requirement, either restore the inoperable channel to OPERABLE status within 30 days, or be in HOT SHUTDOWN within the next 12 hours.
- ACTION 18a - With both channels inoperable, restore the inoperable channel(s) to OPERABLE status within 48 hours, or be in HOT SHUTDOWN within the next 12 hours.
- ACTION 19 - With the number of OPERABLE Channels less than required by the Minimum Channels OPERABLE requirement, either restore the inoperable Channel(s) to OPERABLE status within 72 hours, or:
- 1) Initiate the preplanned alternate method of monitoring the appropriate parameter(s), and
 - 2) Prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days following initiation of the pre-planned alternate outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

#In accordance with Engineered Safety Feature trip value specified by Table 3.3-4.
*With irradiated fuel in the storage pool.

ACTIONS 13, 16, 17, 17a and 17b are repeated from Table 3.3-3 for reference.

TABLE 4.3-3

RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u>
1. Area Monitors				
a. Containment - High Range (3RT-7820-1, 3RT-7820-2)	S	R	M	1, 2, 3, 4
b. Containment - Purge Isolation (3RT-7856-1, 3RT-7857-2)	S	(2)	M	1, 2, 3, 4, 6
c. Main Steam Line (3RT-7874A, 3RT-7875A, 3RT-7874B, 3RT-7875B)	S	R	M	1, 2, 3, 4
2. Process Monitors				
a. Fuel Storage Pool Airborne (3RT-7822-1, 3RT-7823-2)				
i. Gaseous	#	#	#	*
ii. Particulate/Iodine	#	#	#	*
b. Containment Airborne (3RT-7804-1, 3RT-7807-2)				
i. Gaseous	#	#	#	1, 2, 3, 4, 6
ii. Particulate	#	#	#	1, 3, 3, 4, 6
iii. Iodine	#	#	#	6
c. Control Room Airborne (2/3RT-7824-1, 2/3RT-7825-2)				
i. Particulate	#	#	#	All
ii. Gaseous	#	#	#	All

TABLE 4.3-3 (Continued)

RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u>
PROCESS MONITORS (Continued)				
3. Noble Gas Monitors				
a. Plant Vent Stack (2/3 RT-7808, 2RT-7865-1, 3RT-7865-1)	D	R	Q	1, 2, 3, 4
b. Condenser Evacuation System (3RT-7818, 3RT-7870-1)	D	R	Q	1, 2, 3, 4(1)

NOTES:

#In accordance with Table 4.3-2 surveillance requirements for these instrument channels.

*With irradiated fuel in the storage pool.

- (1) With any main steam isolation valve and/or any main steam isolating valve bypass valve not fully closed.
- (2) At least once per refueling interval.

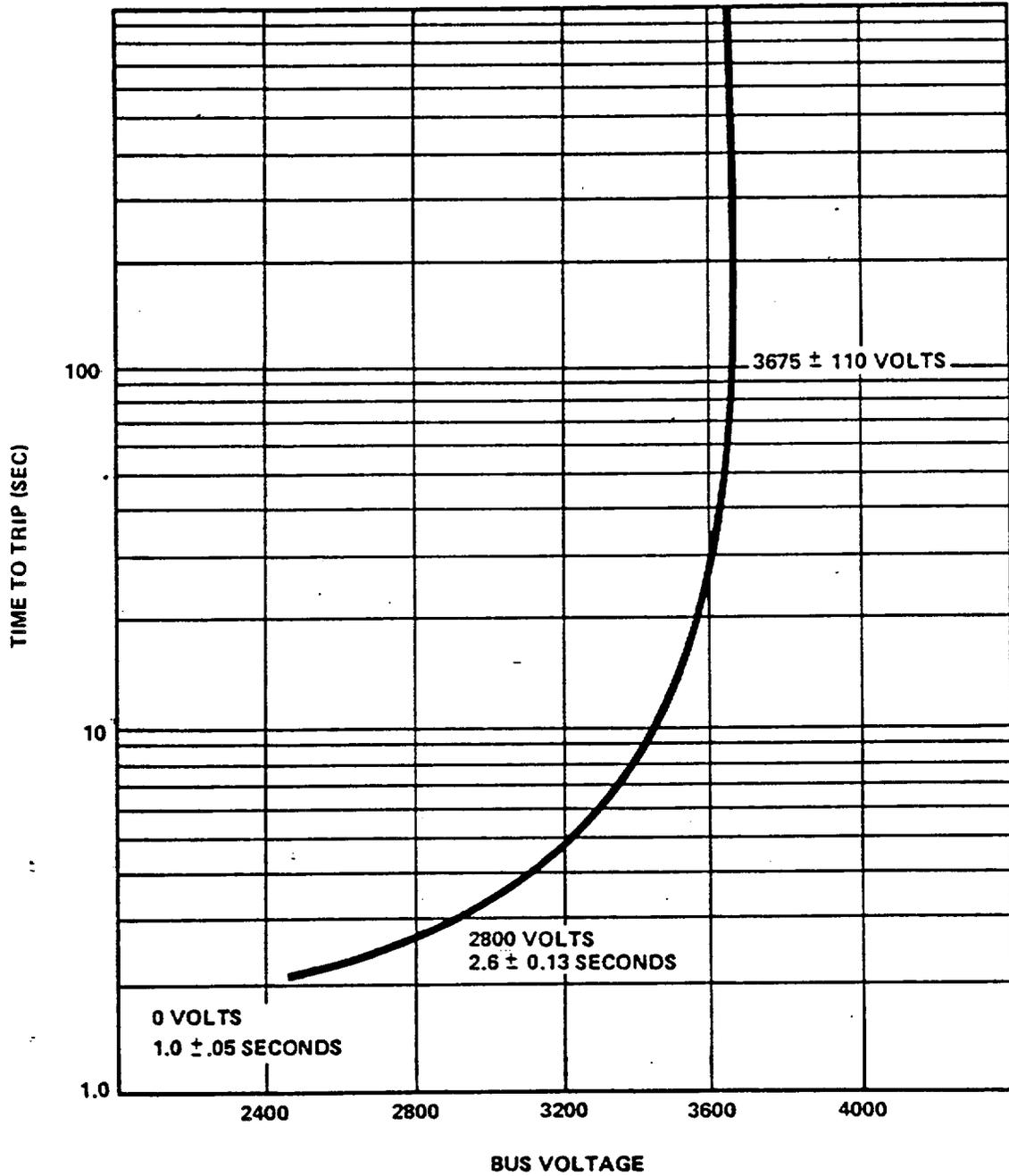


Figure 3.3-1
 DEGRADED BUS VOLTAGE TRIP SETTING

REACTOR COOLANT SYSTEM

3/4.4.10 REACTOR COOLANT GAS VENT SYSTEM

LIMITING CONDITION FOR OPERATION

- 3.4.10 The Reactor Coolant Gas Vent System shall be OPERABLE with:
- a. At least one of valves 3HV0296A or 3HV0296B capable of being powered from an emergency bus and providing a vent path from the reactor vessel head; and,
 - b. At least one of valves 3HV0297A or 3HV0297B capable of being powered from an emergency bus and providing a vent path from the pressurizer steam space; and,
 - c. At least one of valves 3HV0298, capable of being powered from an emergency bus and providing a vent path to the containment atmosphere, or 3HV0299, capable of being powered from an emergency bus and providing a vent path to the quench tank; and
 - d. Valves 3HV0296A, 3HV0296B, 3HV0297A, 3HV0297B, 3HV0299 and 3HV0298 all closed.

APPLICABILITY: MODES 1, 2, 3 and 4

ACTION:

- a. With any of valves 3HV0296A, 3HV0296B, 3HV0297A, or 3HV0297B inoperable, operation may continue provided that:
 - i) power is removed from the inoperable valve(s) within 4 hours; and,
 - ii) valves 3HV0299 and 3HV0298 are maintained closed and power is removed within 4 hours; and,
 - iii) the inoperable valve(s) is restored to OPERABLE status during the next COLD SHUTDOWN.
- b. With any of valves 3HV0299 or 3HV0298 inoperable, operation may continue provided that:
 - i) power is removed from the inoperable valve(s) within 4 hours; and,
 - ii) valves 3HV0296A, 3HV0296B, 3HV0297A and 3HV0297B are all maintained closed and power is removed within 4 hours; and

REACTOR COOLANT SYSTEM

LIMITING CONDITION FOR OPERATION

- iii) the inoperable valve(s) is restored to OPERABLE status during the next COLD SHUTDOWN.
- c. The provisions of 3.0.4 are not applicable for entry into MODES 3, 2 and 1.

SURVEILLANCE REQUIREMENTS

4.4.10 Each reactor coolant system vent path shall be demonstrated OPERABLE at least once per refueling interval by:

1. Verifying all manual isolation valves in each vent path are locked in the open position.
2. Cycling each valve in the vent path through at least one complete cycle of full travel from the control room during COLD SHUTDOWN or REFUELING.
3. Verifying flow through the reactor coolant vent system vent paths during venting during COLD SHUTDOWN.

ATTACHMENT TO LICENSE AMENDMENT NO. 72

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 area of change. Also enclosed are the following overleaf pages to the amended pages.

<u>AMENDMENT PAGE</u>	<u>OVERLEAF PAGE</u>
3/4 3-33	3/4 3-34
3/4 3-38	3/4 3-37
3/4 3-39	3/4 3-40
3/4 4-38	3/4 4-37



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

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. 72
License No. NPF-15

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The applications for amendment to the license for San Onofre Nuclear Generating Station, Unit 3 (the facility) filed by Southern California Edison Company (SCE) on behalf of itself and San Diego Gas and Electric Company, the City of Riverside, California and the City of Anaheim, California (licensees) dated December 19, 1988 and December 30, 1988, which were supplemented September 5, 1989; and April 7, 1989, which was supplemented November 6, 1989, comply 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 applications, the provisions of the Act, and the 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.

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u>
11. FUEL HANDLING ISOLATION (FHIS)				
a. Manual (Trip Buttons)	N.A.	N.A.	R	N.A.
b. Airborne Radiation				
i. Gaseous	S	R	M	*
ii. Particulate/Iodine	S	R	M	*
c. Automatic Actuation Logic	N.A.	N.A.	R(3)	*
12. CONTAINMENT PURGE ISOLATION (CPIS)				
a. Manual (Trip Buttons)	N.A.	N.A.	R	N.A.
b. Airborne Radiation				
i. Gaseous	S	R	M	1,2,3,4,6
ii. Particulate	W	R	M	1,2,3,4,6
iii. Iodine	W	R	M	6
c. Containment Area Radiation (Gamma)	S	(6)	M	1,2,3,4,6
d. Automatic Actuation Logic	N.A.	N.A.	R (3)	1,2,3,4,6

TABLE NOTATION

- (1) Each train or logic channel shall be tested at least every 62 days on a STAGGERED TEST BASIS.
 - (2) Deleted.
 - (3) Testing of Automatic Actuation Logic shall include energization/de-energization of each initiation relay and verification of the OPERABILITY of each initiation relay.
 - (4) A subgroup relay test shall be performed which shall include the energization/de-energization of each subgroup relay and verification of the OPERABILITY of each subgroup relay. Relays exempt from testing during plant operation shall be limited to only those relays associated with plant equipment which cannot be operated during plant operation. Relays not testable during plant operation shall be tested during each COLD SHUTDOWN exceeding 24 hours unless tested during the previous 6 months.
 - (5) Actuated equipment only; does not result in CIAS.
 - (6) At least once per refueling interval.
- * With irradiated fuel in the storage pool.

INSTRUMENTATION

3/4.3.3 MONITORING INSTRUMENTATION

RADIATION MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.1 The radiation monitoring instrumentation channels shown in Table 3.3-6 shall be OPERABLE with their alarm/trip setpoints within the specified limits.

APPLICABILITY: As shown in Table 3.3-6.*

ACTION:

- a. With a radiation monitoring channel alarm/trip setpoint exceeding the value shown in Table 3.3-6, adjust the setpoint to within the limit within 4 hours or declare the channel inoperable.
- b. With one or more radiation monitoring channels inoperable, take the ACTION shown in Table 3.3-6.
- c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.1 Each radiation monitoring instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations for the MODES and at the frequencies shown in Table 4.3-3.

*See Special Test Exception 3.10.5.

TABLE 3.3-6 (Continued)

ACTION STATEMENTS

- ACTION 13 - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, within 1 hour initiate and maintain operation of the control room emergency air cleanup system in the emergency (except as required by ACTIONS 14, 15) mode of operation.
- ACTION 16 - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.9.12.
- ACTION 17 - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, operation may continue provided that the purge valves are maintained closed.
- ACTION 17a - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.4.5.1. (Mode 1, 2, 3, 4 only)
- ACTION 17b - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, close each of the containment purge penetrations providing direct access from the containment atmosphere to the outside atmosphere.
- ACTION 18 - With the number of channels OPERABLE one less than the Minimum Channels OPERABLE requirement, either restore the inoperable channel to OPERABLE status within 30 days, or be in HOT SHUTDOWN within the next 12 hours.
- ACTION 18a - With both channels inoperable, restore the inoperable channel(s) to OPERABLE status within 48 hours, or be in HOT SHUTDOWN within the next 12 hours.
- ACTION 19 - With the number of OPERABLE Channels less than required by the Minimum Channels OPERABLE requirement, either restore the inoperable Channel(s) to OPERABLE status within 72 hours, or:
- 1) Initiate the preplanned alternate method of monitoring the appropriate parameter(s), and
 - 2) Prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days following initiation of the pre-planned alternate outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

#In accordance with Engineered Safety Feature trip value specified by Table 3.3-4.
*With irradiated fuel in the storage pool.

ACTIONS 13, 16, 17, 17a and 17b are repeated from Table 3.3-3 for reference.

TABLE 4.3-3

RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u>
1. Area Monitors				
a. Containment - High Range (2RT-7820-1, 2RT-7820-2)	S	R	M	1, 2, 3, 4
b. Containment - Purge Isolation (2RT-7856-1, 2RT-7857-2)	S	(2)	M	1, 2, 3, 4, 6
c. Main Steam Line (2RT-7874A, 2RT-7875A, 2RT-7874B, 2RT-7875B)	S	R	M	1, 2, 3, 4
2. Process Monitors				
a. Fuel Storage Pool Airborne (2RT-7822-1, 2RT-7823-2)				
i. Gaseous	#	#	#	*
ii. Particulate/Iodine	#	#	#	*
b. Containment Airborne (2RT-7804-1, 2RT-7807-2)				
i. Gaseous	#	#	#	1, 2, 3, 4, 6
ii. Particulate	#	#	#	1, 2, 3, 4, 6
iii. Iodine	#	#	#	6
c. Control Room Airborne (2/3RT-7824-1, 2/3RT-7825-2)				
i. Particulate	#	#	#	All
ii. Gaseous	#	#	#	All

TABLE 4.3-3

RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u>
PROCESS MONITORS (Continued)				
3. Noble Gas Monitors				
a. Plant Vent Stack (2RT-7865-1, 3RT-7865-1, 2/3RT-7808)	D	R	Q	1, 2, 3, 4
b. Condenser Evacuation System (2RT-7870-1, 2RT-7818-1)	D	R	Q	1, 2, 3, 4(1)

NOTES:

#In accordance with Table 4.3-2 surveillance requirements for these instrument channels.

*With irradiated fuel in the storage pool.

(1) With any main steam isolation valve and/or any main steam isolating valve bypass valve not fully closed.

(2) At least once per refueling interval.

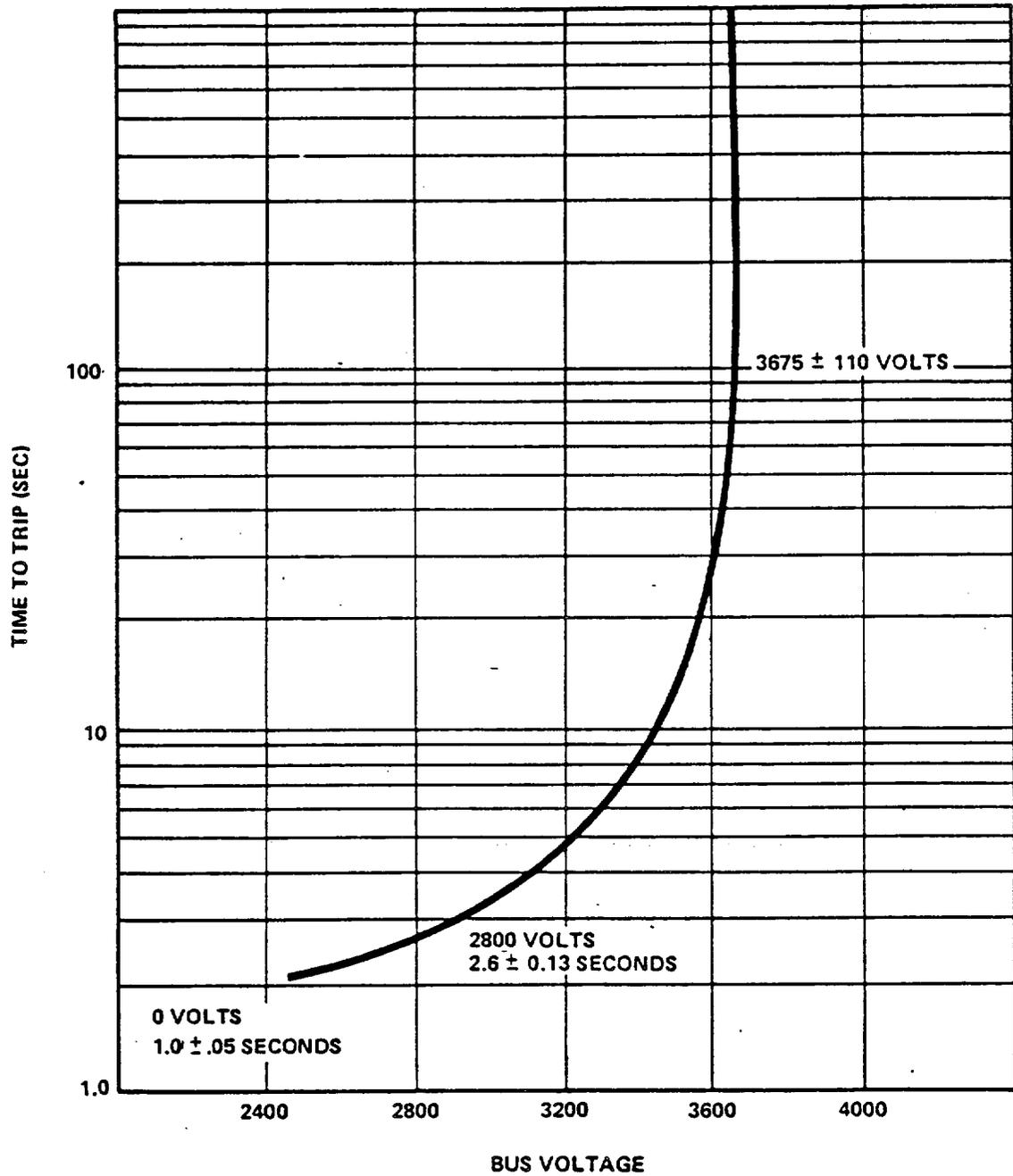


Figure 3.3-1
 DEGRADED BUS VOLTAGE TRIP SETTING

REACTOR COOLANT SYSTEM

3/4.4.10 REACTOR COOLANT GAS VENT SYSTEM

LIMITING CONDITION FOR OPERATION

3.4.10 The Reactor Coolant Gas Vent System shall be OPERABLE with:

- a. At least one of valves 2HVO296A or 2HVO296B capable of being powered from an emergency bus and providing a vent path from the reactor vessel head; and,
- b. At least one of valves 2HVO297A or 2HVO297B capable of being powered from an emergency bus and providing a vent path from the pressurizer steam space; and,
- c. At least one of valves 2HVO298, capable of being powered from an emergency bus and providing a vent path to the containment atmosphere, or 2HVO299, capable of being powered from an emergency bus and providing a vent path to the quench tank; and
- d. Valves 2HVO296A, 2HVO296B, 2HVO297A, 2HVO297B, 2HVO299 and 2HVO298 all closed.

APPLICABILITY: MODES 1, 2, 3 and 4

ACTION:

- a. With any of valves 2HVO296A, 2HVO296B, 2HVO297A or 2HVO297B inoperable, operation may continue provided that:
 - i) power is removed from the inoperable valve(s) within 4 hours; and,
 - ii) valves 2HVO299 and 2HVO298 are maintained closed and power is removed within 4 hours; and,
 - iii) the inoperable valve(s) is restored to OPERABLE status during the next COLD SHUTDOWN.
- b. With any of valves 2HVO299 or 2HVO298 inoperable, operation may continue provided that:
 - i) power is removed from the inoperable valve(s) within 4 hours; and,
 - ii) valves 2HVO296A, 2HVO296B, 2HVO297A and 2HVO297B are all maintained closed and power is removed within 4 hours; and

REACTOR COOLANT SYSTEM

LIMITING CONDITION FOR OPERATION

- iii) the inoperable valve(s) is restored to OPERABLE status during the next COLD SHUTDOWN.
- c. The provisions of 3.0.4 are not applicable for entry into MODES 3, 2 and 1.

SURVEILLANCE REQUIREMENTS

4.4.10 Each reactor coolant system vent path shall be demonstrated OPERABLE at least once per refueling interval by:

1. Verifying all manual isolation valves in each vent path are locked in the open position.
2. Cycling each valve in the vent path through at least one complete cycle of full travel from the control room during COLD SHUTDOWN or REFUELING.
3. Verifying flow through the reactor coolant vent system vent paths during venting during COLD SHUTDOWN.

ATTACHMENT TO LICENSE AMENDMENT NO. 82

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 area of change. Also enclosed are the following overleaf pages to the amended pages.

<u>AMENDMENT PAGE</u>	<u>OVERLEAF PAGE</u>
3/4 3-33	3/4 3-34
3/4 3-38	3/4 3-37
3/4 3-39	3/4 3-40
3/4 4-36	3/4 4-35



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 82 TO FACILITY OPERATING LICENSE NO. NPF-10
AND AMENDMENT NO. 72 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, UNIT NOS. 2 AND 3
DOCKET NOS. 50-361 AND 50-362

1.0 INTRODUCTION

By letters dated December 19, 1988 (PCN-267), December 30, 1988 (PCN-266), which were supplemented September 5, 1989, and April 7, 1989 (PCN-291), which was supplemented November 6, 1989, Southern California Edison Company et al. (the licensee) requested a change to the Technical Specifications for Facility Operating Licenses No. NPF-10 and No. NPF-15 that authorize operation of San Onofre Nuclear Generating Station, Unit Nos. 2 and 3 in San Diego County, California. In PCN-267, the licensee requested to revise TS 3/4.3.3.1, "Radiation Monitoring Instrumentation." In PCN-266, the licensee requested to revise TS 3/4.3.3.1, "Radiation Monitoring Instrumentation," and TS 3/4.3.2, "Engineered Safety Feature Actuation System Instrumentation." In PCN-291, the licensee requested to revise TS 3/4.4.10, "Reactor Coolant Gas Vent System."

These requested changes would extend the interval for 18 month surveillance tests in order to support the nominal 24 month fuel cycle. In each case, the surveillance test interval would be changed from 18 months to "refueling interval." The licensee has submitted proposed changes to cover all the 18 month surveillance tests which cannot be performed during plant operation. At the staff's request, the licensee agreed to amend these proposed TS modifications to define "refueling interval" as 24 months. By letter dated March 20, 1989, this particular request was made by the licensee. This definition has been included in the Frequency Notation Table of the Technical Specifications (Table 1.2) by Amendments 73 and 61 to Facility Operating License Nos. NPF-10 and NPF-15, respectively.

The November 6, 1989 supplement contained clarifying information which did not change the subject of the proposed amendment noticed in the Federal Register.

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2.0 EVALUATION

2.1 PCN-266 and PCN-267

By letter dated December 30, 1988 and supplemented September 5, 1989, the licensee proposed in PCN-266 to revise TS 3/4.3.2, "Engineered Safety Feature Actuation Instrumentation," Table 4.3-2, Item 12.c; and TS 3/4.3.3.1, "Radiation Monitoring Instrumentation," Table 4.3-3, Item 1.b. Radiation monitoring instruments provide two trains of continuous monitoring, recording, and indication of containment area radiation (gamma) levels. These systems also provide alarm annunciation and containment purge isolation trip initiation signals whenever technical specification limits are approached or exceeded. TS 4.3.2.1, Table 4.3-2, Item 12.c and TS 4.3.3.1, Table 4.3-3, Item 1.b state that each containment purge isolation area monitor shall be demonstrated operable by the performance of a channel calibration at least once per 18 months. The proposed change would revise this interval from at least 18 months to at least once per refueling, which is defined as at least once every 24 months.

By letter dated December 19, 1988 and supplemented September 5, 1989, the licensee proposed in PCN-267 to revise TS 3/4.3.3.1, "Radiation Monitoring Instrumentation." This specification provides alarm and trip setpoints for certain radiation monitoring instrumentation channels. The operability of these radiation monitoring alarm channels ensures that: (1) the radiation levels are continuously measured in the areas served by the individual channels; (2) the alarm or automatic action is initiated when the radiation level trip setpoint is exceeded; and (3) sufficient information is available on selected plant parameters to monitor and assess these variables following an accident. Radiation monitoring instruments provide two trains of high range continuous monitoring, recording, and indication of containment area radiation levels. The systems also provide for alarm annunciation whenever the technical specification limits for area radiation are approached or exceeded. During accident conditions, the high range containment monitors would provide for long-term post-accident monitoring of radiation conditions inside containment. TS 4.3.3.1 states that each containment high range channel shall be demonstrated operable by the performance of a channel calibration at least once per 18 months. The proposed change would revise this interval to at least once per refueling, which is defined as at least once every 24 months.

In both PCN-266 and PCN-267, the licensee has requested amendments to its licenses for San Onofre Unit Nos. 2 and 3 to revise its area and high range containment radiation instrument calibration interval from a nominal 18 months to each refueling interval. The revised refueling outage interval corresponds to the expected core life when utilizing higher enrichment and higher burnup fuel, which the staff has previously authorized for these units. The containment area monitors would alarm and actuate certain safety systems during an accident, whereas the containment

high range monitors would alarm only and indicate local dose rates. There are two redundant containment area and high range monitors (4 total) in each unit (8 total). The extension was requested to reduce the potential occupational radiation exposures which would occur if the full scope calibrations were conducted during plant operation.

The staff requested and has received an analysis of the past performance of these instruments from the licensee. They are checked visually daily and are functionally tested monthly. At the calibration interval, they are subjected to radiation fields to assess their performance capabilities for their intended function. Thus, a substantial data base exists regarding their performance and failure modes.

In response to staff questions, the licensee applied a Reliability Centered Maintenance (RCM) approach to analyze the surveillance and calibration data. This approach involved two reviews: (1) a surveillance review to assure that the existing daily and monthly surveillances are finding equipment problems, i.e., performance accuracy, hidden failures, or degraded conditions; and (2) a corrective maintenance history review to ensure that all problems affecting operability were detected by a condition or time directed means, i.e., surveillance, alarm or indication to the operator. The licensee provided data and analyses to support its conclusion that all problems that affect monitor operability were detected, or would have been detected, by the monthly channel functional test, alarms or indications to the operator. The staff reviewed this data with the licensee during a site visit in September 1989.

The staff agrees with the conclusion reached by the licensee, principally because the area monitors are amenable to test using an external pulsed light source. These monitors utilize thallium activated sodium iodide crystals as radiation detectors. Ionizing radiation causes light pulses in the crystals. By applying a light pulse, the complete monitor circuitry is checked monthly. Experience over many decades shows that such detectors are highly reliable and stable over many years of use. Degradation of these detectors normally occurs in the photomultiplier, cables or power supplies, i.e., conditions readily detected, as illustrated by the licensee's data provided to the staff.

The high range containment radiation monitors provide for long-term, post-accident monitoring of radiation levels in the containment. These monitors are ion chamber detectors, which are also robust. A high reading would provide an alarm in the control room, but these detectors do not perform a safety system actuation function. Information provided by these monitors is supplemented by portable instrument capabilities, effluent radiation monitors, and other containment monitoring capabilities of the licensee.

Therefore, based upon the review of the information provided by the licensee, the staff concludes that the licensee's request for an extension of its area and high range containment monitor calibration interval from a nominal 18 months to once per refueling (at least once every 24 months) is acceptable.

2.2 PCN-291

By letter dated April 7, 1989 and supplemented November 6, 1989, the licensee proposed in PCN-291 to revise TS 3/4.4.10, "Reactor Coolant Gas Vent System." This specification requires operability of the reactor coolant gas vent system in modes 1, 2, 3, and 4, which ensures that non-condensable gases which could inhibit natural circulation core cooling can be exhausted from the primary system following a design basis event. The design redundancy of the reactor gas coolant vent system serves to minimize the probability of an inadvertent or irreversible actuation while ensuring that a single failure of a vent valve or control system does not prevent isolation of the vent path. This specification also provides actions to be taken should the operability requirements not be met as well as surveillance requirements to periodically demonstrate system operability. TS 4.4.10 requires that each reactor coolant system vent path be demonstrated operable at least once per 18 months. The proposed change would revise the frequency of this surveillance to at least once per refueling interval, which is at least once every 24 months as defined in TS Table 1.2, "Frequency Notation."

The change from the 18 month surveillance interval to once per refueling interval is to achieve consistency with other technical specification modifications proposed by the licensee as part of its extended fuel cycle operations. The licensee states that the proposed change is required since the current 18 month surveillance interval would necessitate a plant shutdown solely to perform portions of the surveillance. Moreover, the portion of the surveillance which could be performed with the unit at power would result in high man-rem occupational radiation exposure.

The licensee states that there is no safety significance to extending the surveillance interval for the reactor coolant gas vent system valves. First, since the valves are maintained closed and not operated during normal operation, extending the surveillance interval will not increase the service requirements of the valve between surveillances. Second, no credit is taken for these valves in the accident analysis. Even if one of these valves was to become inoperable during plant operation, the TS action is to isolate the vent path. Thus, extending the surveillance interval does not affect this action.

Additionally, the licensee states that since the proposed change would increase the surveillance interval from 18 months to a refueling interval, the actual time interval between surveillances will be a function of the plant capacity factor for that particular fuel cycle. The equilibrium fuel cycle length will be approximately 513 effective full power days. Assuming a production factor of 90% and a 75 day refueling outage, the actual cycle length and the surveillance interval should be approximately 21 months. Currently TS 4.0.2 allows a 25% extension of the surveillance intervals. This extension would accommodate uninterrupted operation for the equilibrium cycle length. However, the TS 4.0.2 limitation on the application of the 25% extension (such that 3 consecutive intervals do not

exceed 3.25 times the nominal interval) eventually would impact operation. Thus, the proposed change does not represent a radical increase over what is already permitted by the TS.

The staff has reviewed the licensee's submittals. The staff concurs that it is prudent to avoid an unnecessary plant shutdown and to avoid unnecessary occupational radiation exposure for surveillance performance. Moreover, the staff agrees with the licensee's conclusion that there is no safety significance to extending the surveillance interval for the reactor coolant gas vent system valves. The staff agrees that the proposed extension is not a significant increase over what is allowed in the present TS. Finally, the proposed modification to the TS is consistent with other TS changes proposed by the licensee as part of its extended fuel cycle. Therefore, based upon review of the information provided by the licensee, the staff concludes that the licensee's request for an extension of the reactor coolant gas vent system surveillance interval from a nominal 18 months to once per refueling (at least once every 24 months) is acceptable.

3.0 CONTACT WITH STATE OFFICIAL

The staff has advised the State Department of Health Services, State of California, of the proposed determination of no significant hazards consideration. No comments were received.

4.0 ENVIRONMENTAL CONSIDERATION

Pursuant to 10 CFR 51.21, 51.32, and 51.35, an environmental assessment and finding of no significant impact have been prepared and published (54 FR 50667) in the Federal Register on December 8, 1989. Accordingly, based upon the environmental assessment, the Commission has determined that the issuance of this amendment will not have a significant effect on the quality of the human environment.

5.0 CONCLUSION

We have 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: James A. Martin, Jr.
Lawrence E. Kokajko

Dated: January 2, 1990

UNITED STATES NUCLEAR REGULATORY COMMISSIONSOUTHERN CALIFORNIA EDISON COMPANY, ET AL.DOCKET NOS. 50-361 AND 50-362FACILITY OPERATING LICENSES

The U.S. Nuclear Regulatory Commission (Commission) has issued Amendment No. 82 to Facility Operating License No. NPF-10 and Amendment No. 72 to Facility Operating License No. NPF-15, issued to Southern California Edison Company, San Diego Gas and Electric Company, The City of Riverside, California and the City of Anaheim, California (the licensees), which revised the Technical Specifications for operation of the San Onofre Nuclear Generating Station, Units 2 and 3, located in San Diego County California.

The amendments were effective as of the date of issuance.

The amendments revise the following sections of the Technical Specifications:

- 3/4.3.2 "Engineered Safety Feature Actuation System Instrumentation"
- 3/4.3.3.1 "Radiation Monitoring Instrumentation"
- 3/4.4.10 "Reactor Coolant Gas Vent System"

Specifically in each case, the surveillance interval has been extended from a nominal 18 months to once per refueling interval, which is defined as at least once every 24 months. These amendments were in response to applications for amendments designated as PCN 266, 267 and 291.

The applications for amendments comply with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations. The Commission has made appropriate findings as required by the Act and the Commission's regulations in 10 CFR Chapter I, which is set forth in the license amendments.

Notice of Consideration of Issuance of Amendments and Opportunity for Hearing in connection with this action was published in the FEDERAL REGISTER on February 24, 1989 (54 FR 8034), February 24, 1989 (54 FR 8038), and May 16, 1989 (54 FR 21142). No request for a hearing or petition for leave to intervene was filed following the notices.

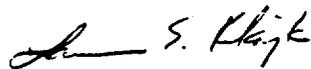
The Commission has prepared an Environmental Assessment related to the action and has determined that an environmental impact statement will not be prepared and that issuance of the amendments will have no significant adverse effect on the quality of the human environment.

For further details with respect to the action see (1) the applications for amendments dated December 19, 1988 and December 30, 1988, which were supplemented September 5, 1989; and April 7, 1989, which was supplemented November 6, 1989; (2) Amendment No. 82 to License No. NPF-10 and Amendment No. 72 to License No. NPF-15; (3) the Commission's related Safety Evaluation and (4) the Commission's Environmental Assessment. All of these items are available for public inspection at the Commission's Public Document Room, 2120 L Street NW., Washington, DC 20555, and the General Library, University of California, P. O. Box 19557, Irvine, California 92713. A copy of items

(2), (3) and (4) may be obtained upon request addressed to the U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Director, Division of Reactor Projects III, IV, V and Special Projects.

Dated at Rockville, Maryland this 2nd day of January, 1990.

FOR THE NUCLEAR REGULATORY COMMISSION



Lawrence E. Kokajko, Project Manager
Project Directorate V
Division of Reactor Projects III
IV, V and Special Projects
Office of Nuclear Reactor Regulation