



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

*Docket File*

August 30, 1989

Docket Nos. 50-361  
and 50-362

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

Mr. Gary D. Cotton  
Senior Vice President  
Engineering and Operations  
San Diego Gas & Electric Company  
101 Ash Street  
P.O. Box 1831  
San Diego, California 92112

Gentlemen:

SUBJECT: ISSUANCE OF AMENDMENT NO. 76 TO FACILITY OPERATING LICENSE NO. NPF-10 AND AMENDMENT NO. 64 TO FACILITY OPERATING LICENSE NO. NPF-15 SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3 (TAC NOS. 68389, 68390, AND 72710)

The Commission has issued the enclosed amendments to Facility Operating Licenses No. NPF-10 and No. NPF-15 for San Onofre Nuclear Generating Station, Units 2 and 3, respectively. The amendments consist of changes to the Technical Specifications in response to your applications dated May 19, 1988, and March 10, 1989. These requests were designated by you as PCNs 246 and 290.

The amendments revise the following Technical Specifications (TS):

- a. TS 3/4.3.3.5, "Remote Shutdown Instrumentation." (Unit 2 only)
- b. TS 3/4.3.3.6, "Accident Monitoring Instrumentation." (Unit 2 only)
- c. TS 3/4.7.6, "Snubbers."

TS 3/4.3.3.5 and TS 3/4.3.3.6 are revised to allow a one-time extension of the surveillance interval for channel calibration of pressurizer level instruments used for remote shutdown monitoring and accident monitoring. TS 3/4.7.6 is revised to increase the interval for functional testing of snubbers to at least once per refueling interval, which is defined as 24

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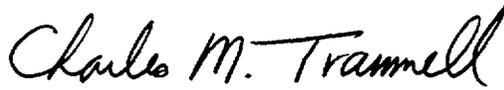
Mssrs. Ray and Cotton

- 2 -

months. Also, TS 3/4.7.6 is revised to provide an extension of the visual inspection interval requirements for snubbers inspected during the Cycle 4 refueling outage.

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

Sincerely,

*for*   
Donald E. Hickman, Project Manager  
Project Directorate V  
Division of Reactor Projects III,  
IV, V and Special Projects  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 76 to License No. NPF-10
2. Amendment No. 64 to License No. NPF-15
3. Safety Evaluation
4. Notice of Issuance

cc w/enclosures:

See next page

Mssrs. Ray and Cotton

- 2 -

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cc w/enclosures:  
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[TAC 68389, ETC.]

\*See previous concurrence

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Technical Specifications in response to your applications dated May 19, 1988,  
and March 10, 1989. These requests were designated by you as PCNs 246 and 290.

The amendments revise the following Technical Specifications (TS) to increase  
the interval for the 18 month surveillance tests to at least once per refueling  
interval, which is defined as 24 months:

- a. TS 3/4.3.3.5, "Remote Shutdown Instrumentation." (Unit 2 only)
- b. TS 3/4.3.3.6, "Accident Monitoring Instrumentation." (Unit 2 only)
- c. TS 3/4.7.6, "Snubbers."

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

Sincerely,

Donald E. Hickman, 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

cc w/enclosures:

See next page  
[TAC 68389, ETC.]

PD5/DRSP  
JLee

1/89

DRSP/D:PD5  
GWKnighton

1/89

PD5/DRSP  
DHickman:dr

8/18/89

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L.B. Marsh

GPA/PA  
OC/LFMB  
WJones  
DHickman

OGC  
Bachmann  
8/25/89

Mr. Harold B. Ray  
Southern California Edison Company

San Onofre Nuclear Generating  
Station, Units 2 and 3

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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. 76  
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 May 19, 1988 and March 10, 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 application, 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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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. 76, 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: August 30, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 76

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 3-50	3/4 3-49
3/4 3-54	--
3/4 7-17	--
3/4 7-18	--
3/4 7-20	3/4 7-19
B 3/4 7-5	B 3/4 7-6

TABLE J.3-9  
REMOTE SHUTDOWN MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>READOUT LOCATION</u>	<u>CHANNEL RANGE</u>	<u>MINIMUM CHANNELS OPERABLE</u>
1. Log Power Level	*	10 <sup>-8</sup> - 200%	1
2. Reactor Coolant Cold Leg Temperature	#	0-700°F(a)	1
3. Pressurizer Pressure	*	0-3000 psia	1
4. Pressurizer Level	*	0-100%	1
5. Steam Generator Pressure	*	0-1200 psia	1/steam generator
6. Steam Generator Level	*	0-100%	1/steam generator
7. Source Range Neutron Flux	*	10 <sup>-1</sup> -10 <sup>5</sup> cps	1
8. Condenser Vacuum	*	0-5" Hg	1
9. Volume Control Tank Level	*	0-100%	1
10. Letdown Heat Exchanger Pressure	*	0-600 psig	1
11. Letdown Heat Exchanger Temperature	*	0-200°F	1
12. Boric Acid Makeup Tank Level	*	0-100%	1
13. Condensate Storage Tank Level	*	0-100%	1
14. Reactor Coolant Hot Leg Temperature	#	0-700°F(b)	1
15. Pressurizer Pressure - Low Range	#	0-1600 psia	1
16. Pressurizer Pressure - High Range	#	1500-2500 psia	1
17. Pressurizer Level	#	0-100%	1
18. Steam Generator Pressure	#	0-1050 psia	1/steam generator
19. Steam Generator Level	#	0-100%	1/steam generator

\* Panel L042

#Panel L411

(a) 0-600°F until completion of DCP 6604

(b) 190-625°F until completion of DCP 6604

TABLE 4.3-6

REMOTE SHUTDOWN MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>
1. Log Power Level	M	R
2. Reactor Coolant Cold Leg Temperature	M	R
3. Pressurizer Pressure	M	R
4. Pressurizer Level	M	R (1)
5. Steam Generator Level	M	R
6. Steam Generator Pressure	M	R
7. Source Range Neutron Flux	M	R
8. Condenser Vacuum	M	R
9. Volume Control Tank Level	M	R
10. Letdown Heat Exchanger Pressure	M	R
11. Letdown Heat Exchanger Temperature	M	R
12. Boric Acid Makeup Tank Level	M	R
13. Condensate Storage Tank Level	M	R
14. Reactor Coolant Hot Leg Temperature	M	R
15. Pressurizer Pressure - Low Range	M	R
16. Pressurizer Pressure - High Range	M	R
17. Pressurizer Level	M	R
18. Steam Generator Pressure	M	R
19. Steam Generator Level	M	R

(1) For Cycle 4 only, this interval may be extended through September 22, 1989.

TABLE 4.3-7

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>
1. Containment Pressure - Narrow Range	M	R
2. Containment Pressure - Wide Range	M	R
3. Reactor Coolant Outlet Temperature - $T_{Hot}$ (Wide Range)	M	R
4. Reactor Coolant Inlet Temperature - $T_{Cold}$ (Wide Range)	M	R
5. Pressurizer Pressure (Wide Range)	M	R
6. Pressurizer Water Level	M	R (1)
7. Steam Line Pressure	M	R
8. Steam Generator Water Level (Wide Range)	M	R
9. Refueling Water Storage Tank Water Level	M	R
10. Auxiliary Feedwater Flow Rate	M	R
11. Reactor Coolant System Subcooling Margin Monitor	M	R
12. Safety Valve Position Indicator	M	R
13. Spray System Pressure	M	R
14. LPSI Header Temperature	M	R
15. Containment Temperature	M	R
16. Containment Water Level (Narrow Range)	M	R
17. Containment Water Level (Wide Range)	M	R
18. Core Exit Thermocouples	M	R

(1) For Cycle 4 only, this interval may be extended through September 22, 1989.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

<u>No. Inoperable Snubbers per Inspection Period</u>	<u>Subsequent Visual Inspection Period*#</u>
0	18 months ± 25%##
1	12 months ± 25%###
2	6 months ± 25%
3,4	124 days ± 25%
5,6,7	62 days ± 25%
8 or more	31 days ± 25%

The snubbers may be categorized into two groups: Those accessible and those inaccessible during reactor operation. Each group may be inspected independently in accordance with the above schedule.

c. Visual Inspection Acceptance Criteria

Visual inspections shall verify (1) that there are no visible indications of damage or impaired OPERABILITY, and (2) attachments to the foundation or supporting structure are secure, and (3) fasteners for attachment of the snubber to (a) the component or pipe and (b) the snubber anchorage are secure. Snubbers which appear inoperable as a result of visual inspections may be determined OPERABLE for the purpose of establishing the next visual inspection interval, provided that (1) the cause of the rejection is clearly established and remedied for that particular snubber and for other snubbers that may be generically susceptible; and (2) the affected snubber is functionally tested in the as found condition and determined OPERABLE per Specification 4.7.6.e or 4.7.6.f, as applicable. However, when a fluid port of a hydraulic snubber is found to be uncovered, the snubber shall be determined inoperable and cannot be determined OPERABLE via functional testing for the purpose of establishing the next visual inspection interval. All snubbers connected to an inoperable common hydraulic fluid reservoir shall be counted as inoperable snubbers.

\* The inspection interval shall not be lengthened more than one step at a time.

# The provisions of Specification 4.0.2 are not applicable.

## 20 months ± 25% for inspections conducted during the Cycle 4 refueling outage.

### 14 months ± 25% for inspections conducted during the Cycle 4 refueling outage.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

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d. Functional Tests

At least once per refueling interval during shutdown, a representative sample of at least 15% of the total of each type of snubber in use in the plant shall be functionally tested either in place or in a bench test. For each snubber of a type that does not meet the functional test acceptance criteria of Specification 4.7.6.e or 4.7.6.f, an additional 15% of that type of snubber shall be functionally tested until no more failures are found or until all snubbers of that type have been functionally tested.

The representative sample selected for functional testing shall include the various configurations, operating environments and the range of size and capacity of snubbers. At least 25% of the snubbers in the representative sample shall include snubbers from the following three categories:

1. The first snubber away from each reactor vessel nozzle
2. Snubbers within 5 feet of heavy equipment (valve, pump, turbine motor, etc.)
3. Snubbers within 10 feet of the discharge from a safety relief valve.

Snubbers that are especially difficult to remove or in high radiation zones during shutdown shall also be included in the representative sample.\*

In addition to the regular sample, snubbers which failed the previous functional test shall be retested during the next test period. If a spare snubber has been installed in place of a failed snubber, then both the failed snubber (if it is repaired and installed in another position) and the spare snubber shall be retested. Test results of those snubbers may not be included for the re-sampling.

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\*Permanent or other exemptions from functional testing for individual snubbers in these categories may be granted by the Commission only if justifiable basis for exemption is presented and/or snubber life destructive testing was performed to qualify snubber operability for all design conditions at either the completion of their fabrication or at a subsequent date.

## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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#### e. Hydraulic Snubbers Functional Test Acceptance Criteria\*

The hydraulic snubber functional test shall verify that:

1. Activation (restraining action) is achieved within the specified range of velocity or acceleration in both tension and compression.
2. Snubber bleed or release rate, where required, is within the specified range in compression or tension. For snubbers specifically required to not displace under continuous load, the ability of the snubber to withstand load without displacement shall be verified.

#### f. Mechanical Snubbers Functional Test Acceptance Criteria\*

The mechanical snubber functional test shall verify that:

1. The force required to initiate or maintain motion of the snubber is within the specified range in both directions of travel.
2. Activation (restraining action) is achieved within the specified range of velocity or acceleration in both tension and compression.
3. Snubber release rate, where required, is within the specified range in compression or tension. For snubbers specifically required not to displace under continuous load, the ability of the snubber to withstand load without displacement shall be verified.

#### g. Functional Test Failure Analysis

An engineering evaluation shall be made of each failure to meet the functional test acceptance criteria to determine the cause of the failure. The results of this evaluation shall be used, if applicable, in selecting snubbers to be tested in an effort to determine the OPERABILITY of other snubbers irrespective of type which may be subject to the same failure mode.

For the snubbers found inoperable, an engineering evaluation shall be performed on the components to which the inoperable snubber are attached. The purpose of this engineering evaluation shall be to determine if the components to which the inoperable snubbers were attached were adversely affected by the inoperability of the snubbers in order to ensure that the component remains capable of meeting the designed service.

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\*Testing methods may be used to measure parameters indirectly or parameters other than those specified if those results can be correlated to the specified parameters through established methods.

## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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If any snubber selected for functional testing either fails to lockup or fails to move, i.e., frozen in place, the cause will be evaluated and if caused by manufacturer or design deficiency all snubbers of the same type subject to the same defect shall be functionally tested. This testing requirement shall be independent of the requirements stated in Specification 4.7.6.e. or 4.7.6.f. for snubbers not meeting the functional test acceptance criteria.

#### h. Functional Testing of Repaired and Replaced Snubbers

Snubbers which fail the visual inspection or the functional test acceptance criteria shall be repaired or replaced. Replacement snubbers and snubbers which have repairs which might affect the functional test result shall be tested to meet the functional test criteria before installation in the unit. These snubbers shall have met the acceptance criteria subsequent to their most recent service, and the functional test must have been performed within 12 month before being installed in the unit.

#### i. Snubber Service Life Monitoring

A record of the service life of each snubber, the date at which the designated service life commences and the installation and maintenance records on which the designated service life is based shall be maintained as required by Specification 6.10.2.1.

Concurrent with the first inservice visual inspection and at least once per refueling interval thereafter, the installation and maintenance records for each snubber shall be reviewed to verify that the indicated service life has not been exceeded or will not be exceeded prior to the next scheduled snubber service life review. If the indicated service life will be exceeded prior to the next scheduled snubber service life review, the snubber service life shall be reevaluated or the snubber shall be replaced or reconditioned so as to extend its service life beyond the date of the next scheduled service life review. This reevaluation, replacement or reconditioning shall be indicated in the records.

#### j. Transient Event Inspections

An inspection shall be performed of all hydraulic and mechanical snubbers attached to sections of safety systems that have experienced unexpected, potentially damaging transients as determined from a review of operational data and a visual inspection of the systems within 6 months following a determination that such an event has occurred. In addition to satisfying the visual inspection acceptance criteria, freedom of motion of mechanical snubbers shall be verified using one of the following: (i) manually induced snubber movement; (ii) evaluation of in-place snubber piston setting; (iii) stroking the mechanical snubber through its full range of travel.

## PLANT SYSTEMS

### BASES

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#### 3/4.7.6 SNUBBERS

All snubbers are required OPERABLE to ensure that the structural integrity of the Reactor Coolant system and all other safety related systems is maintained during and following a seismic or other event initiating dynamic loads. Snubbers excluded from this inspection program are those installed on nonsafety related systems and then only if their failure or failure of the system on which they are installed, would have no adverse effect on any safety related system.

For visual inspection snubbers are categorized into two (2) groups, those accessible and those inaccessible during reactor operation. For functional testing, snubbers are categorized into types by design and manufacturer, irrespective of capacity. For example, Pacific Scientific snubbers are divided into four types corresponding to different design features: PSA 1/4 and 1/2 are one type; PSA 1, 3, and 10 are another; PSA 6 is another; and PSA 35 and 100 are a fourth type.

The visual inspection frequency is based upon maintaining a constant level of snubber protection to systems. Therefore, the required inspection interval varies inversely with the observed snubber failures and is determined by the number of inoperable snubbers found during an inspection. Inspections performed before that interval has elapsed may be used as a new reference point to determine the next inspection. However, the results of such early inspections performed before the original required time interval has elapsed (nominal time less 25%) may not be used to lengthen the required inspection interval. Any inspection whose results require a shorter inspection interval will override the previous schedule. Amendment No. 76 allows a one time extension of the inspection period during Cycle 4 operation while the NRC develops generic guidance applicable to 24 month operating cycles.

To provide assurance of snubber functional reliability, a representative sample of the installed snubbers will be functionally tested during plant shutdowns at refueling intervals.

Hydraulic snubbers and mechanical snubbers may each be treated as a different entity for the above surveillance programs.

## PLANT SYSTEMS

### BASES

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#### SNUBBERS (Continued)

The service life of a snubber is evaluated via manufacturer input and information through consideration of the snubber service conditions and associated installation and maintenance records (newly installed snubber, seal replaced, spring replaced, in high radiation area, in high temperature area, etc.). The requirement to monitor the snubber service life is included to ensure that the snubbers periodically undergo a performance evaluation in view of their age and operating conditions. These records will provide statistical bases for future consideration of snubber service life. The requirements for the maintenance of records and the snubber service life review are not intended to affect plant operation.

#### 3/4.7.7 SEALED SOURCE CONTAMINATION

The limitations on removable contamination for sources requiring leak testing, including alpha emitters, is based on 10 CFR 70.39(c) limits for plutonium. This limitation will ensure that leakage from byproduct, source, and special nuclear material sources will not exceed allowable intake values.

Sealed sources are classified into three groups according to their use, with surveillance requirements commensurate with the probability of damage to a source in that group. Those sources which are frequently handled are required to be tested more often than those which are not. Sealed sources which are continuously enclosed within a shielded mechanism (i.e. sealed sources within radiation monitoring or boron measuring devices) are considered to be stored and need not be tested unless they are removed from the shield mechanism.

#### 3/4.7.8 FIRE SUPPRESSION SYSTEMS

The OPERABILITY of the fire suppression systems ensures that adequate fire suppression capability is available to confine and extinguish fires occurring in any portion of the facility where safety related equipment is located. The fire suppression system consists of the water system, spray and/or sprinklers, and fire hose stations. The collective capability of the fire suppression systems is adequate to minimize potential damage to safety related equipment and is a major element in the facility fire protection program.

In the event that portions of the fire suppression systems are inoperable, alternate backup fire fighting equipment is required to be made available in the affected areas until the inoperable equipment is restored to service. When the inoperable fire fighting equipment is intended for use as a backup means of fire suppression, a longer period of time is allowed to provide an alternate means of fire fighting than if the inoperable equipment is the primary means of fire suppression.

The surveillance requirements provide assurance that the minimum OPERABILITY requirements of the fire suppression systems are met.



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. 64  
License No. NPF-15

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application 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 May 19, 1988, 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 1;
  - B. The facility will operate in conformity with the application, 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.

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. 64, 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: August 30, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 64

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 7-17	--
3/4 7-18	--
3/4 7-21	3/4 7-22
B 3/4 7-5	B 3/4 7-6

PLANT SYSTEMS

3/4.7.6 SNUBBERS

LIMITING CONDITION FOR OPERATION

3.7.6 All snubbers shall be OPERABLE. The only snubbers excluded from this requirement are those installed on nonsafety-related systems and then only if their failure or failure of the system on which they are installed, would have no adverse effect on any safety-related system.

APPLICABILITY: MODES 1, 2, 3 and 4. (MODES 5 and 6 for snubbers located on systems required OPERABLE in those MODES).

ACTION:

With one or more snubbers inoperable, within 72 hours replace or restore the inoperable snubber(s) to OPERABLE status and perform an engineering evaluation per Specification 4.7.6.g on the attached component or declare the attached system inoperable and follow the appropriate ACTION statement for that system.

SURVEILLANCE REQUIREMENTS

4.7.6 Each snubber shall be demonstrated OPERABLE by performance of the following augmented inservice inspection program.

a. Inspection Types

As used in this specification, type of snubber shall mean snubbers of the same design and manufacturer, irrespective of capacity.

b. Visual Inspections

The first inservice visual inspection of snubbers shall be performed after 4 months but within 10 months of commencing POWER OPERATION and shall include all snubbers. If less than two snubbers are found inoperable during the first inservice visual inspection, the second inservice visual inspection shall be performed 12 months  $\pm$  25% from the date of the first inspection. Otherwise, subsequent visual inspections shall be performed in accordance with the following schedule:

<u>No. Inoperable Snubbers per Inspection Period</u>	<u>Subsequent Visual Inspection Period*<sup>#</sup></u>
0	18 months $\pm$ 25% <sup>##</sup>
1	12 months $\pm$ 25% <sup>###</sup>
2	6 months $\pm$ 25%
3,4	124 days $\pm$ 25%
5,6,7	62 days $\pm$ 25%
8 or more	31 days $\pm$ 25%

\*The inspection interval shall not be lengthened more than one step at a time.

#The provisions of Specification 4.0.2 are not applicable.

##20 months  $\pm$  25% for inspections conducted during the Cycle 4 refueling outage.

###14 months  $\pm$  25% for inspections conducted during the Cycle 4 refueling outage.

## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

The snubbers may be categorized into two groups: Those accessible and those inaccessible during reactor operation. Each group may be inspected independently in accordance with the above schedule.

c. Visual Inspection Acceptance Criteria

Visual inspections shall verify (1) that there are no visible indications of damage or impaired OPERABILITY, and (2) attachments to the foundation or supporting structure are secure, and (3) fasteners for attachment of the snubber to (a) the component or pipe and (b) the snubber anchorage are secure. Snubbers which appear inoperable as a result of visual inspections may be determined OPERABLE for the purpose of establishing the next visual inspection interval, provided that (1) the cause of the rejection is clearly established and remedied for that particular snubber and for other snubbers that may be generically susceptible; and (2) the affected snubber is functionally tested in the as found condition and determined OPERABLE per Specification 4.7.6.e or 4.7.6.f, as applicable. However, when a fluid port of a hydraulic snubber is found to be uncovered, the snubber shall be determined inoperable and cannot be determined OPERABLE via functional testing for the purpose of establishing the next visual inspection interval. All snubbers connected to an inoperable common hydraulic fluid reservoir shall be counted as inoperable snubbers.

d. Functional Tests\*

At least once per refueling interval during shutdown, a representative sample of at least 15% of the total of each type of snubber in use in the plant shall be functionally tested either in place or in a bench test. For each snubber of a type of that does not meet the functional test acceptance criteria of Specification 4.7.6.e or 4.7.6.f, an additional 15% of that type of snubber shall be functionally tested until no more failures are found or until all snubbers of that type have been functionally tested.

The representative sample selected for functional testing shall include the various configurations, operating environments and the range of size and capacity of snubbers. At least 25% of the snubbers in the representative sample shall include snubbers from the following three categories:

1. The first snubber away from each reactor vessel nozzle
2. Snubbers within 5 feet of heavy equipment (valve, pump, turbine motor, etc.)
3. Snubbers within 10 feet of the discharge from safety relief valve.

\*Permanent or other exemptions from functional testing for individual snubbers in these categories may be granted by the Commission only if justifiable basis for exemption is presented and/or snubber life destructive testing was performed to qualify snubber operability for all design conditions at either the completion of their fabrication or at a subsequent date.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

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i. Snubber Service Life Monitoring

A record of the service life of each snubber, the date at which the designated service life commences and the installation and maintenance records on which the designated service life is based shall be maintained as required by Specification 6.10.2.1.

Concurrent with the first inservice visual inspection and at least once per refueling interval thereafter, the installation and maintenance records for each snubber shall be reviewed to verify that the indicated service life has not been exceeded or will not be exceeded prior to the next scheduled snubber service life review. If the indicated service life will be exceeded prior to the next scheduled snubber service life review, the snubber service life shall be reevaluated or the snubber shall be replaced or reconditioned so as to extend its service life beyond the date of the next scheduled service life review. This reevaluation, replacement or reconditioning shall be indicated in the records.

j. Transient Event Inspections

An inspection shall be performed of all hydraulic and mechanical snubbers attached to sections of safety systems that have experienced unexpected, potentially damaging transients as determined from a review of operational data and a visual inspection of the systems within 6 months following a determination that such an event has occurred. In addition to satisfying the visual inspection acceptance criteria, freedom of motion of mechanical snubbers shall be verified using one of the following: (i) manually induced snubber movement; (ii) evaluation of in-place snubber piston setting; (iii) stroking the mechanical snubber through its full range of travel.

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## PLANT SYSTEMS

### BASES

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#### 3/4.7.6 SNUBBERS

All snubbers are required OPERABLE to ensure that the structural integrity of the Reactor Coolant system and all other safety related systems is maintained during and following a seismic or other event initiating dynamic loads. Snubbers excluded from this inspection program are those installed on nonsafety related systems and then only if their failure or failure of the system on which they are installed, would have no adverse effect on any safety related system.

For visual inspection snubbers are categorized into two (2) groups, those accessible and those inaccessible during reactor operation. For functional testing, snubbers are categorized into types by design and manufacturer, irrespective of capacity. For example, Pacific Scientific snubbers are divided into four types corresponding to different design features: PSA 1/4 and 1/2 are one type; PSA 1, 3, and 10 are another; PSA 6 is another; and PSA 35 and 100 are a fourth type.

The visual inspection frequency is based upon maintaining a constant level of snubber protection to systems. Therefore, the required inspection interval varies inversely with the observed snubber failures and is determined by the number of inoperable snubbers found during an inspection. Inspections performed before that interval has elapsed may be used as a new reference point to determine the next inspection. However, the results of such early inspections performed before the original required time interval has elapsed (nominal time less 25%) may not be used to lengthen the required inspection interval. Any inspection whose results require a shorter inspection interval will override the previous schedule. Amendment No. 64 allows a one time extension of the inspection period during Cycle 4 operation while the NRC develops generic guidance applicable to 24 month operating cycles.

To provide assurance of snubber functional reliability, a representative sample of the installed snubbers will be functionally tested during plant shutdowns at refueling intervals.

Hydraulic snubbers and mechanical snubbers may each be treated as a different entity for the above surveillance programs.

## PLANT SYSTEMS

### BASES

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#### SNUBBERS (Continued)

The service life of a snubber is evaluated via manufacturer input and information through consideration of the snubber service conditions and associated installation and maintenance records (newly installed snubber, seal replaced, spring replaced, in high radiation area, in high temperature area, etc.). The requirement to monitor the snubber service life is included to ensure that the snubbers periodically undergo a performance evaluation in view of their age and operating conditions. These records will provide statistical bases for future consideration of snubber service life. The requirements for the maintenance of records and the snubber service life review are not intended to affect plant operation.

#### 3/4.7.7 SEALED SOURCE CONTAMINATION

The limitations on removable contamination for sources requiring leak testing, including alpha emitters, is based on 10 CFR 70.39(c) limits for plutonium. This limitation will ensure that leakage from byproduct, source, and special nuclear material sources will not exceed allowable intake values.

Sealed sources are classified into three groups according to their use, with surveillance requirements commensurate with the probability of damage to a source in that group. Those sources which are frequently handled are required to be tested more often than those which are not. Sealed sources which are continuously enclosed within a shielded mechanism (i.e. sealed sources within radiation monitoring or boron measuring devices) are considered to be stored and need not be tested unless they are removed from the shield mechanism.

#### 3/4.7.8 FIRE SUPPRESSION SYSTEMS

The OPERABILITY of the fire suppression systems ensures that adequate fire suppression capability is available to confine and extinguish fires occurring in any portion of the facility where safety related equipment is located. The fire suppression system consists of the water system, spray and/or sprinklers, and fire hose stations. The collective capability of the fire suppression systems is adequate to minimize potential damage to safety related equipment and is a major element in the facility fire protection program.

In the event that portions of the fire suppression systems are inoperable, alternate backup fire fighting equipment is required to be made available in the affected areas until the inoperable equipment is restored to service. When the inoperable fire fighting equipment is intended for use as a backup means of fire suppression, a longer period of time is allowed to provide an alternate means of fire fighting than if the inoperable equipment is the primary means of fire suppression.

The surveillance requirements provide assurance that the minimum OPERABILITY requirements of the fire suppression systems are met.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 76 TO FACILITY OPERATING LICENSE NO. NPF-10  
AND AMENDMENT NO. 64 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 letters dated May 19, 1988, and March 10, 1989, Southern California Edison Company (SCE), et al., (the licensees) requested changes to the Technical Specifications for Facility Operating Licenses No. NPF-10 and No. NPF-15 that authorize operation of San Onofre Nuclear Generating Station (SONGS), Units 2 and 3 in San Diego County, California. These requests - designated as PCNs 246 and 290 - proposed to extend the interval for certain of the required 18 month surveillance tests in order to support the nominal 24 month fuel cycle. Both Units 2 and 3 are operating in their first such cycle and will be required to shut down to perform the 18 month surveillances unless the required interval is extended. SCE has submitted proposed changes to cover all the 18 month surveillance tests which cannot be performed during plant operation. Many of these requests would have changed the required interval from "at least once every 18 months" to "at least once per refueling interval." By letter dated March 20, 1989, SCE amended these requests to define "refueling interval" as 24 months. This definition has been included in the Frequency Notation table of the Technical Specifications (Table 1.2) by Amendments 73 and 61 to Licenses No. NPF-10 and No. NPF-15 respectively.

2.0 DISCUSSION AND EVALUATION

By letter dated May 19, 1988, the licensees proposed to change Technical Specification 3/4.7.6, "Snubbers," to extend the 18 month surveillance interval to at least once per refueling interval (24 months). Specification 3/4.7.6 delineates the operability requirements for snubbers, defines an augmented inservice inspection program to demonstrate operability, and specifies compensatory actions to be taken when the operability requirements are not met.

Operability of snubbers ensures that the structural integrity of the Reactor Coolant System and all other safety related systems is maintained during and following a seismic event or any other event which imparts dynamic loads. Surveillance Requirement 4.7.6.b requires a visual inspection of all snubbers on a regular basis. The interval for visual inspections is decreased as a function of the number of inoperable snubbers discovered. With no inoperable snubbers found, a maximum interval of 18 months plus or minus 25% is allowed. With one inoperable snubber per inspection period, the interval is 12 months plus or minus 25%. The proposed change would increase the maximum interval to 20 months plus or minus 25% and would increase the interval for the one inoperable snubber case to 14 months plus or minus 25%. Surveillance Requirement 4.7.6.d requires that a representative sample of at least 10% of each type of snubber be functionally tested at least once per 18 months. The proposed change would increase the interval for functional testing to 24 months, would increase the sample size from 10% to 15%, and would revise the bases to be consistent with these changes. Surveillance Requirement 4.7.6.i requires a service life review of the installation and maintenance records for each snubber at least once per 18 months to verify that the service life has not been exceeded and will not be exceeded prior to the next scheduled review. The proposed change would increase the interval for the service life review to 24 months.

SCE states that a review of the test history of this surveillance would have limited applicability because of the snubber reduction program which is currently underway and because of the number of design changes which add or delete snubbers. SCE also provides an analysis which shows that a functional test interval of 24 months with a sample size of 15% provides a higher level of operability than an interval of 18 months with a sample size of 10%.

The staff has evaluated the licensees' submittal. The proposed change to the visual inspection interval would add 2.5 months to the allowable interval for both the maximum and the single inoperable snubber cases. We have determined that this small increase would not significantly decrease snubber reliability for a one time extension of the intervals. In addition, the increased sample size for the functional test more than compensates for the increased functional test interval, so that it also tends to compensate to some degree for the increased visual inspection interval. The service life monitoring program is independent of interval since it determines whether the service life will be exceeded prior to the next service life review, whenever that is scheduled to occur. For these reasons, and because the staff is preparing a branch technical position or generic letter on snubber surveillance testing, we find the change proposed by the licensees to be acceptable on a one time only basis. Therefore, we have modified the proposed changes to indicate the one time only approval. The staff position on a permanent change to the surveillance interval will be provided in the branch technical position or generic letter.

PCN-290

By letter dated March 10, 1989, the licensees proposed to add a new Technical Specification 3/4.10.7, "Special Test Exceptions, 18 Month Channel Calibrations," to the Unit 2 license to allow a one time extension of the 18 month channel calibrations for 52 Reactor Protective System (RPS), Engineered Safety Features Actuation System (ESFAS), Remote Shutdown Monitoring, and Accident Monitoring instruments. The proposed calibration interval for cycle 4 would extend to "the cycle 5 refueling outage .... or October 1, 1989, whichever occurs first." (October 1, 1989, is 24 months from the date of the last surveillance of the instrument which needs to be calibrated first.) By letter dated May 15, 1989, SCE provided additional justification for the proposed change. By letter dated June 30, 1989, SCE modified their request to delete 49 instruments that were calibrated during the unscheduled outage in May and June of 1989, and to extend the interval to "the scheduled cycle 5 refueling outage, or October 18, 1989, whichever comes first" for the remaining three instruments. (October 18, 1989, is 24 months from the date of the last surveillance of the instrument which needs to be calibrated first.) Those three instruments are 1) Pressurizer Level on Remote Shutdown Panel L042, 2) Pressurizer Pressure - High Range on Remote Shutdown Panel L411, and 3) the Pressurizer Water Level accident monitoring instrument.

Operability of the remote shutdown instrumentation on Panel L042 ensures that sufficient capability is available to permit shutdown and maintenance of HOT STANDBY of the facility from locations outside the control room in the event of control room inhabitability. Operability of the remote shutdown instrumentation on Panel L411 ensures that sufficient capability is available to permit shutdown and maintenance of COLD SHUTDOWN of the facility in the event of a fire in the cable spreading room, control room, or Remote Shutdown Panel L042. Operability of the accident monitoring instrumentation ensures that sufficient information is available on selected plant parameters to monitor and assess these variables following an accident. Surveillance Requirements (SRs) 4.3.3.5 and 4.3.3.6 require each remote shutdown monitoring and accident monitoring instrument, respectively, to be demonstrated operable by, in part, performance of a channel calibration at least once per 18 months.

Technical Specification 4.0.2 allows a 25% extension of surveillance intervals, for a maximum interval of 22.5 months between channel calibrations.

This 22.5 month interval will expire on September 1, 1989, for the remote shutdown monitoring and accident monitoring pressurizer level instruments. It will expire on September 30, 1989, for the remote shutdown monitoring pressurizer pressure instrument.

By letter dated May 15, 1989, SCE provided the results of a detailed study of past instrument drift in support of this request. The study examined the long term drift characteristics of transmitters and statistically adjusted this drift to reflect the maximum drift expected over 30 months at a 95% probability and a 95% confidence level.

The staff has evaluated the licensees' submittal. Because the scheduled start of the cycle 5 refueling outage has been changed to September 8, 1989, the channel calibration extension required to prevent unnecessary plant shutdown has become seven days for the pressurizer level instruments. A 21 day extension would allow for a two week slip in the start of the outage. The pressurizer pressure instrument will require no extension for up to a three week slip in the outage schedule. Therefore, the staff has determined, and the licensee has agreed, that a three week extension of the pressurizer level instruments is all that is required. The instruments in question are used for monitoring purposes only and initiate no automatic protective actions. The staff concludes that a three week, or approximately 3%, extension of the surveillance interval for the pressurizer level instruments would not affect operability of those instruments. Any drift over that short time period would be expected to be small and not observable to the operators. Since these instruments do not initiate any automatic actions, the surveillance extension could not cause any setpoints to be exceeded. For these reasons, the staff finds that the required extension would have no adverse effect upon public health and safety and is therefore acceptable. In addition, the staff has concluded, and the licensee has agreed, that the approved extension should be located in SRs 4.3.3.5 and 4.3.3.6 for the remote shutdown monitoring and accident monitoring instruments respectively. Consequently, those sections of the technical specifications will be revised and the new Specification 3/4.10.7 proposed by the licensees will not be required.

### 3.0 CONTACT WITH STATE OFFICIAL

The NRC staff has advised the Chief of the Radiological Health Branch, 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 (54FR35736) in the Federal Register on August 29, 1989. Based upon the environmental assessment, the Commission has determined that the issuance of the amendments will not have 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: D. Hickman

Dated: August 30, 1989

UNITED STATES NUCLEAR REGULATORY COMMISSIONSOUTHERN CALIFORNIA EDISON COMPANY, ET AL.DOCKET NOS. 50-361 AND 50-362NOTICE OF ISSUANCE OF AMENDMENTS TOFACILITY OPERATING LICENSES

The U.S. Nuclear Regulatory Commission (Commission) has issued Amendment No. 76 to Facility Operating License No. NPF-10 and Amendment No. 64 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.

These amendments revised the following Technical Specifications (TS):

- a. TS 3/4.3.3.5, "Remote Shutdown Instrumentation." (Unit 2 only)
- b. TS 3/4.3.3.6, "Accident Monitoring Instrumentation." (Unit 2 only)
- c. TS 3/4.7.6, "Snubbers."

TS 3/4.3.3.5 and TS 3/4.3.3.6 are revised to allow a one-time extension of the surveillance interval for channel calibration of pressurizer level instruments used for remote shutdown monitoring and accident monitoring. TS 3/4.7.6 is revised to increase the interval for functional testing of snubbers to at least once per refueling interval, which is defined as 24 months. Also, TS 3/4.7.6 is revised to provide an extension of the visual inspection interval requirements for snubbers inspected during the Cycle 4 refueling outage. These amendments are in response to applications for amendments designated as PCN 246 and PCN 290, dated May 19, 1988 and March 10, 1989.

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.

Notices of Consideration of Issuance of Amendments and Opportunity for Hearing in connection with this action were published in the FEDERAL REGISTER on February 27, 1989 (54 FR 8250) and April 24, 1989 (54 FR 16438-D). 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 amendment 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 May 19, 1988 and March 10, 1989, (2) Amendment No. 76 to License No. NPF-10 And Amendment No. 64 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 30<sup>th</sup> day of August, 1989.

FOR THE NUCLEAR REGULATORY COMMISSION

*Charles M. Trammell*

Charles M. Trammell, Senior Project Manager  
Project Directorate V  
Division of Reactor Projects III  
IV, V and Special Projects  
Office of Nuclear Reactor Regulation



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

August 30, 1989

Docket Nos. 50-361  
and 50-362

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

Mr. Gary D. Cotton  
Senior Vice President  
Engineering and Operations  
San Diego Gas & Electric Company  
101 Ash Street  
P.O. Box 1831  
San Diego, California 92112

Gentlemen:

SUBJECT: ISSUANCE OF AMENDMENT NO. 76 TO FACILITY OPERATING LICENSE NO. NPF-10  
AND AMENDMENT NO. 64 TO FACILITY OPERATING LICENSE NO. NPF-15 SAN  
ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3 (TAC NOS. 68389,  
68390, AND 72710)

The Commission has issued the enclosed amendments to Facility Operating Licenses No. NPF-10 and No. NPF-15 for San Onofre Nuclear Generating Station, Units 2 and 3, respectively. The amendments consist of changes to the Technical Specifications in response to your applications dated May 19, 1988, and March 10, 1989. These requests were designated by you as PCNs 246 and 290.

The amendments revise the following Technical Specifications (TS):

- a. TS 3/4.3.3.5, "Remote Shutdown Instrumentation." (Unit 2 only)
- b. TS 3/4.3.3.6, "Accident Monitoring Instrumentation." (Unit 2 only)
- c. TS 3/4.7.6, "Snubbers."

TS 3/4.3.3.5 and TS 3/4.3.3.6 are revised to allow a one-time extension of the surveillance interval for channel calibration of pressurizer level instruments used for remote shutdown monitoring and accident monitoring. TS 3/4.7.6 is revised to increase the interval for functional testing of snubbers to at least once per refueling interval, which is defined as 24

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Mssrs. Ray and Cotton

- 2 -

months. Also, TS 3/4.7.6 is revised to provide an extension of the visual inspection interval requirements for snubbers inspected during the Cycle 4 refueling outage.

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

Sincerely,

for

*Charles M. Trammell*

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

Enclosures:

1. Amendment No. 76 to License No. NPF-10
2. Amendment No. 64 to License No. NPF-15
3. Safety Evaluation
4. Notice of Issuance

cc w/enclosures:

See next page

Mr. Harold B. Ray  
Southern California Edison Company

San Onofre Nuclear Generating  
Station, Units 2 and 3

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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. 76  
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 May 19, 1988 and March 10, 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 application, 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.

~~8909260203~~ 22 pp.

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. 76, 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: August 30, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 76

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 3-50	3/4 3-49
3/4 3-54	--
3/4 7-17	--
3/4 7-18	--
3/4 7-20	3/4 7-19
B 3/4 7-5	B 3/4 7-6

TABLE J.3-9  
REMOTE SHUTDOWN MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>READOUT LOCATION</u>	<u>CHANNEL RANGE</u>	<u>MINIMUM CHANNELS OPERABLE</u>
1. Log Power Level	*	10 <sup>-8</sup> - 200%	1
2. Reactor Coolant Cold Leg Temperature	#	0-700°F(a)	1
3. Pressurizer Pressure	*	0-3000 psia	1
4. Pressurizer Level	*	0-100%	1
5. Steam Generator Pressure	*	0-1200 psia	1/steam generator
6. Steam Generator Level	*	0-100%	1/steam generator
7. Source Range Neutron Flux	*	10 <sup>-1</sup> -10 <sup>5</sup> cps	1
8. Condenser Vacuum	*	0-5" Hg	1
9. Volume Control Tank Level	*	0-100%	1
10. Letdown Heat Exchanger Pressure	*	0-600 psig	1
11. Letdown Heat Exchanger Temperature	*	0-200°F	1
12. Boric Acid Makeup Tank Level	*	0-100%	1
13. Condensate Storage Tank Level	*	0-100%	1
14. Reactor Coolant Hot Leg Temperature	#	0-700°F(b)	1
15. Pressurizer Pressure - Low Range	#	0-1600 psia	1
16. Pressurizer Pressure - High Range	#	1500-2500 psia	1
17. Pressurizer Level	#	0-100%	1
18. Steam Generator Pressure	#	0-1050 psia	1/steam generator
19. Steam Generator Level	#	0-100%	1/steam generator

\* Panel L042

#Panel L411

(a) 0-600°F until completion of DCP 6604

(b) 190-625°F until completion of DCP 6604

TABLE 4.3-6

REMOTE SHUTDOWN MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>
1. Log Power Level	M	R
2. Reactor Coolant Cold Leg Temperature	M	R
3. Pressurizer Pressure	M	R
4. Pressurizer Level	M	R (1)
5. Steam Generator Level	M	R
6. Steam Generator Pressure	M	R
7. Source Range Neutron Flux	M	R
8. Condenser Vacuum	M	R
9. Volume Control Tank Level	M	R
10. Letdown Heat Exchanger Pressure	M	R
11. Letdown Heat Exchanger Temperature	M	R
12. Boric Acid Makeup Tank Level	M	R
13. Condensate Storage Tank Level	M	R
14. Reactor Coolant Hot Leg Temperature	M	R
15. Pressurizer Pressure - Low Range	M	R
16. Pressurizer Pressure - High Range	M	R
17. Pressurizer Level	M	R
18. Steam Generator Pressure	M	R
19. Steam Generator Level	M	R

(1) For Cycle 4 only, this interval may be extended through September 22, 1989.

TABLE 4.3-7

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>
1. Containment Pressure - Narrow Range	M	R
2. Containment Pressure - Wide Range	M	R
3. Reactor Coolant Outlet Temperature - $T_{Hot}$ (Wide Range)	M	R
4. Reactor Coolant Inlet Temperature - $T_{Cold}$ (Wide Range)	M	R
5. Pressurizer Pressure (Wide Range)	M	R
6. Pressurizer Water Level	M	R (1)
7. Steam Line Pressure	M	R
8. Steam Generator Water Level (Wide Range)	M	R
9. Refueling Water Storage Tank Water Level	M	R
10. Auxiliary Feedwater Flow Rate	M	R
11. Reactor Coolant System Subcooling Margin Monitor	M	R
12. Safety Valve Position Indicator	M	R
13. Spray System Pressure	M	R
14. LPSI Header Temperature	M	R
15. Containment Temperature	M	R
16. Containment Water Level (Narrow Range)	M	R
17. Containment Water Level (Wide Range)	M	R
18. Core Exit Thermocouples	M	R

(1) For Cycle 4 only, this interval may be extended through September 22, 1989.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

<u>No. Inoperable Snubbers per Inspection Period</u>	<u>Subsequent Visual Inspection Period*#</u>
0	18 months ± 25%##
1	12 months ± 25%###
2	6 months ± 25%
3,4	124 days ± 25%
5,6,7	62 days ± 25%
8 or more	31 days ± 25%

The snubbers may be categorized into two groups: Those accessible and those inaccessible during reactor operation. Each group may be inspected independently in accordance with the above schedule.

c. Visual Inspection Acceptance Criteria

Visual inspections shall verify (1) that there are no visible indications of damage or impaired OPERABILITY, and (2) attachments to the foundation or supporting structure are secure, and (3) fasteners for attachment of the snubber to (a) the component or pipe and (b) the snubber anchorage are secure. Snubbers which appear inoperable as a result of visual inspections may be determined OPERABLE for the purpose of establishing the next visual inspection interval, provided that (1) the cause of the rejection is clearly established and remedied for that particular snubber and for other snubbers that may be generically susceptible; and (2) the affected snubber is functionally tested in the as found condition and determined OPERABLE per Specification 4.7.6.e or 4.7.6.f, as applicable. However, when a fluid port of a hydraulic snubber is found to be uncovered, the snubber shall be determined inoperable and cannot be determined OPERABLE via functional testing for the purpose of establishing the next visual inspection interval. All snubbers connected to an inoperable common hydraulic fluid reservoir shall be counted as inoperable snubbers.

\* The inspection interval shall not be lengthened more than one step at a time.

# The provisions of Specification 4.0.2 are not applicable.

## 20 months ± 25% for inspections conducted during the Cycle 4 refueling outage.

### 14 months ± 25% for inspections conducted during the Cycle 4 refueling outage.

## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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#### d. Functional Tests

At least once per refueling interval during shutdown, a representative sample of at least 15% of the total of each type of snubber in use in the plant shall be functionally tested either in place or in a bench test. For each snubber of a type that does not meet the functional test acceptance criteria of Specification 4.7.6.e or 4.7.6.f, an additional 15% of that type of snubber shall be functionally tested until no more failures are found or until all snubbers of that type have been functionally tested.

The representative sample selected for functional testing shall include the various configurations, operating environments and the range of size and capacity of snubbers. At least 25% of the snubbers in the representative sample shall include snubbers from the following three categories:

1. The first snubber away from each reactor vessel nozzle
2. Snubbers within 5 feet of heavy equipment (valve, pump, turbine motor, etc.)
3. Snubbers within 10 feet of the discharge from a safety relief valve.

Snubbers that are especially difficult to remove or in high radiation zones during shutdown shall also be included in the representative sample.\*

In addition to the regular sample, snubbers which failed the previous functional test shall be retested during the next test period. If a spare snubber has been installed in place of a failed snubber, then both the failed snubber (if it is repaired and installed in another position) and the spare snubber shall be retested. Test results of those snubbers may not be included for the re-sampling.

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\*Permanent or other exemptions from functional testing for individual snubbers in these categories may be granted by the Commission only if justifiable basis for exemption is presented and/or snubber life destructive testing was performed to qualify snubber operability for all design conditions at either the completion of their fabrication or at a subsequent date.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

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e. Hydraulic Snubbers Functional Test Acceptance Criteria\*

The hydraulic snubber functional test shall verify that:

1. Activation (restraining action) is achieved within the specified range of velocity or acceleration in both tension and compression.
2. Snubber bleed or release rate, where required, is within the specified range in compression or tension. For snubbers specifically required to not displace under continuous load, the ability of the snubber to withstand load without displacement shall be verified.

f. Mechanical Snubbers Functional Test Acceptance Criteria\*

The mechanical snubber functional test shall verify that:

1. The force required to initiate or maintain motion of the snubber is within the specified range in both directions of travel.
2. Activation (restraining action) is achieved within the specified range of velocity or acceleration in both tension and compression.
3. Snubber release rate, where required, is within the specified range in compression or tension. For snubbers specifically required not to displace under continuous load, the ability of the snubber to withstand load without displacement shall be verified.

g. Functional Test Failure Analysis

An engineering evaluation shall be made of each failure to meet the functional test acceptance criteria to determine the cause of the failure. The results of this evaluation shall be used, if applicable, in selecting snubbers to be tested in an effort to determine the OPERABILITY of other snubbers irrespective of type which may be subject to the same failure mode.

For the snubbers found inoperable, an engineering evaluation shall be performed on the components to which the inoperable snubber are attached. The purpose of this engineering evaluation shall be to determine if the components to which the inoperable snubbers were attached were adversely affected by the inoperability of the snubbers in order to ensure that the component remains capable of meeting the designed service.

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\*Testing methods may be used to measure parameters indirectly or parameters other than those specified if those results can be correlated to the specified parameters through established methods.

## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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If any snubber selected for functional testing either fails to lockup or fails to move, i.e., frozen in place, the cause will be evaluated and if caused by manufacturer or design deficiency all snubbers of the same type subject to the same defect shall be functionally tested. This testing requirement shall be independent of the requirements stated in Specification 4.7.6.e. or 4.7.6.f. for snubbers not meeting the functional test acceptance criteria.

#### h. Functional Testing of Repaired and Replaced Snubbers

Snubbers which fail the visual inspection or the functional test acceptance criteria shall be repaired or replaced. Replacement snubbers and snubbers which have repairs which might affect the functional test result shall be tested to meet the functional test criteria before installation in the unit. These snubbers shall have met the acceptance criteria subsequent to their most recent service, and the functional test must have been performed within 12 months before being installed in the unit.

#### i. Snubber Service Life Monitoring

A record of the service life of each snubber, the date at which the designated service life commences and the installation and maintenance records on which the designated service life is based shall be maintained as required by Specification 6.10.2.1.

Concurrent with the first inservice visual inspection and at least once per refueling interval thereafter, the installation and maintenance records for each snubber shall be reviewed to verify that the indicated service life has not been exceeded or will not be exceeded prior to the next scheduled snubber service life review. If the indicated service life will be exceeded prior to the next scheduled snubber service life review, the snubber service life shall be reevaluated or the snubber shall be replaced or reconditioned so as to extend its service life beyond the date of the next scheduled service life review. This reevaluation, replacement or reconditioning shall be indicated in the records.

#### j. Transient Event Inspections

An inspection shall be performed of all hydraulic and mechanical snubbers attached to sections of safety systems that have experienced unexpected, potentially damaging transients as determined from a review of operational data and a visual inspection of the systems within 6 months following a determination that such an event has occurred. In addition to satisfying the visual inspection acceptance criteria, freedom of motion of mechanical snubbers shall be verified using one of the following: (i) manually induced snubber movement; (ii) evaluation of in-place snubber piston setting; (iii) stroking the mechanical snubber through its full range of travel.

## PLANT SYSTEMS

### BASES

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#### 3/4.7.6 SNUBBERS

All snubbers are required OPERABLE to ensure that the structural integrity of the Reactor Coolant system and all other safety related systems is maintained during and following a seismic or other event initiating dynamic loads. Snubbers excluded from this inspection program are those installed on nonsafety related systems and then only if their failure or failure of the system on which they are installed, would have no adverse effect on any safety related system.

For visual inspection snubbers are categorized into two (2) groups, those accessible and those inaccessible during reactor operation. For functional testing, snubbers are categorized into types by design and manufacturer, irrespective of capacity. For example, Pacific Scientific snubbers are divided into four types corresponding to different design features: PSA 1/4 and 1/2 are one type; PSA 1, 3, and 10 are another; PSA 6 is another; and PSA 35 and 100 are a fourth type.

The visual inspection frequency is based upon maintaining a constant level of snubber protection to systems. Therefore, the required inspection interval varies inversely with the observed snubber failures and is determined by the number of inoperable snubbers found during an inspection. Inspections performed before that interval has elapsed may be used as a new reference point to determine the next inspection. However, the results of such early inspections performed before the original required time interval has elapsed (nominal time less 25%) may not be used to lengthen the required inspection interval. Any inspection whose results require a shorter inspection interval will override the previous schedule. Amendment No. 76 allows a one time extension of the inspection period during Cycle 4 operation while the NRC develops generic guidance applicable to 24 month operating cycles.

To provide assurance of snubber functional reliability, a representative sample of the installed snubbers will be functionally tested during plant shutdowns at refueling intervals.

Hydraulic snubbers and mechanical snubbers may each be treated as a different entity for the above surveillance programs.

## PLANT SYSTEMS

### BASES

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#### SNUBBERS (Continued)

The service life of a snubber is evaluated via manufacturer input and information through consideration of the snubber service conditions and associated installation and maintenance records (newly installed snubber, seal replaced, spring replaced, in high radiation area, in high temperature area, etc.). The requirement to monitor the snubber service life is included to ensure that the snubbers periodically undergo a performance evaluation in view of their age and operating conditions. These records will provide statistical bases for future consideration of snubber service life. The requirements for the maintenance of records and the snubber service life review are not intended to affect plant operation.

#### 3/4.7.7 SEALED SOURCE CONTAMINATION

The limitations on removable contamination for sources requiring leak testing, including alpha emitters, is based on 10 CFR 70.39(c) limits for plutonium. This limitation will ensure that leakage from byproduct, source, and special nuclear material sources will not exceed allowable intake values.

Sealed sources are classified into three groups according to their use, with surveillance requirements commensurate with the probability of damage to a source in that group. Those sources which are frequently handled are required to be tested more often than those which are not. Sealed sources which are continuously enclosed within a shielded mechanism (i.e. sealed sources within radiation monitoring or boron measuring devices) are considered to be stored and need not be tested unless they are removed from the shield mechanism.

#### 3/4.7.8 FIRE SUPPRESSION SYSTEMS

The OPERABILITY of the fire suppression systems ensures that adequate fire suppression capability is available to confine and extinguish fires occurring in any portion of the facility where safety related equipment is located. The fire suppression system consists of the water system, spray and/or sprinklers, and fire hose stations. The collective capability of the fire suppression systems is adequate to minimize potential damage to safety related equipment and is a major element in the facility fire protection program.

In the event that portions of the fire suppression systems are inoperable, alternate backup fire fighting equipment is required to be made available in the affected areas until the inoperable equipment is restored to service. When the inoperable fire fighting equipment is intended for use as a backup means of fire suppression, a longer period of time is allowed to provide an alternate means of fire fighting than if the inoperable equipment is the primary means of fire suppression.

The surveillance requirements provide assurance that the minimum OPERABILITY requirements of the fire suppression systems are met.



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. 64  
License No. NPF-15

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application 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 May 19, 1988, 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 1;
  - B. The facility will operate in conformity with the application, 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.

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. 64, 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: August 30, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 64

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 7-17	--
3/4 7-18	--
3/4 7-21	3/4 7-22
B 3/4 7-5	B 3/4 7-6

PLANT SYSTEMS

3/4.7.6 SNUBBERS

LIMITING CONDITION FOR OPERATION

3.7.6 All snubbers shall be OPERABLE. The only snubbers excluded from this requirement are those installed on nonsafety-related systems and then only if their failure or failure of the system on which they are installed, would have no adverse effect on any safety-related system.

APPLICABILITY: MODES 1, 2, 3 and 4. (MODES 5 and 6 for snubbers located on systems required OPERABLE in those MODES).

ACTION:

With one or more snubbers inoperable, within 72 hours replace or restore the inoperable snubber(s) to OPERABLE status and perform an engineering evaluation per Specification 4.7.6.g on the attached component or declare the attached system inoperable and follow the appropriate ACTION statement for that system.

SURVEILLANCE REQUIREMENTS

4.7.6 Each snubber shall be demonstrated OPERABLE by performance of the following augmented inservice inspection program.

a. Inspection Types

As used in this specification, type of snubber shall mean snubbers of the same design and manufacturer, irrespective of capacity.

b. Visual Inspections

The first inservice visual inspection of snubbers shall be performed after 4 months but within 10 months of commencing POWER OPERATION and shall include all snubbers. If less than two snubbers are found inoperable during the first inservice visual inspection, the second inservice visual inspection shall be performed 12 months  $\pm$  25% from the date of the first inspection. Otherwise, subsequent visual inspections shall be performed in accordance with the following schedule:

<u>No. Inoperable Snubbers per Inspection Period</u>	<u>Subsequent Visual Inspection Period*<sup>#</sup></u>
0	18 months $\pm$ 25% <sup>##</sup>
1	12 months $\pm$ 25% <sup>###</sup>
2	6 months $\pm$ 25%
3,4	124 days $\pm$ 25%
5,6,7	62 days $\pm$ 25%
8 or more	31 days $\pm$ 25%

\*The inspection interval shall not be lengthened more than one step at a time.

#The provisions of Specification 4.0.2 are not applicable.

##20 months  $\pm$  25% for inspections conducted during the Cycle 4 refueling outage.

###14 months  $\pm$  25% for inspections conducted during the Cycle 4 refueling outage.

## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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The snubbers may be categorized into two groups: Those accessible and those inaccessible during reactor operation. Each group may be inspected independently in accordance with the above schedule.

c. Visual Inspection Acceptance Criteria

Visual inspections shall verify (1) that there are no visible indications of damage or impaired OPERABILITY, and (2) attachments to the foundation or supporting structure are secure, and (3) fasteners for attachment of the snubber to (a) the component or pipe and (b) the snubber anchorage are secure. Snubbers which appear inoperable as a result of visual inspections may be determined OPERABLE for the purpose of establishing the next visual inspection interval, provided that (1) the cause of the rejection is clearly established and remedied for that particular snubber and for other snubbers that may be generically susceptible; and (2) the affected snubber is functionally tested in the as found condition and determined OPERABLE per Specification 4.7.6.e or 4.7.6.f, as applicable. However, when a fluid port of a hydraulic snubber is found to be uncovered, the snubber shall be determined inoperable and cannot be determined OPERABLE via functional testing for the purpose of establishing the next visual inspection interval. All snubbers connected to an inoperable common hydraulic fluid reservoir shall be counted as inoperable snubbers.

d. Functional Tests\*

At least once per refueling interval during shutdown, a representative sample of at least 15% of the total of each type of snubber in use in the plant shall be functionally tested either in place or in a bench test. For each snubber of a type of that does not meet the functional test acceptance criteria of Specification 4.7.6.e or 4.7.6.f, an additional 15% of that type of snubber shall be functionally tested until no more failures are found or until all snubbers of that type have been functionally tested.

The representative sample selected for functional testing shall include the various configurations, operating environments and the range of size and capacity of snubbers. At least 25% of the snubbers in the representative sample shall include snubbers from the following three categories:

1. The first snubber away from each reactor vessel nozzle
2. Snubbers within 5 feet of heavy equipment (valve, pump, turbine motor, etc.)
3. Snubbers within 10 feet of the discharge from safety relief valve.

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\*Permanent or other exemptions from functional testing for individual snubbers in these categories may be granted by the Commission only if justifiable basis for exemption is presented and/or snubber life destructive testing was performed to qualify snubber operability for all design conditions at either the completion of their fabrication or at a subsequent date.

## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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i. Snubber Service Life Monitoring

A record of the service life of each snubber, the date at which the designated service life commences and the installation and maintenance records on which the designated service life is based shall be maintained as required by Specification 6.10.2.1.

Concurrent with the first inservice visual inspection and at least once per refueling interval thereafter, the installation and maintenance records for each snubber shall be reviewed to verify that the indicated service life has not been exceeded or will not be exceeded prior to the next scheduled snubber service life review. If the indicated service life will be exceeded prior to the next scheduled snubber service life review, the snubber service life shall be reevaluated or the snubber shall be replaced or reconditioned so as to extend its service life beyond the date of the next scheduled service life review. This reevaluation, replacement or reconditioning shall be indicated in the records.

j. Transient Event Inspections

An inspection shall be performed of all hydraulic and mechanical snubbers attached to sections of safety systems that have experienced unexpected, potentially damaging transients as determined from a review of operational data and a visual inspection of the systems within 6 months following a determination that such an event has occurred. In addition to satisfying the visual inspection acceptance criteria, freedom of motion of mechanical snubbers shall be verified using one of the following: (i) manually induced snubber movement; (ii) evaluation of in-place snubber piston setting; (iii) stroking the mechanical snubber through its full range of travel.

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## PLANT SYSTEMS

### BASES

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#### 3/4.7.6 SNUBBERS

All snubbers are required OPERABLE to ensure that the structural integrity of the Reactor Coolant system and all other safety related systems is maintained during and following a seismic or other event initiating dynamic loads. Snubbers excluded from this inspection program are those installed on nonsafety related systems and then only if their failure or failure of the system on which they are installed, would have no adverse effect on any safety related system.

For visual inspection snubbers are categorized into two (2) groups, those accessible and those inaccessible during reactor operation. For functional testing, snubbers are categorized into types by design and manufacturer, irrespective of capacity. For example, Pacific Scientific snubbers are divided into four types corresponding to different design features: PSA 1/4 and 1/2 are one type; PSA 1, 3, and 10 are another; PSA 6 is another; and PSA 35 and 100 are a fourth type.

The visual inspection frequency is based upon maintaining a constant level of snubber protection to systems. Therefore, the required inspection interval varies inversely with the observed snubber failures and is determined by the number of inoperable snubbers found during an inspection. Inspections performed before that interval has elapsed may be used as a new reference point to determine the next inspection. However, the results of such early inspections performed before the original required time interval has elapsed (nominal time less 25%) may not be used to lengthen the required inspection interval. Any inspection whose results require a shorter inspection interval will override the previous schedule. Amendment No. 64 allows a one time extension of the inspection period during Cycle 4 operation while the NRC develops generic guidance applicable to 24 month operating cycles.

To provide assurance of snubber functional reliability, a representative sample of the installed snubbers will be functionally tested during plant shutdowns at refueling intervals.

Hydraulic snubbers and mechanical snubbers may each be treated as a different entity for the above surveillance programs.

## PLANT SYSTEMS

### BASES

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#### SNUBBERS (Continued)

The service life of a snubber is evaluated via manufacturer input and information through consideration of the snubber service conditions and associated installation and maintenance records (newly installed snubber, seal replaced, spring replaced, in high radiation area, in high temperature area, etc.). The requirement to monitor the snubber service life is included to ensure that the snubbers periodically undergo a performance evaluation in view of their age and operating conditions. These records will provide statistical bases for future consideration of snubber service life. The requirements for the maintenance of records and the snubber service life review are not intended to affect plant operation.

#### 3/4.7.7 SEALED SOURCE CONTAMINATION

The limitations on removable contamination for sources requiring leak testing, including alpha emitters, is based on 10 CFR 70.39(c) limits for plutonium. This limitation will ensure that leakage from byproduct, source, and special nuclear material sources will not exceed allowable intake values.

Sealed sources are classified into three groups according to their use, with surveillance requirements commensurate with the probability of damage to a source in that group. Those sources which are frequently handled are required to be tested more often than those which are not. Sealed sources which are continuously enclosed within a shielded mechanism (i.e. sealed sources within radiation monitoring or boron measuring devices) are considered to be stored and need not be tested unless they are removed from the shield mechanism.

#### 3/4.7.8 FIRE SUPPRESSION SYSTEMS

The OPERABILITY of the fire suppression systems ensures that adequate fire suppression capability is available to confine and extinguish fires occurring in any portion of the facility where safety related equipment is located. The fire suppression system consists of the water system, spray and/or sprinklers, and fire hose stations. The collective capability of the fire suppression systems is adequate to minimize potential damage to safety related equipment and is a major element in the facility fire protection program.

In the event that portions of the fire suppression systems are inoperable, alternate backup fire fighting equipment is required to be made available in the affected areas until the inoperable equipment is restored to service. When the inoperable fire fighting equipment is intended for use as a backup means of fire suppression, a longer period of time is allowed to provide an alternate means of fire fighting than if the inoperable equipment is the primary means of fire suppression.

The surveillance requirements provide assurance that the minimum OPERABILITY requirements of the fire suppression systems are met.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 76 TO FACILITY OPERATING LICENSE NO. NPF-10  
AND AMENDMENT NO. 64 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 letters dated May 19, 1988, and March 10, 1989, Southern California Edison Company (SCE), et al., (the licensees) requested changes to the Technical Specifications for Facility Operating Licenses No. NPF-10 and No. NPF-15 that authorize operation of San Onofre Nuclear Generating Station (SONGS), Units 2 and 3 in San Diego County, California. These requests - designated as PCNs 246 and 290 - proposed to extend the interval for certain of the required 18 month surveillance tests in order to support the nominal 24 month fuel cycle. Both Units 2 and 3 are operating in their first such cycle and will be required to shut down to perform the 18 month surveillances unless the required interval is extended. SCE has submitted proposed changes to cover all the 18 month surveillance tests which cannot be performed during plant operation. Many of these requests would have changed the required interval from "at least once every 18 months" to "at least once per refueling interval." By letter dated March 20, 1989, SCE amended these requests to define "refueling interval" as 24 months. This definition has been included in the Frequency Notation table of the Technical Specifications (Table 1.2) by Amendments 73 and 61 to Licenses No. NPF-10 and No. NPF-15 respectively.

2.0 DISCUSSION AND EVALUATION

By letter dated May 19, 1988, the licensees proposed to change Technical Specification 3/4.7.6, "Snubbers," to extend the 18 month surveillance interval to at least once per refueling interval (24 months). Specification 3/4.7.6 delineates the operability requirements for snubbers, defines an augmented inservice inspection program to demonstrate operability, and specifies compensatory actions to be taken when the operability requirements are not met.

*8909260205 5pp.*

Operability of snubbers ensures that the structural integrity of the Reactor Coolant System and all other safety related systems is maintained during and following a seismic event or any other event which imparts dynamic loads. Surveillance Requirement 4.7.6.b requires a visual inspection of all snubbers on a regular basis. The interval for visual inspections is decreased as a function of the number of inoperable snubbers discovered. With no inoperable snubbers found, a maximum interval of 18 months plus or minus 25% is allowed. With one inoperable snubber per inspection period, the interval is 12 months plus or minus 25%. The proposed change would increase the maximum interval to 20 months plus or minus 25% and would increase the interval for the one inoperable snubber case to 14 months plus or minus 25%. Surveillance Requirement 4.7.6.d requires that a representative sample of at least 10% of each type of snubber be functionally tested at least once per 18 months. The proposed change would increase the interval for functional testing to 24 months, would increase the sample size from 10% to 15%, and would revise the bases to be consistent with these changes. Surveillance Requirement 4.7.6.i requires a service life review of the installation and maintenance records for each snubber at least once per 18 months to verify that the service life has not been exceeded and will not be exceeded prior to the next scheduled review. The proposed change would increase the interval for the service life review to 24 months.

SCE states that a review of the test history of this surveillance would have limited applicability because of the snubber reduction program which is currently underway and because of the number of design changes which add or delete snubbers. SCE also provides an analysis which shows that a functional test interval of 24 months with a sample size of 15% provides a higher level of operability than an interval of 18 months with a sample size of 10%.

The staff has evaluated the licensees' submittal. The proposed change to the visual inspection interval would add 2.5 months to the allowable interval for both the maximum and the single inoperable snubber cases. We have determined that this small increase would not significantly decrease snubber reliability for a one time extension of the intervals. In addition, the increased sample size for the functional test more than compensates for the increased functional test interval, so that it also tends to compensate to some degree for the increased visual inspection interval. The service life monitoring program is independent of interval since it determines whether the service life will be exceeded prior to the next service life review, whenever that is scheduled to occur. For these reasons, and because the staff is preparing a branch technical position or generic letter on snubber surveillance testing, we find the change proposed by the licensees to be acceptable on a one time only basis. Therefore, we have modified the proposed changes to indicate the one time only approval. The staff position on a permanent change to the surveillance interval will be provided in the branch technical position or generic letter.

PCN-290

By letter dated March 10, 1989, the licensees proposed to add a new Technical Specification 3/4.10.7, "Special Test Exceptions, 18 Month Channel Calibrations," to the Unit 2 license to allow a one time extension of the 18 month channel calibrations for 52 Reactor Protective System (RPS), Engineered Safety Features Actuation System (ESFAS), Remote Shutdown Monitoring, and Accident Monitoring instruments. The proposed calibration interval for cycle 4 would extend to "the cycle 5 refueling outage .... or October 1, 1989, whichever occurs first." (October 1, 1989, is 24 months from the date of the last surveillance of the instrument which needs to be calibrated first.) By letter dated May 15, 1989, SCE provided additional justification for the proposed change. By letter dated June 30, 1989, SCE modified their request to delete 49 instruments that were calibrated during the unscheduled outage in May and June of 1989, and to extend the interval to "the scheduled cycle 5 refueling outage, or October 18, 1989, whichever comes first" for the remaining three instruments. (October 18, 1989, is 24 months from the date of the last surveillance of the instrument which needs to be calibrated first.) Those three instruments are 1) Pressurizer Level on Remote Shutdown Panel L042, 2) Pressurizer Pressure - High Range on Remote Shutdown Panel L411, and 3) the Pressurizer Water Level accident monitoring instrument.

Operability of the remote shutdown instrumentation on Panel L042 ensures that sufficient capability is available to permit shutdown and maintenance of HOT STANDBY of the facility from locations outside the control room in the event of control room inhabitability. Operability of the remote shutdown instrumentation on Panel L411 ensures that sufficient capability is available to permit shutdown and maintenance of COLD SHUTDOWN of the facility in the event of a fire in the cable spreading room, control room, or Remote Shutdown Panel L042. Operability of the accident monitoring instrumentation ensures that sufficient information is available on selected plant parameters to monitor and assess these variables following an accident. Surveillance Requirements (SRs) 4.3.3.5 and 4.3.3.6 require each remote shutdown monitoring and accident monitoring instrument, respectively, to be demonstrated operable by, in part, performance of a channel calibration at least once per 18 months.

Technical Specification 4.0.2 allows a 25% extension of surveillance intervals, for a maximum interval of 22.5 months between channel calibrations.

This 22.5 month interval will expire on September 1, 1989, for the remote shutdown monitoring and accident monitoring pressurizer level instruments. It will expire on September 30, 1989, for the remote shutdown monitoring pressurizer pressure instrument.

By letter dated May 15, 1989, SCE provided the results of a detailed study of past instrument drift in support of this request. The study examined the long term drift characteristics of transmitters and statistically adjusted this drift to reflect the maximum drift expected over 30 months at a 95% probability and a 95% confidence level.

The staff has evaluated the licensees' submittal. Because the scheduled start of the cycle 5 refueling outage has been changed to September 8, 1989, the channel calibration extension required to prevent unnecessary plant shutdown has become seven days for the pressurizer level instruments. A 21 day extension would allow for a two week slip in the start of the outage. The pressurizer pressure instrument will require no extension for up to a three week slip in the outage schedule. Therefore, the staff has determined, and the licensee has agreed, that a three week extension of the pressurizer level instruments is all that is required. The instruments in question are used for monitoring purposes only and initiate no automatic protective actions. The staff concludes that a three week, or approximately 3%, extension of the surveillance interval for the pressurizer level instruments would not affect operability of those instruments. Any drift over that short time period would be expected to be small and not observable to the operators. Since these instruments do not initiate any automatic actions, the surveillance extension could not cause any setpoints to be exceeded. For these reasons, the staff finds that the required extension would have no adverse effect upon public health and safety and is therefore acceptable. In addition, the staff has concluded, and the licensee has agreed, that the approved extension should be located in SRs 4.3.3.5 and 4.3.3.6 for the remote shutdown monitoring and accident monitoring instruments respectively. Consequently, those sections of the technical specifications will be revised and the new Specification 3/4.10.7 proposed by the licensees will not be required.

### 3.0 CONTACT WITH STATE OFFICIAL

The NRC staff has advised the Chief of the Radiological Health Branch, 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 (54FR35736) in the Federal Register on August 29, 1989. Based upon the environmental assessment, the Commission has determined that the issuance of the amendments will not have 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: D. Hickman

Dated: August 30, 1989

UNITED STATES NUCLEAR REGULATORY COMMISSIONSOUTHERN CALIFORNIA EDISON COMPANY, ET AL.DOCKET NOS. 50-361 AND 50-362NOTICE OF ISSUANCE OF AMENDMENTS TOFACILITY OPERATING LICENSES

The U.S. Nuclear Regulatory Commission (Commission) has issued Amendment No. 76 to Facility Operating License No. NPF-10 and Amendment No. 64 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.

These amendments revised the following Technical Specifications (TS):

- a. TS 3/4.3.3.5, "Remote Shutdown Instrumentation." (Unit 2 only)
- b. TS 3/4.3.3.6, "Accident Monitoring Instrumentation." (Unit 2 only)
- c. TS 3/4.7.6, "Snubbers."

TS 3/4.3.3.5 and TS 3/4.3.3.6 are revised to allow a one-time extension of the surveillance interval for channel calibration of pressurizer level instruments used for remote shutdown monitoring and accident monitoring. TS 3/4.7.6 is revised to increase the interval for functional testing of snubbers to at least once per refueling interval, which is defined as 24 months. Also, TS 3/4.7.6 is revised to provide an extension of the visual inspection interval requirements for snubbers inspected during the Cycle 4 refueling outage. These amendments are in response to applications for amendments designated as PCN 246 and PCN 290, dated May 19, 1988 and March 10, 1989.

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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.

Notices of Consideration of Issuance of Amendments and Opportunity for Hearing in connection with this action were published in the FEDERAL REGISTER on February 27, 1989 (54 FR 8250) and April 24, 1989 (54 FR 16438-D). 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 amendment 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 May 19, 1988 and March 10, 1989, (2) Amendment No. 76 to License No. NPF-10 And Amendment No. 64 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 30<sup>th</sup> day of August, 1989.

FOR THE NUCLEAR REGULATORY COMMISSION

*Charles M. Trammell*

Charles M. Trammell, Senior Project Manager  
Project Directorate V  
Division of Reactor Projects III  
IV, V and Special Projects  
Office of Nuclear Reactor Regulation



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

August 30, 1989

Docket Nos. 50-361  
and 50-362

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

Mr. Gary D. Cotton  
Senior Vice President  
Engineering and Operations  
San Diego Gas & Electric Company  
101 Ash Street  
P.O. Box 1831  
San Diego, California 92112

Gentlemen:

SUBJECT: ISSUANCE OF AMENDMENT NO. 76 TO FACILITY OPERATING LICENSE NO. NPF-10 AND AMENDMENT NO. 64 TO FACILITY OPERATING LICENSE NO. NPF-15 SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3 (TAC NOS. 68389, 68390, AND 72710)

The Commission has issued the enclosed amendments to Facility Operating Licenses No. NPF-10 and No. NPF-15 for San Onofre Nuclear Generating Station, Units 2 and 3, respectively. The amendments consist of changes to the Technical Specifications in response to your applications dated May 19, 1988, and March 10, 1989. These requests were designated by you as PCNs 246 and 290.

The amendments revise the following Technical Specifications (TS):

- a. TS 3/4.3.3.5, "Remote Shutdown Instrumentation." (Unit 2 only)
- b. TS 3/4.3.3.6, "Accident Monitoring Instrumentation." (Unit 2 only)
- c. TS 3/4.7.6, "Snubbers."

TS 3/4.3.3.5 and TS 3/4.3.3.6 are revised to allow a one-time extension of the surveillance interval for channel calibration of pressurizer level instruments used for remote shutdown monitoring and accident monitoring. TS 3/4.7.6 is revised to increase the interval for functional testing of snubbers to at least once per refueling interval, which is defined as 24

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Mssrs. Ray and Cotton

- 2 -

months. Also, TS 3/4.7.6 is revised to provide an extension of the visual inspection interval requirements for snubbers inspected during the Cycle 4 refueling outage.

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

Sincerely,

for

*Charles M. Trammell*

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

Enclosures:

1. Amendment No. 76 to License No. NPF-10
2. Amendment No. 64 to License No. NPF-15
3. Safety Evaluation
4. Notice of Issuance

cc w/enclosures:

See next page

Mr. Harold B. Ray  
Southern California Edison Company

San Onofre Nuclear Generating  
Station, Units 2 and 3

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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. 76  
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 May 19, 1988 and March 10, 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 application, 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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22 pp.

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. 76, 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: August 30, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 76

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 3-50	3/4 3-49
3/4 3-54	--
3/4 7-17	--
3/4 7-18	--
3/4 7-20	3/4 7-19
B 3/4 7-5	B 3/4 7-6

TABLE J.3-9  
REMOTE SHUTDOWN MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>READOUT LOCATION</u>	<u>CHANNEL RANGE</u>	<u>MINIMUM CHANNELS OPERABLE</u>
1. Log Power Level	*	10 <sup>-8</sup> - 200%	1
2. Reactor Coolant Cold Leg Temperature	#	0-700°F(a)	1
3. Pressurizer Pressure	*	0-3000 psia	1
4. Pressurizer Level	*	0-100%	1
5. Steam Generator Pressure	*	0-1200 psia	1/steam generator
6. Steam Generator Level	*	0-100%	1/steam generator
7. Source Range Neutron Flux	*	10 <sup>-1</sup> -10 <sup>5</sup> cps	1
8. Condenser Vacuum	*	0-5" Hg	1
9. Volume Control Tank Level	*	0-100%	1
10. Letdown Heat Exchanger Pressure	*	0-600 psig	1
11. Letdown Heat Exchanger Temperature	*	0-200°F	1
12. Boric Acid Makeup Tank Level	*	0-100%	1
13. Condensate Storage Tank Level	*	0-100%	1
14. Reactor Coolant Hot Leg Temperature	#	0-700°F(b)	1
15. Pressurizer Pressure - Low Range	#	0-1600 psia	1
16. Pressurizer Pressure - High Range	#	1500-2500 psia	1
17. Pressurizer Level	#	0-100%	1
18. Steam Generator Pressure	#	0-1050 psia	1/steam generator
19. Steam Generator Level	#	0-100%	1/steam generator

\* Panel L042

#Panel L411

(a) 0-600°F until completion of DCP 6604

(b) 190-625°F until completion of DCP 6604

TABLE 4.3-6

REMOTE SHUTDOWN MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>
1. Log Power Level	M	R
2. Reactor Coolant Cold Leg Temperature	M	R
3. Pressurizer Pressure	M	R
4. Pressurizer Level	M	R (1)
5. Steam Generator Level	M	R
6. Steam Generator Pressure	M	R
7. Source Range Neutron Flux	M	R
8. Condenser Vacuum	M	R
9. Volume Control Tank Level	M	R
10. Letdown Heat Exchanger Pressure	M	R
11. Letdown Heat Exchanger Temperature	M	R
12. Boric Acid Makeup Tank Level	M	R
13. Condensate Storage Tank Level	M	R
14. Reactor Coolant Hot Leg Temperature	M	R
15. Pressurizer Pressure - Low Range	M	R
16. Pressurizer Pressure - High Range	M	R
17. Pressurizer Level	M	R
18. Steam Generator Pressure	M	R
19. Steam Generator Level	M	R

(1) For Cycle 4 only, this interval may be extended through September 22, 1989.

TABLE 4.3-7

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>
1. Containment Pressure - Narrow Range	M	R
2. Containment Pressure - Wide Range	M	R
3. Reactor Coolant Outlet Temperature - $T_{Hot}$ (Wide Range)	M	R
4. Reactor Coolant Inlet Temperature - $T_{Cold}$ (Wide Range)	M	R
5. Pressurizer Pressure (Wide Range)	M	R
6. Pressurizer Water Level	M	R (1)
7. Steam Line Pressure	M	R
8. Steam Generator Water Level (Wide Range)	M	R
9. Refueling Water Storage Tank Water Level	M	R
10. Auxiliary Feedwater Flow Rate	M	R
11. Reactor Coolant System Subcooling Margin Monitor	M	R
12. Safety Valve Position Indicator	M	R
13. Spray System Pressure	M	R
14. LPSI Header Temperature	M	R
15. Containment Temperature	M	R
16. Containment Water Level (Narrow Range)	M	R
17. Containment Water Level (Wide Range)	M	R
18. Core Exit Thermocouples	M	R

(1) For Cycle 4 only, this interval may be extended through September 22, 1989.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

<u>No. Inoperable Snubbers per Inspection Period</u>	<u>Subsequent Visual Inspection Period*#</u>
0	18 months ± 25%##
1	12 months ± 25%###
2	6 months ± 25%
3,4	124 days ± 25%
5,6,7	62 days ± 25%
8 or more	31 days ± 25%

The snubbers may be categorized into two groups: Those accessible and those inaccessible during reactor operation. Each group may be inspected independently in accordance with the above schedule.

c. Visual Inspection Acceptance Criteria

Visual inspections shall verify (1) that there are no visible indications of damage or impaired OPERABILITY, and (2) attachments to the foundation or supporting structure are secure, and (3) fasteners for attachment of the snubber to (a) the component or pipe and (b) the snubber anchorage are secure. Snubbers which appear inoperable as a result of visual inspections may be determined OPERABLE for the purpose of establishing the next visual inspection interval, provided that (1) the cause of the rejection is clearly established and remedied for that particular snubber and for other snubbers that may be generically susceptible; and (2) the affected snubber is functionally tested in the as found condition and determined OPERABLE per Specification 4.7.6.e or 4.7.6.f, as applicable. However, when a fluid port of a hydraulic snubber is found to be uncovered, the snubber shall be determined inoperable and cannot be determined OPERABLE via functional testing for the purpose of establishing the next visual inspection interval. All snubbers connected to an inoperable common hydraulic fluid reservoir shall be counted as inoperable snubbers.

\* The inspection interval shall not be lengthened more than one step at a time.

# The provisions of Specification 4.0.2 are not applicable.

## 20 months ± 25% for inspections conducted during the Cycle 4 refueling outage.

### 14 months ± 25% for inspections conducted during the Cycle 4 refueling outage.

## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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#### d. Functional Tests

At least once per refueling interval during shutdown, a representative sample of at least 15% of the total of each type of snubber in use in the plant shall be functionally tested either in place or in a bench test. For each snubber of a type that does not meet the functional test acceptance criteria of Specification 4.7.6.e or 4.7.6.f, an additional 15% of that type of snubber shall be functionally tested until no more failures are found or until all snubbers of that type have been functionally tested.

The representative sample selected for functional testing shall include the various configurations, operating environments and the range of size and capacity of snubbers. At least 25% of the snubbers in the representative sample shall include snubbers from the following three categories:

1. The first snubber away from each reactor vessel nozzle
2. Snubbers within 5 feet of heavy equipment (valve, pump, turbine motor, etc.)
3. Snubbers within 10 feet of the discharge from a safety relief valve.

Snubbers that are especially difficult to remove or in high radiation zones during shutdown shall also be included in the representative sample.\*

In addition to the regular sample, snubbers which failed the previous functional test shall be retested during the next test period. If a spare snubber has been installed in place of a failed snubber, then both the failed snubber (if it is repaired and installed in another position) and the spare snubber shall be retested. Test results of those snubbers may not be included for the re-sampling.

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\*Permanent or other exemptions from functional testing for individual snubbers in these categories may be granted by the Commission only if justifiable basis for exemption is presented and/or snubber life destructive testing was performed to qualify snubber operability for all design conditions at either the completion of their fabrication or at a subsequent date.

## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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e. Hydraulic Snubbers Functional Test Acceptance Criteria\*

The hydraulic snubber functional test shall verify that:

1. Activation (restraining action) is achieved within the specified range of velocity or acceleration in both tension and compression.
2. Snubber bleed or release rate, where required, is within the specified range in compression or tension. For snubbers specifically required to not displace under continuous load, the ability of the snubber to withstand load without displacement shall be verified.

f. Mechanical Snubbers Functional Test Acceptance Criteria\*

The mechanical snubber functional test shall verify that:

1. The force required to initiate or maintain motion of the snubber is within the specified range in both directions of travel.
2. Activation (restraining action) is achieved within the specified range of velocity or acceleration in both tension and compression.
3. Snubber release rate, where required, is within the specified range in compression or tension. For snubbers specifically required not to displace under continuous load, the ability of the snubber to withstand load without displacement shall be verified.

g. Functional Test Failure Analysis

An engineering evaluation shall be made of each failure to meet the functional test acceptance criteria to determine the cause of the failure. The results of this evaluation shall be used, if applicable, in selecting snubbers to be tested in an effort to determine the OPERABILITY of other snubbers irrespective of type which may be subject to the same failure mode.

For the snubbers found inoperable, an engineering evaluation shall be performed on the components to which the inoperable snubber are attached. The purpose of this engineering evaluation shall be to determine if the components to which the inoperable snubbers were attached were adversely affected by the inoperability of the snubbers in order to ensure that the component remains capable of meeting the designed service.

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\*Testing methods may be used to measure parameters indirectly or parameters other than those specified if those results can be correlated to the specified parameters through established methods.

## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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If any snubber selected for functional testing either fails to lockup or fails to move, i.e., frozen in place, the cause will be evaluated and if caused by manufacturer or design deficiency all snubbers of the same type subject to the same defect shall be functionally tested. This testing requirement shall be independent of the requirements stated in Specification 4.7.6.e. or 4.7.6.f. for snubbers not meeting the functional test acceptance criteria.

h. Functional Testing of Repaired and Replaced Snubbers

Snubbers which fail the visual inspection or the functional test acceptance criteria shall be repaired or replaced. Replacement snubbers and snubbers which have repairs which might affect the functional test result shall be tested to meet the functional test criteria before installation in the unit. These snubbers shall have met the acceptance criteria subsequent to their most recent service, and the functional test must have been performed within 12 month before being installed in the unit.

i. Snubber Service Life Monitoring

A record of the service life of each snubber, the date at which the designated service life commences and the installation and maintenance records on which the designated service life is based shall be maintained as required by Specification 6.10.2.1.

Concurrent with the first inservice visual inspection and at least once per refueling interval thereafter, the installation and maintenance records for each snubber shall be reviewed to verify that the indicated service life has not been exceeded or will not be exceeded prior to the next scheduled snubber service life review. If the indicated service life will be exceeded prior to the next scheduled snubber service life review, the snubber service life shall be reevaluated or the snubber shall be replaced or reconditioned so as to extend its service life beyond the date of the next scheduled service life review. This reevaluation, replacement or reconditioning shall be indicated in the records.

j. Transient Event Inspections

An inspection shall be performed of all hydraulic and mechanical snubbers attached to sections of safety systems that have experienced unexpected, potentially damaging transients as determined from a review of operational data and a visual inspection of the systems within 6 months following a determination that such an event has occurred. In addition to satisfying the visual inspection acceptance criteria, freedom of motion of mechanical snubbers shall be verified using one of the following: (i) manually induced snubber movement; (ii) evaluation of in-place snubber piston setting; (iii) stroking the mechanical snubber through its full range of travel.

## PLANT SYSTEMS

### BASES

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#### 3/4.7.6 SNUBBERS

All snubbers are required OPERABLE to ensure that the structural integrity of the Reactor Coolant system and all other safety related systems is maintained during and following a seismic or other event initiating dynamic loads. Snubbers excluded from this inspection program are those installed on nonsafety related systems and then only if their failure or failure of the system on which they are installed, would have no adverse effect on any safety related system.

For visual inspection snubbers are categorized into two (2) groups, those accessible and those inaccessible during reactor operation. For functional testing, snubbers are categorized into types by design and manufacturer, irrespective of capacity. For example, Pacific Scientific snubbers are divided into four types corresponding to different design features: PSA 1/4 and 1/2 are one type; PSA 1, 3, and 10 are another; PSA 6 is another; and PSA 35 and 100 are a fourth type.

The visual inspection frequency is based upon maintaining a constant level of snubber protection to systems. Therefore, the required inspection interval varies inversely with the observed snubber failures and is determined by the number of inoperable snubbers found during an inspection. Inspections performed before that interval has elapsed may be used as a new reference point to determine the next inspection. However, the results of such early inspections performed before the original required time interval has elapsed (nominal time less 25%) may not be used to lengthen the required inspection interval. Any inspection whose results require a shorter inspection interval will override the previous schedule. Amendment No. 76 allows a one time extension of the inspection period during Cycle 4 operation while the NRC develops generic guidance applicable to 24 month operating cycles.

To provide assurance of snubber functional reliability, a representative sample of the installed snubbers will be functionally tested during plant shutdowns at refueling intervals.

Hydraulic snubbers and mechanical snubbers may each be treated as a different entity for the above surveillance programs.

## PLANT SYSTEMS

### BASES

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#### SNUBBERS (Continued)

The service life of a snubber is evaluated via manufacturer input and information through consideration of the snubber service conditions and associated installation and maintenance records (newly installed snubber, seal replaced, spring replaced, in high radiation area, in high temperature area, etc.). The requirement to monitor the snubber service life is included to ensure that the snubbers periodically undergo a performance evaluation in view of their age and operating conditions. These records will provide statistical bases for future consideration of snubber service life. The requirements for the maintenance of records and the snubber service life review are not intended to affect plant operation.

#### 3/4.7.7 SEALED SOURCE CONTAMINATION

The limitations on removable contamination for sources requiring leak testing, including alpha emitters, is based on 10 CFR 70.39(c) limits for plutonium. This limitation will ensure that leakage from byproduct, source, and special nuclear material sources will not exceed allowable intake values.

Sealed sources are classified into three groups according to their use, with surveillance requirements commensurate with the probability of damage to a source in that group. Those sources which are frequently handled are required to be tested more often than those which are not. Sealed sources which are continuously enclosed within a shielded mechanism (i.e. sealed sources within radiation monitoring or boron measuring devices) are considered to be stored and need not be tested unless they are removed from the shield mechanism.

#### 3/4.7.8 FIRE SUPPRESSION SYSTEMS

The OPERABILITY of the fire suppression systems ensures that adequate fire suppression capability is available to confine and extinguish fires occurring in any portion of the facility where safety related equipment is located. The fire suppression system consists of the water system, spray and/or sprinklers, and fire hose stations. The collective capability of the fire suppression systems is adequate to minimize potential damage to safety related equipment and is a major element in the facility fire protection program.

In the event that portions of the fire suppression systems are inoperable, alternate backup fire fighting equipment is required to be made available in the affected areas until the inoperable equipment is restored to service. When the inoperable fire fighting equipment is intended for use as a backup means of fire suppression, a longer period of time is allowed to provide an alternate means of fire fighting than if the inoperable equipment is the primary means of fire suppression.

The surveillance requirements provide assurance that the minimum OPERABILITY requirements of the fire suppression systems are met.



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. 64  
License No. NPF-15

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application 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 May 19, 1988, 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 1;
  - B. The facility will operate in conformity with the application, 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.

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. 64, 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: August 30, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 64

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 7-17	--
3/4 7-18	--
3/4 7-21	3/4 7-22
B 3/4 7-5	B 3/4 7-6

PLANT SYSTEMS

3/4.7.6 SNUBBERS

LIMITING CONDITION FOR OPERATION

3.7.6 All snubbers shall be OPERABLE. The only snubbers excluded from this requirement are those installed on nonsafety-related systems and then only if their failure or failure of the system on which they are installed, would have no adverse effect on any safety-related system.

APPLICABILITY: MODES 1, 2, 3 and 4. (MODES 5 and 6 for snubbers located on systems required OPERABLE in those MODES).

ACTION:

With one or more snubbers inoperable, within 72 hours replace or restore the inoperable snubber(s) to OPERABLE status and perform an engineering evaluation per Specification 4.7.6.g on the attached component or declare the attached system inoperable and follow the appropriate ACTION statement for that system.

SURVEILLANCE REQUIREMENTS

4.7.6 Each snubber shall be demonstrated OPERABLE by performance of the following augmented inservice inspection program.

a. Inspection Types

As used in this specification, type of snubber shall mean snubbers of the same design and manufacturer, irrespective of capacity.

b. Visual Inspections

The first inservice visual inspection of snubbers shall be performed after 4 months but within 10 months of commencing POWER OPERATION and shall include all snubbers. If less than two snubbers are found inoperable during the first inservice visual inspection, the second inservice visual inspection shall be performed 12 months  $\pm$  25% from the date of the first inspection. Otherwise, subsequent visual inspections shall be performed in accordance with the following schedule:

<u>No. Inoperable Snubbers per Inspection Period</u>	<u>Subsequent Visual Inspection Period*#</u>
0	18 months $\pm$ 25%##
1	12 months $\pm$ 25%###
2	6 months $\pm$ 25%
3,4	124 days $\pm$ 25%
5,6,7	62 days $\pm$ 25%
8 or more	31 days $\pm$ 25%

\*The inspection interval shall not be lengthened more than one step at a time.

#The provisions of Specification 4.0.2 are not applicable.

##20 months  $\pm$  25% for inspections conducted during the Cycle 4 refueling outage.

###14 months  $\pm$  25% for inspections conducted during the Cycle 4 refueling outage.

## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

The snubbers may be categorized into two groups: Those accessible and those inaccessible during reactor operation. Each group may be inspected independently in accordance with the above schedule.

c. Visual Inspection Acceptance Criteria

Visual inspections shall verify (1) that there are no visible indications of damage or impaired OPERABILITY, and (2) attachments to the foundation or supporting structure are secure, and (3) fasteners for attachment of the snubber to (a) the component or pipe and (b) the snubber anchorage are secure. Snubbers which appear inoperable as a result of visual inspections may be determined OPERABLE for the purpose of establishing the next visual inspection interval, provided that (1) the cause of the rejection is clearly established and remedied for that particular snubber and for other snubbers that may be generically susceptible; and (2) the affected snubber is functionally tested in the as found condition and determined OPERABLE per Specification 4.7.6.e or 4.7.6.f, as applicable. However, when a fluid port of a hydraulic snubber is found to be uncovered, the snubber shall be determined inoperable and cannot be determined OPERABLE via functional testing for the purpose of establishing the next visual inspection interval. All snubbers connected to an inoperable common hydraulic fluid reservoir shall be counted as inoperable snubbers.

d. Functional Tests\*

At least once per refueling interval during shutdown, a representative sample of at least 15% of the total of each type of snubber in use in the plant shall be functionally tested either in place or in a bench test. For each snubber of a type of that does not meet the functional test acceptance criteria of Specification 4.7.6.e or 4.7.6.f, an additional 15% of that type of snubber shall be functionally tested until no more failures are found or until all snubbers of that type have been functionally tested.

The representative sample selected for functional testing shall include the various configurations, operating environments and the range of size and capacity of snubbers. At least 25% of the snubbers in the representative sample shall include snubbers from the following three categories:

1. The first snubber away from each reactor vessel nozzle
2. Snubbers within 5 feet of heavy equipment (valve, pump, turbine motor, etc.)
3. Snubbers within 10 feet of the discharge from safety relief valve.

\*Permanent or other exemptions from functional testing for individual snubbers in these categories may be granted by the Commission only if justifiable basis for exemption is presented and/or snubber life destructive testing was performed to qualify snubber operability for all design conditions at either the completion of their fabrication or at a subsequent date.

## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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#### i. Snubber Service Life Monitoring

A record of the service life of each snubber, the date at which the designated service life commences and the installation and maintenance records on which the designated service life is based shall be maintained as required by Specification 6.10.2.1.

Concurrent with the first inservice visual inspection and at least once per refueling interval thereafter, the installation and maintenance records for each snubber shall be reviewed to verify that the indicated service life has not been exceeded or will not be exceeded prior to the next scheduled snubber service life review. If the indicated service life will be exceeded prior to the next scheduled snubber service life review, the snubber service life shall be reevaluated or the snubber shall be replaced or reconditioned so as to extend its service life beyond the date of the next scheduled service life review. This reevaluation, replacement or reconditioning shall be indicated in the records.

#### j. Transient Event Inspections

An inspection shall be performed of all hydraulic and mechanical snubbers attached to sections of safety systems that have experienced unexpected, potentially damaging transients as determined from a review of operational data and a visual inspection of the systems within 6 months following a determination that such an event has occurred. In addition to satisfying the visual inspection acceptance criteria, freedom of motion of mechanical snubbers shall be verified using one of the following: (i) manually induced snubber movement; (ii) evaluation of in-place snubber piston setting; (iii) stroking the mechanical snubber through its full range of travel.

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## PLANT SYSTEMS

### BASES

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#### 3/4.7.6 SNUBBERS

All snubbers are required OPERABLE to ensure that the structural integrity of the Reactor Coolant system and all other safety related systems is maintained during and following a seismic or other event initiating dynamic loads. Snubbers excluded from this inspection program are those installed on nonsafety related systems and then only if their failure or failure of the system on which they are installed, would have no adverse effect on any safety related system.

For visual inspection snubbers are categorized into two (2) groups, those accessible and those inaccessible during reactor operation. For functional testing, snubbers are categorized into types by design and manufacturer, irrespective of capacity. For example, Pacific Scientific snubbers are divided into four types corresponding to different design features: PSA 1/4 and 1/2 are one type; PSA 1, 3, and 10 are another; PSA 6 is another; and PSA 35 and 100 are a fourth type.

The visual inspection frequency is based upon maintaining a constant level of snubber protection to systems. Therefore, the required inspection interval varies inversely with the observed snubber failures and is determined by the number of inoperable snubbers found during an inspection. Inspections performed before that interval has elapsed may be used as a new reference point to determine the next inspection. However, the results of such early inspections performed before the original required time interval has elapsed (nominal time less 25%) may not be used to lengthen the required inspection interval. Any inspection whose results require a shorter inspection interval will override the previous schedule. Amendment No. 64 allows a one time extension of the inspection period during Cycle 4 operation while the NRC develops generic guidance applicable to 24 month operating cycles.

To provide assurance of snubber functional reliability, a representative sample of the installed snubbers will be functionally tested during plant shutdowns at refueling intervals.

Hydraulic snubbers and mechanical snubbers may each be treated as a different entity for the above surveillance programs.

## PLANT SYSTEMS

### BASES

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#### SNUBBERS (Continued)

The service life of a snubber is evaluated via manufacturer input and information through consideration of the snubber service conditions and associated installation and maintenance records (newly installed snubber, seal replaced, spring replaced, in high radiation area, in high temperature area, etc.). The requirement to monitor the snubber service life is included to ensure that the snubbers periodically undergo a performance evaluation in view of their age and operating conditions. These records will provide statistical bases for future consideration of snubber service life. The requirements for the maintenance of records and the snubber service life review are not intended to affect plant operation.

#### 3/4.7.7 SEALED SOURCE CONTAMINATION

The limitations on removable contamination for sources requiring leak testing, including alpha emitters, is based on 10 CFR 70.39(c) limits for plutonium. This limitation will ensure that leakage from byproduct, source, and special nuclear material sources will not exceed allowable intake values.

Sealed sources are classified into three groups according to their use, with surveillance requirements commensurate with the probability of damage to a source in that group. Those sources which are frequently handled are required to be tested more often than those which are not. Sealed sources which are continuously enclosed within a shielded mechanism (i.e. sealed sources within radiation monitoring or boron measuring devices) are considered to be stored and need not be tested unless they are removed from the shield mechanism.

#### 3/4.7.8 FIRE SUPPRESSION SYSTEMS

The OPERABILITY of the fire suppression systems ensures that adequate fire suppression capability is available to confine and extinguish fires occurring in any portion of the facility where safety related equipment is located. The fire suppression system consists of the water system, spray and/or sprinklers, and fire hose stations. The collective capability of the fire suppression systems is adequate to minimize potential damage to safety related equipment and is a major element in the facility fire protection program.

In the event that portions of the fire suppression systems are inoperable, alternate backup fire fighting equipment is required to be made available in the affected areas until the inoperable equipment is restored to service. When the inoperable fire fighting equipment is intended for use as a backup means of fire suppression, a longer period of time is allowed to provide an alternate means of fire fighting than if the inoperable equipment is the primary means of fire suppression.

The surveillance requirements provide assurance that the minimum OPERABILITY requirements of the fire suppression systems are met.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 76 TO FACILITY OPERATING LICENSE NO. NPF-10  
AND AMENDMENT NO. 64 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 letters dated May 19, 1988, and March 10, 1989, Southern California Edison Company (SCE), et al., (the licensees) requested changes to the Technical Specifications for Facility Operating Licenses No. NPF-10 and No. NPF-15 that authorize operation of San Onofre Nuclear Generating Station (SONGS), Units 2 and 3 in San Diego County, California. These requests - designated as PCNs 246 and 290 - proposed to extend the interval for certain of the required 18 month surveillance tests in order to support the nominal 24 month fuel cycle. Both Units 2 and 3 are operating in their first such cycle and will be required to shut down to perform the 18 month surveillances unless the required interval is extended. SCE has submitted proposed changes to cover all the 18 month surveillance tests which cannot be performed during plant operation. Many of these requests would have changed the required interval from "at least once every 18 months" to "at least once per refueling interval." By letter dated March 20, 1989, SCE amended these requests to define "refueling interval" as 24 months. This definition has been included in the Frequency Notation table of the Technical Specifications (Table 1.2) by Amendments 73 and 61 to Licenses No. NPF-10 and No. NPF-15 respectively.

2.0 DISCUSSION AND EVALUATION

By letter dated May 19, 1988, the licensees proposed to change Technical Specification 3/4.7.6, "Snubbers," to extend the 18 month surveillance interval to at least once per refueling interval (24 months). Specification 3/4.7.6 delineates the operability requirements for snubbers, defines an augmented inservice inspection program to demonstrate operability, and specifies compensatory actions to be taken when the operability requirements are not met.

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Operability of snubbers ensures that the structural integrity of the Reactor Coolant System and all other safety related systems is maintained during and following a seismic event or any other event which imparts dynamic loads. Surveillance Requirement 4.7.6.b requires a visual inspection of all snubbers on a regular basis. The interval for visual inspections is decreased as a function of the number of inoperable snubbers discovered. With no inoperable snubbers found, a maximum interval of 18 months plus or minus 25% is allowed. With one inoperable snubber per inspection period, the interval is 12 months plus or minus 25%. The proposed change would increase the maximum interval to 20 months plus or minus 25% and would increase the interval for the one inoperable snubber case to 14 months plus or minus 25%. Surveillance Requirement 4.7.6.d requires that a representative sample of at least 10% of each type of snubber be functionally tested at least once per 18 months. The proposed change would increase the interval for functional testing to 24 months, would increase the sample size from 10% to 15%, and would revise the bases to be consistent with these changes. Surveillance Requirement 4.7.6.i requires a service life review of the installation and maintenance records for each snubber at least once per 18 months to verify that the service life has not been exceeded and will not be exceeded prior to the next scheduled review. The proposed change would increase the interval for the service life review to 24 months.

SCE states that a review of the test history of this surveillance would have limited applicability because of the snubber reduction program which is currently underway and because of the number of design changes which add or delete snubbers. SCE also provides an analysis which shows that a functional test interval of 24 months with a sample size of 15% provides a higher level of operability than an interval of 18 months with a sample size of 10%.

The staff has evaluated the licensees' submittal. The proposed change to the visual inspection interval would add 2.5 months to the allowable interval for both the maximum and the single inoperable snubber cases. We have determined that this small increase would not significantly decrease snubber reliability for a one time extension of the intervals. In addition, the increased sample size for the functional test more than compensates for the increased functional test interval, so that it also tends to compensate to some degree for the increased visual inspection interval. The service life monitoring program is independent of interval since it determines whether the service life will be exceeded prior to the next service life review, whenever that is scheduled to occur. For these reasons, and because the staff is preparing a branch technical position or generic letter on snubber surveillance testing, we find the change proposed by the licensees to be acceptable on a one time only basis. Therefore, we have modified the proposed changes to indicate the one time only approval. The staff position on a permanent change to the surveillance interval will be provided in the branch technical position or generic letter.

PCN-290

By letter dated March 10, 1989, the licensees proposed to add a new Technical Specification 3/4.10.7, "Special Test Exceptions, 18 Month Channel Calibrations," to the Unit 2 license to allow a one time extension of the 18 month channel calibrations for 52 Reactor Protective System (RPS), Engineered Safety Features Actuation System (ESFAS), Remote Shutdown Monitoring, and Accident Monitoring instruments. The proposed calibration interval for cycle 4 would extend to "the cycle 5 refueling outage .... or October 1, 1989, whichever occurs first." (October 1, 1989, is 24 months from the date of the last surveillance of the instrument which needs to be calibrated first.) By letter dated May 15, 1989, SCE provided additional justification for the proposed change. By letter dated June 30, 1989, SCE modified their request to delete 49 instruments that were calibrated during the unscheduled outage in May and June of 1989, and to extend the interval to "the scheduled cycle 5 refueling outage, or October 18, 1989, whichever comes first" for the remaining three instruments. (October 18, 1989, is 24 months from the date of the last surveillance of the instrument which needs to be calibrated first.) Those three instruments are 1) Pressurizer Level on Remote Shutdown Panel L042, 2) Pressurizer Pressure - High Range on Remote Shutdown Panel L411, and 3) the Pressurizer Water Level accident monitoring instrument.

Operability of the remote shutdown instrumentation on Panel L042 ensures that sufficient capability is available to permit shutdown and maintenance of HOT STANDBY of the facility from locations outside the control room in the event of control room inhabitability. Operability of the remote shutdown instrumentation on Panel L411 ensures that sufficient capability is available to permit shutdown and maintenance of COLD SHUTDOWN of the facility in the event of a fire in the cable spreading room, control room, or Remote Shutdown Panel L042. Operability of the accident monitoring instrumentation ensures that sufficient information is available on selected plant parameters to monitor and assess these variables following an accident. Surveillance Requirements (SRs) 4.3.3.5 and 4.3.3.6 require each remote shutdown monitoring and accident monitoring instrument, respectively, to be demonstrated operable by, in part, performance of a channel calibration at least once per 18 months.

Technical Specification 4.0.2 allows a 25% extension of surveillance intervals, for a maximum interval of 22.5 months between channel calibrations.

This 22.5 month interval will expire on September 1, 1989, for the remote shutdown monitoring and accident monitoring pressurizer level instruments. It will expire on September 30, 1989, for the remote shutdown monitoring pressurizer pressure instrument.

By letter dated May 15, 1989, SCE provided the results of a detailed study of past instrument drift in support of this request. The study examined the long term drift characteristics of transmitters and statistically adjusted this drift to reflect the maximum drift expected over 30 months at a 95% probability and a 95% confidence level.

The staff has evaluated the licensees' submittal. Because the scheduled start of the cycle 5 refueling outage has been changed to September 8, 1989, the channel calibration extension required to prevent unnecessary plant shutdown has become seven days for the pressurizer level instruments. A 21 day extension would allow for a two week slip in the start of the outage. The pressurizer pressure instrument will require no extension for up to a three week slip in the outage schedule. Therefore, the staff has determined, and the licensee has agreed, that a three week extension of the pressurizer level instruments is all that is required. The instruments in question are used for monitoring purposes only and initiate no automatic protective actions. The staff concludes that a three week, or approximately 3%, extension of the surveillance interval for the pressurizer level instruments would not affect operability of those instruments. Any drift over that short time period would be expected to be small and not observable to the operators. Since these instruments do not initiate any automatic actions, the surveillance extension could not cause any setpoints to be exceeded. For these reasons, the staff finds that the required extension would have no adverse effect upon public health and safety and is therefore acceptable. In addition, the staff has concluded, and the licensee has agreed, that the approved extension should be located in SRs 4.3.3.5 and 4.3.3.6 for the remote shutdown monitoring and accident monitoring instruments respectively. Consequently, those sections of the technical specifications will be revised and the new Specification 3/4.10.7 proposed by the licensees will not be required.

### 3.0 CONTACT WITH STATE OFFICIAL

The NRC staff has advised the Chief of the Radiological Health Branch, 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 (54FR35736) in the Federal Register on August 29, 1989. Based upon the environmental assessment, the Commission has determined that the issuance of the amendments will not have 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: D. Hickman

Dated: August 30, 1989

UNITED STATES NUCLEAR REGULATORY COMMISSIONSOUTHERN CALIFORNIA EDISON COMPANY, ET AL.DOCKET NOS. 50-361 AND 50-362NOTICE OF ISSUANCE OF AMENDMENTS TOFACILITY OPERATING LICENSES

The U.S. Nuclear Regulatory Commission (Commission) has issued Amendment No. 76 to Facility Operating License No. NPF-10 and Amendment No. 64 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.

These amendments revised the following Technical Specifications (TS):

- a. TS 3/4.3.3.5, "Remote Shutdown Instrumentation." (Unit 2 only)
- b. TS 3/4.3.3.6, "Accident Monitoring Instrumentation." (Unit 2 only)
- c. TS 3/4.7.6, "Snubbers."

TS 3/4.3.3.5 and TS 3/4.3.3.6 are revised to allow a one-time extension of the surveillance interval for channel calibration of pressurizer level instruments used for remote shutdown monitoring and accident monitoring. TS 3/4.7.6 is revised to increase the interval for functional testing of snubbers to at least once per refueling interval, which is defined as 24 months. Also, TS 3/4.7.6 is revised to provide an extension of the visual inspection interval requirements for snubbers inspected during the Cycle 4 refueling outage. These amendments are in response to applications for amendments designated as PCN 246 and PCN 290, dated May 19, 1988 and March 10, 1989.

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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.

Notices of Consideration of Issuance of Amendments and Opportunity for Hearing in connection with this action were published in the FEDERAL REGISTER on February 27, 1989 (54 FR 8250) and April 24, 1989 (54 FR 16438-D). 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 amendment 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 May 19, 1988 and March 10, 1989, (2) Amendment No. 76 to License No. NPF-10 And Amendment No. 64 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 30<sup>th</sup> day of August, 1989.

FOR THE NUCLEAR REGULATORY COMMISSION

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