

January 24, 2002

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

SUBJECT: SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3 -  
ISSUANCE OF AMENDMENTS RELATED TO PEAK CONTAINMENT  
PRESSURE (TAC NOS. MB2845 AND MB2846)

Dear Mr. Ray:

The Commission has issued the enclosed Amendment No. 182 to Facility Operating License No. NPF-10 and Amendment No. 173 to Facility Operating License No. NPF-15 for San Onofre Nuclear Generating Station, Units 2 and 3, respectively. The amendments consist of changes to the Technical Specifications (TSs) in response to your application dated August 24, 2001, as supplemented by e-mail dated November 16, 2001 (NRC memorandum dated December 5, 2001, Accession No. ML013330085).

The amendments decrease the calculated peak containment internal pressure for the design basis loss-of-coolant accident and main steam line break from 55.1 to 45.9 psig and 56.6 to 56.5 psig, respectively, in Section 5.5.2.15, "Containment Leakage Rate Testing Program," of the TSs. The new values are recalculations of the containment internal pressure.

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

Sincerely,

**/RA/**

L. Raghavan, Senior Project Manager, Section 2  
Project Directorate IV  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-361 and 50-362

Enclosures: 1. Amendment No. 182 to NPF-10  
2. Amendment No. 173 to NPF-15  
3. Safety Evaluation

cc w/encls: See next page

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Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

DISTRIBUTION

Docket Nos. 50-361 and 50-362

PUBLIC

PDIV-2 r/f G. Hill (4)

Enclosures: 1. Amendment No. 182 to NPF-10  
2. Amendment No. 173 to NPF-15  
3. Safety Evaluation

RidsNrrDlpmLpdiv (S.Richards)  
RidsNrrPMLRaghavan/JDonohew  
RidsNrrLAMMcAllister  
RidsNrrDripRtsb (R. Dennig)  
RidsAcrcAcnwMailCenter  
RidsOgcRp  
RidsRgn4MailCenter (K. Kennedy,  
L. Hurley, D. Bujol)

cc w/encls: See next page

TS PAGES: ML020240317 & ML020240321

JHannon

ACCESSION NO: ML013340271 Pkg: ML013340277

\* See previous concurrence

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DATE	1/19/02	1/17/02	12/30/01	01/16/02	1/18/2002

OFFICIAL RECORD COPY

San Onofre Nuclear Generating Station, Units 2 and 3

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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 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 182  
License No. NPF-10

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Southern California Edison Company, et al., (SCE or the licensee), dated August 24, 2001, as supplemented by e-mail dated November 21, 2001 (NRC memorandum dated December 5, 2001, Accession No. ML013330085), complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 182, are hereby incorporated in the license. Southern California Edison Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

**/RA/**

Stephen Dembek, Chief, Section 2  
Project Directorate IV  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical  
Specifications

Date of Issuance: January 24, 2002

ATTACHMENT TO LICENSE AMENDMENT NO. 182

FACILITY OPERATING LICENSE NO. NPF-10

DOCKET NO. 50-361

Replace the following page of the Appendix A Technical Specifications with the attached revised page. The revised page is identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE

5.0-20a

INSERT

5.0-20a

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 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 173

License No. NPF-15

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Southern California Edison Company, et al., (SCE or the licensee) dated August 24, 2001, as supplemented by e-mail dated November 16, 2001 (NRC memorandum dated December 5, 2001, Accession No. ML013330085), complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 173, are hereby incorporated in the license. Southern California Edison Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

**/RA/**

Stephen Dembek, Chief, Section 2  
Project Directorate IV  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical  
Specifications

Date of Issuance: January 24, 2002



ATTACHMENT TO LICENSE AMENDMENT NO. 173

FACILITY OPERATING LICENSE NO. NPF-15

DOCKET NO. 50-362

Replace the following page of the Appendix A Technical Specifications with the attached revised page. The revised page is identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE

5.0-20a

INSERT

5.0-20a

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 182 TO FACILITY OPERATING LICENSE NO. NPF-10  
AND AMENDMENT NO. 173 TO FACILITY OPERATING LICENSE NO. NPF-15  
SOUTHERN CALIFORNIA EDISON COMPANY  
SAN DIEGO GAS AND ELECTRIC COMPANY  
THE CITY OF RIVERSIDE, CALIFORNIA  
THE CITY OF ANAHEIM, CALIFORNIA  
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3  
DOCKET NOS. 50-361 AND 50-362

## 1.0 INTRODUCTION

By application dated August 24, 2001, as supplemented by e-mail dated November 16, 2001, Southern California Edison Company (the licensee) requested changes to the Technical Specifications (TSs) for San Onofre Nuclear Generating Station (SONGS), Units 2 and 3. The proposed changes would decrease the calculated peak containment internal pressure for the design basis loss-of-coolant accident (LOCA) and main steamline break (MSLB) from 55.1 to 45.9 psig and 56.6 to 56.5 psig, respectively, in Section 5.5.2.15, "Containment Leakage Rate Testing Program," of the TSs.

In the e-mail the licensee provided a clarification of its application dated August 24, 2001. This additional information (ADAMS Accession No. ML013330085) does not expand the scope of the application as noticed, clarifies the proposed changes given in the application, and does not change the Nuclear Regulatory Commission (NRC) staff's original proposed no significant hazards consideration determination published in the *Federal Register* on October 3, 2001 (66 FR 50472).

## 2.0 EVALUATION

In its application, the licensee stated that it had recalculated the peak containment pressure for the design basis LOCA and MSLB. The licensee used the BECHTEL computer code COPPATA which has been reviewed and approved by NRC for use in calculating peak containment pressure for design-basis accidents. As stated in Section 6.2.1.1.3.1 of the SONGS final safety analysis report, this was the computer code used to calculate the current peak containment pressures for the design basis LOCA and MSLB in Section 5.5.2.15, "Containment Leakage Rate Testing Program," of the TSs. In Section 6.2.1.1 of NUREG-0712, February 1981, the safety evaluation report that licensed operation of SONGS, Units 2 and 3, states that the COPPATA code is acceptable for containment pressure response analysis.

As stated in the application and supplemental e-mail, in recalculating the peak containment pressures for the MSLB, the licensee made the following changes to the calculations:

- Added new MSLB mass and energy release data from the nuclear steam supply system (NSSS) vendor (ABB-Combustion Engineering, now Westinghouse), based on the maximum coolant temperature allowed in the approved reduction in the minimum cold leg temperature of the reactor coolant system (RCS) in Amendments 149 and 141 for SONGS, Units 2 and 3, respectively.
- Updated passive (structural) heat sink data.
- Included transient containment spray flow modeling not previously used in the analysis.

The recalculation of the peak containment pressure for the MSLB considered a spectrum of large MSLB events. The recalculated results showed that the limiting MSLB for peak pressure is the 8.85 square foot area MSLB with failure of one main steam isolation valve to close. The results incorporated the applicable instrument total reactor coolant loop uncertainties. The recalculation is for 102 percent of the 3390 MWt, which was the previously licensed power level of SONGS before the recent power uprate to 3438 MWt. The 102 percent of 3390 MWt, or 3457.8 MWt, bounds the new approved increase in the licensed reactor power for SONGS. The licensee's recalculated peak containment pressure for the design basis MSLB is 56.5 psig.

In recalculating the peak containment pressures for the LOCA, the licensee stated that it also made the following changes to the calculations:

- Added new LOCA mass and energy release data from the NSSS vendor (ABB-Combustion Engineering, now Westinghouse), based on the maximum coolant temperature allowed in the approved reduction in the minimum RCS cold leg temperature in Amendments 149 and 141 for SONGS, Units 2 and 3, respectively.
- Updated passive (structural) heat sink data.
- Included transient containment spray flow modeling not previously used in the analysis.

The recalculation of the peak containment pressure for the LOCA considered a spectrum of large-break LOCA events. The recalculated results showed that the limiting LOCA for peak pressure is the double ended (pump) discharge leg slot break with failure of one emergency diesel generator. The results incorporated the applicable instrument total loop uncertainties. Again, the 102 percent of 3390 MWt, or 3458 MWt, bounds the new approved increase in the licensed reactor power for SONGS. The licensee's recalculated peak containment pressure for the design basis LOCA is 45.9 psig.

The licensee stated that the updated mass and energy release data for the MSLB and LOCA is conservative based on the applicable instrument loop uncertainties and a maximum cold leg temperature, which is based on Amendment Nos. 149 and 141 for SONGS Units 2 and 3, respectively. The data were calculated in conformance with Sections 6.2.1.3, "Mass and Energy Release Analysis for Postulated Loss-of-Coolant Accidents," and 6.2.1.4, "Mass and Energy Release Analysis for Postulated Secondary System Pipe Ruptures" (i.e., the MSLB), of the NRC Standard Review Plan (SRP, NUREG-0800). The data for the LOCA incorporated the applicable portions of 10 CFR Part 50, Appendix K methodology, which is described in the following reports: (1) CENPD-132 through Supplement 3-P-A, "Calculational Methods for the C-E Large Break LOCA Evaluation Model for the Analysis of C-E and W designed NSSS,"

dated June 1985, and (2) CENPD-133 through Supplement 5, "CEFLASH-4A, A FORTRAN77 Digital Computer Program for reactor Blowdown Analysis," dated June 1985.

The licensee stated that the design internal containment pressure for SONGS, Units 2 and 3, is 60 psig. The recalculated peak containment pressures of 45.9 and 56.5 psig for the design basis LOCA and MSLB are less than the design pressure.

Because the recalculated peak containment pressures for the design basis MSLB and LOCA are based on approved computer codes, conservative updated mass and energy release data from the NSSS vendor for the units, and methodology in the SRP (including instrument loop uncertainties, the minimum approved RCS cold leg temperature, and an assumed power level for the accidents greater than the maximum licensed power level), and because the recalculated peak containment pressures for the MSLB and LOCA are less than the design pressure, the NRC staff concludes that the proposed amendment is acceptable.

### 3.0 STATE CONSULTATION

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

### 4.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve no significant increase in the amounts and no significant change in the types of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (66 FR 50472 dated October 3, 2001). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

### 5.0 CONCLUSION

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

Principal Contributor: Jack Donohew

Date: January 24, 2002