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A. Edward Scherer
Manager of
Nuclear Regulatory Affairs

December 7, 1999

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D. C. 20555

Subject: **Docket Nos. 50-361 and 50-362**
1998 Emergency Core Cooling System Annual 10 CFR 50.46 Report
San Onofre Nuclear Generating Station, Units 2 and 3

References: 1. December 22, 1998 Letter from A. E. Scherer to NRC, "Docket Nos. 50-361 and 50-362, 1997 Emergency Core Cooling System Annual 10 CFR 50.46 Report, San Onofre Nuclear Generating Station, Units 2 and 3"

2. March 5, 1999 Letter from R. S. Bell, Jr. (ABB CE) to A. Gilliam (SCE), Subject: Limited Authorization to Reproduce a Copyrighted Document

Gentlemen:

This letter transmits as Enclosures 1 and 2 the San Onofre Units 2 and 3 annual report for the 1998 calendar year required by paragraph (a)(3)(ii) of 10 CFR 50.46, "Acceptance criteria for emergency core cooling systems for light-water nuclear power reactors." This regulation requires Southern California Edison (SCE) to annually report to the NRC for San Onofre Units 2 and 3 the nature of each change to or error discovered in the Emergency Core Cooling System (ECCS) evaluation model or in the application of this model that affects the temperature calculation and estimated effects of any such changes, errors, or applications on the limiting ECCS analysis. Any significant change or error is required to be reported to the NRC within 30 days.

There were no changes to or errors in the ECCS evaluation models or changes to their application for calendar year 1998.

The "Annual Report on ABB CE ECCS Performance Evaluation Models, CENPD-279 Supplement 10" (Enclosure 1) describes the codes and methodology used by Asea Brown Boveri Combustion Engineering (ABB CE) for the San Onofre Units 2 and 3

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ECCS analysis for the 1998 reporting period. CENPD-279 Supplement 10 Appendix C summarizes the plant specific evaluation for San Onofre Units 2 and 3. Appendices A,B, D, and E of CENPD-279 Supplement 10 apply to plants other than San Onofre, and are therefore not included.

For the 1997 reporting period, a 40°F error was found in the large break Loss of Coolant Accident (LOCA) analysis, as described in Reference 1. This error, which affected Cycle 9 operation of both Unit 2 and Unit 3, continued to be applicable during 1998. No other changes or errors which affect the large break LOCA analysis were found in 1998. No changes or errors which impact the peak clad temperature were found in 1998 in the evaluation models or application of the models for the small break LOCA or post-LOCA long term cooling calculations. SCE made no changes to the LOCA evaluation models per 10 CFR 50.59.

Enclosure 2 provides a summary of the effect on Peak Clad Temperature (PCT) of the errors or changes to the ECCS evaluation model reported under 10 CFR 50.46 for 1998. While not limiting with regard to PCT, detailed information for the small break LOCA is also included in Enclosure 2 (in accordance with Supplement 1 to Information Notice 97-15, Reporting of Errors and Changes in Large-Break/Small-Break Loss-of-Coolant Evaluation Models of Fuel Vendors and Compliance with 10 CFR 50.46 (a)(3)).

Large Break LOCA Evaluation Model

The arithmetic sum of the PCT effects of both the 10 CFR 50.46 and 10 CFR 50.59 changes is a 40°F effect on the large break LOCA analysis PCT for Cycle 9 operation.

In 1998 the limiting large break LOCA PCT did not exceed the 10 CFR 50.46(b)(1) acceptance criterion of 2200°F.

The sum of the absolute magnitude of the 10 CFR 50.46 evaluation model changes and errors found since the approval of the August 1994 large break LOCA analysis is 40°F.

Small Break LOCA Evaluation Model

The arithmetic sum of the PCT effects of both the 10 CFR 50.46 and 10 CFR 50.59 changes is a less than 3°F effect on the small break LOCA analysis PCT for Cycle 9 operation.

In 1998 the limiting small break LOCA PCT did not exceed the 10 CFR 50.46(b)(1) acceptance criterion of 2200°F, and remained bounded by the PCT for the large break LOCA.

The sum of the absolute magnitude of the 10 CFR 50.46 evaluation model changes and errors found since the approval of the original small break LOCA analyis is less than 3°F.

A March 5, 1999 ABB CE letter (Reference 2) providing limited authorization for the NRC to reproduce the copyrighted CENPD-279 Supplement 10 (Enclosure 1) is provided as Enclosure 3.

If you have any questions or need additional information on this subject, please let me know.

Sincerely,

Enclosures

cc: E. W. Merschoff, Regional Administrator, NRC Region IV
J. A. Sloan, NRC Senior Resident Inspector, San Onofre Units 2 & 3
L. Raghavan, NRC Project Manager, San Onofre Units 2 and 3

ENCLOSURE 1