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Director, Office of Nuclear Reactor Regulation
Attention: Mr. George W. Knighton, Branch Chief
Licensing Branch No. 3
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Gentlemen:

Subject: Docket Nos. 50-361 and 50-362
San Onofre Nuclear Generating Station
Units 2 and 3

The Southern California Edison Company's letter dated August 21, 1984 submitted Proposed Technical Specification Change NPF-10-163 for San Onofre Nuclear Generating Station Unit 2 Operating License NPF-10. The proposed change revises Technical Specification Sections 3/4.1.2.7 "Borated Water Source - Shutdown" and 3/4.1.2.8 "Borated Water Source - Operating" consistent with the safety analysis of the Cycle 2 fuel design for San Onofre Unit 2.

Additional clarification regarding Proposed Change NPF-10-163 was provided to the Reactor Systems Branch reviewer during a telephone conversation on December 6, 1984. The enclosure constitutes formal transmittal of the information provided during the conversation. The information provided was for clarification only and does not constitute a change to the basis of the proposed Technical Specification.

If you have any further questions, please call me.

Very truly yours,

M.O. Medford

cc: Harry Rood, USNRC (to be opened by addressee only)
Joseph O. Ward, (California Department of Health Services)
F. R. Huey, (USNRC Senior Resident Inspector, Units 1, 2, & 3)
J. B. Martin (USNRC Regional Administrator, Region V)

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Clarification of Borated Water Source Requirements

The Boric Acid Makeup (BAMU) Tank and the Refueling Water Storage Tank (RWST) are required to provide Reactor Coolant System (RCS) shutdown boration and makeup capability. Procedurally, boric acid from the BAMU Tank is charged into the RCS before cooldown begins in order to meet shutdown margin requirements at the end of the cooldown. Additional borated water from either the BAMU system or the RWST is charged into the RCS during the cooldown as required to maintain pressurizer level. There has been no change in the applicable procedures between Cycle 1 and Cycle 2 in this regard.

The minimum boric acid concentration in the BAMU Tank for Modes 1 through 4 is set by the cold shutdown RCS boron concentration requirement (which is greater for the more reactive Cycle 2 core) and the pressurizer volume available for the pre-cooldown boration with letdown isolated (which is unchanged from Cycle 1). The minimum boric acid volume required in the BAMU Tank by Technical Specification 3.1.2.8 for Cycle 1, included both the initial boration volume and a portion of the cooldown makeup volume. Proposed Technical Specification NPF-10-163 reduces excessive conservatism in the BAMU tank volume requirement by deleting the volume credited as RCS makeup. For Cycle 2, the entire cooldown makeup volume will be contained in the RWST; and the minimum boric acid volume required in the BAMU Tank will include only the initial boration volume required to establish the Mode 5 shutdown margin. The combined effect of the increased boric acid concentration required for Cycle 2 operation and decrease in excessively conservative volume requirement is a net decrease in the volume specified for operation in Modes 1 through 4, in Figure 3.1-1.

The minimum RWST volume for boration specified in Bases Section 3/4.1.2, is set by boration and makeup requirements with letdown available and BAMU Tanks unavailable. This volume (which has increased from 53,500 gallons for Cycle 1 to 81,970 gallons for Cycle 2, in Modes 1 through 4) exceeds that required for RCS cooldown makeup alone and remains bounded by the Safety Injection requirements of Technical Specification 3/4.5.4. The volume/concentration required for operation in Modes 5 and 6, as shown in Figure 3.1-1, has increased for Cycle 2 in order to meet the increased Cycle 2 shutdown margin requirements. Accordingly, the minimum RWST volume for boration in Modes 5 and 6 with letdown available and BAMU Tanks unavailable has increased from 5465 gallons for Cycle 1 to 9970 gallons for Cycle 2.

The maximum allowed boric acid concentration specified in figure 3.1-1 remains unchanged for Cycle 2. Therefore, the boron mixing demonstrated during the preoperational natural circulation test remains valid.

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