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November 14, 1984

Director, Office of Nuclear Reactor Regulation
Attention: Mr. H. R. Denton
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Gentlemen:

Subject: Docket No. 50-206
Amendment No. 114
San Onofre Nuclear Generating Station
Unit 1

Reference: Letter, M. O. Medford, SCE, to H. R. Denton, NRC, same subject, April 12, 1984

The reference letter provided additional information and revisions to Proposed Change No. 124, submitted as part of Amendment No. 114 by letter dated September 9, 1983. Discussions with NRC reviewers identified a need to modify the proposed change. The modified portions of the proposed change and an editorial correction are provided as the enclosure to this letter. In addition to these changes, NRC reviewers expressed concerns of possible containment atmosphere leakage through the recirculation system in the event of a single failure of a component in the recirculation system. This concern was expressed in light of the Appendix J requirement which allows leakage from containment isolation valves that are sealed (post LOCA) with fluid from a seal system to be excluded when determining the combined leakage rate of all penetrations and valves subject to Type B and C tests, provided that the seal water system fluid inventory is sufficient to maintain the sealing function for at least 30 days at a pressure of 1.10 Pa. To resolve this concern, a brief discussion of the components and configuration of the recirculation system (including containment spray) is provided below.

The recirculation system consists of two recirculation sump pumps, two refueling water pumps (which provide containment spray) and two charging pumps. Each pair of pumps is connected in parallel, therefore, any single pump failure will not render the system inoperable. The flow control valves of the recirculation system are designed to fail to the position of greater safety, i.e., open. The three motor operated valves located inside containment on the cold leg injection lines fail in the as is position. For each of these lines, the piping configuration provides elevation differentials inside containment which will create water loop seals in the event that a motor operated valve fails to open. Based on this configuration, there is sufficient redundancy and separation of components to assure continued operation of the recirculation system, thereby maintaining the entire system

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water solid and pressurized at greater than 1.10 Pa. While the recirculation system is in operation, the positive pressure on the suction side of the refueling water pumps will assure that the containment spray line also remains water solid. Since the recirculation system will remain in continuous operation indefinitely following a LOCA, the water recirculating to provide core cooling will also provide the sealing function for the pumps and valves of this system for at least 30 days, thereby satisfying the Appendix J requirement.

If you have any further questions or desire additional information, please call me.

Very truly yours,

M. O. Medford

Enclosure

cc: J. O. Ward, Chief, Radiological Health Branch,
State Department of Health Services

Enclosure

Section II of the Bases for Technical Specification 4.3 will be revised as follows:

"II. Recirculation System Testing

The Portion of the Recirculation system outside the containment sphere is effectively an extension of the boundary of the containment.

Leakage from this system shall be maintained at as low as practical levels. The effective leakage of this system shall be maintained in accordance with the maximum leakage limitations established in Section 3.3.1.A(4) of Appendix A Technical Specifications.

The piping configurations of the recirculation and containment spray lines assure that leakage within Technical Specification limits will not deplete the isolation valve seal water system fluid inventory for at least 30 days at a pressure of 1.10 Pa. Therefore, leakage from the isolation valves and containment penetrations for these systems is not added to the combined leakage rate for all penetrations and valves subject to Type B and C tests.

The containment penetrations encompassed by the recirculation and containment spray systems include penetrations for one containment spray line, three reactor coolant pump seal water injection lines, and the recirculation pump discharge line to the recirculation heat exchanger."

An editorial correction to the enclosure of the reference letter is as follows:

Section "4.3.1.III.C Test Schedule" should be revised to read "4.3.1.II.C Test Pressure".