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November 21, 1984

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Director, Office of Nuclear Reactor Regulation
Attention: Mr. J. A. Zwolinski, Chief
Operating Reactors Branch No. 5
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Gentlemen:

Subject: Docket No. 50-206
Increased Power Peakings
San Onofre Nuclear Generating Station
Unit 1

Reference: Letter dated October 17, 1984, M. O. Medford, SCE,
to W. A. Paulson, NRC, Concerning Increased Power Peakings

The reference letter provided a proposed change to the basis for Technical Specification 3.5.2 "Control Group Insertion Limits". This change was proposed in connection with the safety evaluation for the Cycle 8 restart of San Onofre Unit 1. A recent three-way telephone conversation among parties from SCE, Westinghouse Nuclear Technology Division and NRC staff identified the need for additional information relating to the safety evaluation submitted with the proposed basis change. Specifically the NRC staff reviewer asked why the justification for the continued applicability of the small break LOCA analysis is brief and does not contain numerical detail similar to the large break LOCA justification. In response, Westinghouse provided a verbal explanation which is reiterated below.

The large break LOCA analysis used FAH as an explicit input with other parameters to determine the magnitude of the chopped cosine power shape for the hot rod axial power distribution. In the small break LOCA analysis, however, FAH is not an explicit input. A conservative hot rod axial power distribution was input to the code directly. The actual power shape assumed is provided in the attached figure. The peak linear power assumed in the small break analysis (14.2 Kw) is conservative with respect to the technical specification value (13.7 Kw). Additionally, an implied FAH can be derived by determining the ratio of the average heat flux assumed in the hot rod and the average heat flux assumed in the core. This results in an implied enthalpy rise peaking factor of approximately 1.95.

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Mr. J. A. Zwolinski

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The small break LOCA analysis was performed when the technical specification value for FΔH was 1.75. Additionally, the peak linear power assumed is conservative. As discussed in Section 4.3 of the Safety Evaluation for the FΔH increase, a reduction in FΔH from 1.75 to 1.57 results in a less limiting LOCA situation. Therefore, the small break LOCA analysis is conservative and remains applicable for an FΔH of 1.57.

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

Very truly yours,

A handwritten signature in dark ink, appearing to read "M. D. McKenzie", is written over the typed name.

cc: E. McKenna, NRC Project Manager
B. D. McKenzie, Westinghouse Nuclear Technology Division

SMALL BREAK ANALYSIS
HOT ROD AXIAL POWER DISTRIBUTION

