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March 11, 1983

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

Gentlemen:

Subject: Docket No. 50-206
Seismic Safety Margins
San Onofre Nuclear Generating Station
Unit 1

By letter dated August 16, 1982, we provided a detailed evaluation of the seismic safety margins in the seismic reevaluation program for San Onofre Unit 1 considering 10 percent exceedances of the Housner response spectra. Since submittal of that evaluation, a discrepancy was discovered in the computation of the average percent envelope of the time histories used in the analysis of the reactor coolant loop (Table 3 on page 12 of the enclosure to the August 16, 1982 letter). Corrected numbers are provided on the enclosed page.

As shown on the enclosed page, the margins decrease. However, the overall effects of the 10% exceedances of the Housner spectra are not considered to be significant. This is because (1) for the reactor building and containment sphere more than 95% of the responses, which are the driving forces for the attached equipment and piping, are due to the fundamental modes of the soil-structure interaction system, and (2) the fundamental modes of the structures are outside the period range where the 10% exceedances of the Housner spectra are postulated to occur. It should also be noted that inclusion of the effects of the Sphere Enclosure Building on the analyses, as discussed in the February 17, 1983 meeting with the NRC Staff, may slightly reduce the contribution of the fundamental mode to the overall response. However, it also results in a lower frequency which is further outside the period range of interest. Therefore, the conclusions in our previous evaluation are not changed. It is still concluded that the nonlinear evaluation of the reactor coolant loop will not be affected.

If you have any questions on this information, please let us know.

Very truly yours,

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Enclosure

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Table 3 Average Percent Envelope of Design Time Histories
Used in Analysis of Reactor Coolant Loop

Direction	Percent Spectral Damping	Average Percent Envelope
Horizontal (Trace A)	2	11.5
	4	16.0
	7	6.6
Horizontal (Trace B)	2	12.5
	4	12.2
	7	2.4
Vertical	2	15.6
	4	15.8
	7	13.7