## Southern California Edison Company

P. O. BOX 800 2244 WALNUT GROVE AVENUE ROSEMEAD, CALIFORNIA 91770

M.O. MEDFORD MANAGER, NUCLEAR LICENSING

November 2, 1984

Director, Office of Nuclear Reactor Regulation Attention: 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 Seismic Evaluation of Piping San Onofre Nuclear Generating Station Unit 1

By letter dated September 12, 1983, the NRC forwarded a report containing audit calculations of the safety injection piping and the charging and pressurizer spray piping at San Onofre Unit 1. This report was prepared for the NRC by EG&G, Idaho. SCE comments on the analysis of the safety injection piping were provided by letter dated May 30, 1984.

SCE and Westinghouse have reviewed the EG&G analysis of the charging and pressurizer spray piping. The enclosed comments are provided for your consideration. However, it should be noted that these particular lines have been reanalyzed and upgraded as part of the current return to service effort. The reanalysis was done by our consultant Impell Corporation. Based on a review of the Impell analyses, the concerns raised by EG&G do not exist in the return to service analyses.

If you have any questions regarding this information, please let me know.

Very truly yours,

m. O. meddad

Enclosure



TELEPHONE (213) 572-1749

400

Enclosure

## SCE COMMENTS ON EG&G ANALYSIS OF SONGS 1 CHARGING AND PRESSURIZER SPRAY PIPING

- In the second paragraph on Page 53 of the EG&G report, the stresses at node points 2710 and 3000 were questioned. EG&G is correct in stating that the stress index of 1.5 was not applied for the B<sub>2</sub> term in Equation (9) in the analysis reviewed by EG&G. Subsequent recalculation by Westinghouse using moments from a later analysis dated December 29, 1982, and a B<sub>2</sub> of 1.5 as required by the ASME Code qualifies the welds to 3 Sm.
- 2. In the last paragraph on Page 53 of the EG&G report, EG&G questioned the methodology used to check the branch at node 2700. EG&G is correct in stating that both the run and branch moments should be taken at the intersection of the run and branch center lines, and  $T_B$  rather than  $T_B$  should be used in the C<sub>2b</sub> equation. Recalculating the section modulus using the mean radius, the resultant stress when combined with the pressure and dead weight stresses is below the 3Sm allowable for ASTM A-312, Tp 316SS at 555°F.

The stresses at node point 2700 above have been recalculated using moments from an updated analysis of December 29, 1982, that was performed by Westinghouse. Reference is made to this analysis in the Westinghouse package of the Charging and Pressurizer Spray Piping that was presented to EG&G for their review. It is these results from this later analysis that qualifies the stresses to 3 Sm.

- 3. In the middle paragraph on Page 55 of the EG&G report, concern is expressed regarding a hand calculation performed on an elbow. This particular hand calculation was an isolated case performed only for that particular elbow as a means to demonstrate additional margin. The computer claculations for the elbow met the maximum allowable limits. However, the Westinghouse project criteria called for maintaining a 10 percent margin on stress limits between the allowable limit and the calculated value. Therefore, even though the elbow qualified to the maximum stress limit, the 10 percent margin was not maintained and the additional hand calculation was performed.
- 4. In the last paragraph on Page 55 of EG&G's report, it is indicated that the support calculation results contained in Appendix D to EG&G's report should be addressed. The supports listed in Appendix D were reviewed and 15 supports were identified for which structural adequacy was not confirmed. Most of the observations concerned structural steel beyond the Westinghouse scope of evaluation.

The structural members interfacing with the supports in question have been evaluated by Bechtel during the present RTS program. At the time of the EG&G audit in 1983, all work on SONGS 1 had been suspended and consequently the structural evaluation had not yet been performed.

4

JLR:2595F

٤.

· • • \*

۹.