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August 31, 1992

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U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, D. C. 20555

Gentlemen:

**SUBJECT: Docket No. 50-206  
HELB--Feedwater Welds 381A/B/C  
San Onofre Nuclear Generation Station, Unit 1**

**REFERENCE:** Letter from R.M. Rosenblum (SCE) to NRC, dated October 31, 1991

The referenced letter transmitted the results of our most recent High Energy Line Break Analysis (HELBA) for San Onofre Nuclear Generation Station, Unit 1 (SONGS 1). The three welds which join the auxiliary feedwater lines to the main feedwater lines were unresolved for HELB interactions at that time. This letter provides the additional information we committed to provide in the referenced submittal.

**BACKGROUND**

The Augmented ISI program was implemented as a means to resolve HELB interactions through an increased inspection program for certain secondary system high-energy lines. Technical Specification 4.10, "Augmented Inservice Inspection of High Energy Lines Outside of Containment," requires periodic volumetric inspections of specified welds in the main feedwater, main steam and first point extraction steam lines. These consist of a baseline inspection, an inspection within 3.5 years, and subsequent inspections at a ten-year interval. Although the three feedwater welds were not included in our Augmented ISI program, our initial review indicated that some of the inspections may have been completed. However, our investigation revealed that we cannot consider these welds to have been inspected to a level equivalent with the Augmented ISI program requirements.

**INSPECTIONS PERFORMED**

Our investigation found that a baseline volumetric non-destructive examination of the three welds was performed in 1975 as a part of the normal implementation of a design modification which relocated these lines. Results of the examination were satisfactory.

Our October 31, 1991 letter stated that the welds were inspected in 1980 as a result of our implementation of IE Bulletin 79-13, "Cracking in Feedwater System Piping" which required volumetric examination of the weld connections as well as an area of at least one pipe diameter downstream of each weld. We later found that our inspection was based on Revision 2 of the IE Bulletin

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which had deleted the requirement to perform volumetric examination of the weld connections. A review of the radiographs confirmed that only the area downstream of the welds were examined in 1980.

#### HELB ANALYSIS OF LINES

The modification which relocated these lines was performed after the initial HELB study had been completed (early 1970s). Therefore, these lines were not considered for inclusion in the Augmented ISI program. The Augmented ISI program was implemented on July 15, 1975 by Technical Specification 4.10, Amendment 13, prior to the subsequent HELB analysis of these lines.

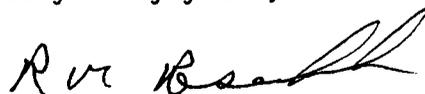
A supplemental HELB study performed in 1983 identified these lines as requiring resolution. The 1983 study was not intended to fully resolve all HELB interactions because plant modifications for fire protection (Appendix R) were in progress that had the potential to change the plant configuration, and additional HELB analysis was planned to be completed following the completion of the modifications. The results of the additional HELB analysis, which identified these lines as being unresolved, was summarized in our October 1991 submittal.

#### FUTURE PLANS

The California Public Utilities Commission recently has approved an agreement requiring the permanent shutdown of SONGS 1. Consistent with that agreement, we plan to cease operations at the end of the current fuel cycle (Cycle 11), approximately the end of November 1992. The HELB issue was scheduled to be fully resolved by Cycle 13 under the NRC's Order Confirming License Commitments on Full-Term Operating License (FTOL) Open Items dated January 2, 1990. As we indicated in our letter dated July 8, 1992, "TAC List Status," the HELB issue is closed by the shutdown of SONGS 1. Accordingly, we will not plan to inspect these welds at the next refueling outage as previously stated in our October 31, 1992 letter (reference).

If you have any question regarding this matter, or desire additional information, please contact me.

Very truly yours,



cc: J. B. Martin, Regional Administrator, NRC Region V  
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