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October 13, 1983

Director of Nuclear Reactor Regulation
Attention: 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
SEP Topic V-6
Reactor Vessel Integrity
San Onofre Nuclear Generating Station
Unit 1

The open items for SEP Topic V-6 are documented in NUREG-0569, Evaluation of the Integrity of SEP Reactor Vessels dated December, 1979. This NUREG was transmitted to us by letter dated March 5, 1980. With regards to the San Onofre Unit 1 reactor vessel, the NUREG indicates that there is no detailed information available on the vessel weld material. The NUREG recommends that we should attempt to obtain detailed information regarding the weld material.

As early as November 10, 1977, we identified to the NRC staff that information on the reactor vessel weld material was not available. Since that time we have made attempts to obtain such data from the NSSS vendor and the vessel manufacturer. In response to IE Bulletin 78-12, Atypical Weld Material in Reactor Pressure Vessel Welds, we indicated that we had been unsuccessful in obtaining data on the weld material. In our July 13, 1979 response, we indicated that the use of atypical weld material was remote since the vessel manufacturer had not identified the use of such material in other vessels manufactured at the same time as the San Onofre Unit 1 vessel.

In our 150 Day Response regarding Pressurized Thermal Shock (PTS) to Reactor Pressure Vessels transmitted to the NRC by letter dated January 25, 1982 a detailed discussion on the weld chemistry was provided. It basically reiterates previous assumptions. At the time of the manufacture of the vessel low nickel welds were used; therefore, we conservatively assumed a .20% nickel content. Since there is no information regarding the copper content, we conservatively assumed .35% copper content in the weld. However, for those vessels manufactured at the time of the San Onofre Unit 1 vessel, the highest copper content observed in the welds was 0.27%. Therefore, the use of .35% was overly conservative.

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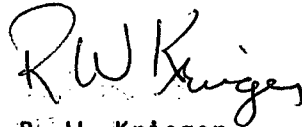
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Subsequently, the NRC published their draft Staff Evaluation of Pressurized Thermal Shock dated September 13, 1982. In this document the staff utilized a nickel content of .20% and a copper content of .27% for the weld data for the San Onofre Unit 1 vessel. As discussed above the .27% copper was the highest copper content observed in welds for vessels manufactured at the time of the San Onofre Unit 1 vessel. Also based on the information provided in that staff evaluation, the San Onofre Unit 1 reactor vessel is acceptable to withstand a PTS event beyond the design life of the vessel.

We consider that this SEP Topic on vessel integrity is resolved as a result of the evaluations performed during the PTS issue. The open item in NUREG-0569 to obtain information on the reactor vessel weld material should be closed.

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

Very truly yours,



R. W. Krieger
 Supervising Engineer
 San Onofre Unit 1 Licensing

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