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U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

Subject: Beaver Valley Power Station, Unit No. 1
Docket No. 50-334, License No. DPR-66
Response to Information Request Dated January 25, 1993
(TAC No. M84673)

This letter provides a response to your request for additional information regarding our proposed Technical Specification Change Request No. 202, submitted by letter dated November 2, 1992. The concerns related to reracking the spent fuel pool are stated below followed by our response.

Item 1

The proposed revision to TS Bases 3/4.9.14, "Fuel Storage-Spent Fuel Storage Pool," states a 650 ppm uncertainty in the boron concentration in the spent fuel pool. Since this revision was probably meant to show that 400 ppm (1050-650) is sufficient to assure a k-eff no greater than 0.95 for the worst accident, we recommend that it be reworded so as not to imply that there is a 650 ppm uncertainty in the measurement or prediction of boron concentration in the pool. This uncertainty presumably remains at 50 ppm.

Response 1

The uncertainty remains at 50 ppm and to clarify this position, we propose to modify the statement in parentheses to read as follows:

"(this includes a 50 ppm conservative allowance for uncertainties and 600 ppm for margin)."

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Item 2

We do not concur with the proposal to allow a separate calculation to establish the admissibility of storing low burnup fuel in a Region 2 peripheral cell on a case-by-case basis. These calculations should be done now to determine the minimum burnup requirements for fuel that can be stored in peripheral cells based on the remaining interior cells containing fuel with the minimum allowed burnup for Region 2. A separate initial enrichment versus burnup table should be included in the TS for these peripheral cells.

Response 2

The required calculations will be performed using the KENO-V.a and CASMO-3 codes to determine the burnup requirements for fuel storage in peripheral cells that do not meet the requirements of proposed Table 3.9-1. Based on the results of these calculations, a revision to the proposed Technical Specification change will be developed to incorporate a separate enrichment versus burnup table. Submittal of this revision will be provided following approval by our review committees.

Item 3

Some sections of the criticality analysis description refer to a conservative reference calculational temperature of 4 deg C whereas others refer to a reference temperature of 20 deg C. Please clarify this discrepancy. If 4 deg C is the reference temperature used in the calculations, justify its acceptability based on NRC Information Notice 91-66, which describes the limitations in using the SCALE 27-group ENDF/B-IV hydrogen cross sections at other than 20 deg C or 277 deg C. If 20 deg C is used, how is the increase in reactivity at temperatures lower than 20 deg C (which have occurred at several pools) accounted for?

Response 3

The correct reference temperature is 4 deg C. Page 4-13 of the Licensing Report has been corrected to show a reference temperature of 4 deg C. Page 4-22 has also been revised to delete reference to a temperature of 68 deg F. Please replace pages 4-13 and 4-22 in your copy of the Licensing Report with the attached pages dated February 17, 1993.

Response 3 (Continued)

NRC Information Notice 91-66 refers to NITAWL-KENO-V.a calculations. (The discrepancy leading to Information Notice 91-66 was discovered and first reported by Holtec International, the firm responsible for the Unit 1 analysis.) Holtec is aware of the potential error and has verified that this error was not included in the analysis for the Unit 1 reracking.

The reactivity at 4 deg C was evaluated using the CASMO-3 calculation for the Beaver Valley racks. As recognized by the Information Notice, the two codes (CASMO and KENO) are in relatively good agreement at low temperatures (20°C). Table 4.7.1 of the Licensing Report indicates the incremental reactivity between 20 deg C and 4 deg C, as calculated by CASMO, is very small (0.001 and 0.002ΔK for Regions 1 and 2, respectively). It is on this basis that we consider the 4 deg C value acceptable as the reference temperature.

Item 4

Should the addition of the phrase "of 5.0 w/o" in TS Bases 3/4.9.14 be placed after "nominal region average enrichment" rather than after the tolerance limits?

Response 4

Moving the enrichment as recommended does not alter the intent of this change, therefore, we propose to reposition the phrase "of 5.0 w/o" to follow the phrase "nominal region average enrichment."

A revision to incorporate the Technical Specification modifications referred to herein will be submitted by July 1, 1993.

Sincerely,



J. D. Sieber

cc: Mr. L. W. Rossbach, Sr. Resident Inspector
Mr. T. T. Martin, NRC Region I Administrator
Mr. G. E. Edison, Project Manager
Mr. M. L. Bowling (VEPCO)