March 18, 2003

Mr. R. T. Ridenoure
Division Manager - Nuclear Operations
Omaha Public Power District
Fort Calhoun Station FC-2-4 Adm.
P.O. Box 550
Fort Calhoun, NE 68023-0550

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION RELATED TO FT. CALHOUN STATION PRESSURE-TEMPERATURE LIMIT REPORT SUBMITTAL (TAC NO. MB6468)

Dear Mr. Ridenoure**:**

By letter dated October 8, 2002, Omaha Public Power District (OPPD) submitted for NRC staff review, a license amendment request which would permit the implementation of a pressure-temperature limit report (PTLR) for the Ft. Calhoun Station Unit 1 (FCS). OPPD stated that the submittal was consistent with the requirements of Title 10 of the *Code of Federal Regulations* Part 50, Section 90, and the guidance provided in Generic Letter 96-03, "Relocation of the Pressure Temperature Limit Curves and Low Pressure Overpressure Protection System Limits."

The staff reviewed the submittal and conducted a teleconference on February 4, 2003, with your staff to discuss this submittal. The staff has determined that additional information is needed to complete our review. A request for additional information is enclosed. This request was discussed with Richard Jarworski of your staff on March 10, 2003, and it was agreed that a response would be provided within 30 days of receipt of this letter.

If you have any questions, please contact me at (301) 415-1445.

Sincerely,

**/RA/**
Alan B. Wang, Project Manager, Section 2
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-285

Enclosure: Request for Additional Information

cc w/encl: See next page

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**REQUEST FOR ADDITIONAL INFORMATION**

**PRESSURE-TEMPERATURE LIMIT REPORT (PTLR) SUBMITTAL**

**OMAHA PUBLIC POWER DISTRICT**

**FT. CALHOUN STATION, UNIT 1**

**DOCKET NO. 50-285**

1. If separate fluence values are actually used in the licensing basis calculation of adjusted reference temperature (ART) and pressurized thermal shock reference temperature ($RT_{PTS}$) values for each material, then peak neutron fluence values for each reactor pressure vessel (RPV) beltline material should be included in the PTLR. Alternatively, where such material-specific fluence values are located (e.g., Table x.x in Ref. 8.x), could be clearly documented in the PTLR. This comment goes to the intent of demonstrating that the information on the limiting material has been included in the PTLR.

2. In Section 2.0, it would be appropriate to note in the PTLR exactly which edition of ASTM Standard E 185 is being used in order to comply with Appendix H withdrawal schedule requirements. In addition, a statement regarding testing to ASTM Standard E 185-82 (i.e., the 1982 edition, consistent with the requirements in 10 CFR Part 50, Appendix H) would also be appropriate.

3. ART or $RT_{PTS}$ values for each RPV material should be included in the PTLR. Alternatively, where each material's ART or $RT_{PTS}$ values are located (e.g., Table x.x in Ref. 8.x), could be clearly documented in the PTLR. The staff recognizes the material ART values of interest for the purpose of the development of the Ft. Calhoun pressure-temperature (P-T) limit curves are associated with 40 effective full power years (EFPY) of operation, whereas the $RT_{PTS}$ values associated with the vessel PTS evaluation are associated with the end of license conditions in accordance with 10 CFR 50.61. Documentation of ART or $RT_{PTS}$ values in the PTLR should also clearly state for what operational time the values are calculated. This comment goes to the intent of demonstrating that the information on the limiting material has been included in the PTLR.

4. In Section 5.0 of the PTLR, the term "relief exemption" is used. "Relief exemption" is a non-standard term. In the context of the section, the word "exemption" would be appropriate.

5. Confirm, with the exception of the information in Section 2.0 of Attachment 1 to LIC-02-0109, that the proposed PTLR P-T limit curves are exactly the same as those currently in the Ft. Calhoun Technical Specifications (TS). The P-T limit curves in the TS were approved by Amendment No. 207 dated April 22, 2002.

6. Consistent with the information noted in Column 2 of the table in Generic Letter 96-03, "Relocation of the Pressure Temperature Limit Curves and Low Temperature Overpressure Protection System Limits," provide a concise list of all documentation

(e.g., CEN-683 (Rev. 6)-A, as modified by exemption request for CC N-640, etc.), which, in total, will comprise the Ft. Calhoun "integrated PTLR methodology."

7. The application states that the current "criticality limit" for Ft. Calhoun is 300°F, and that such a limit is used in lieu of a core critical operation P-T limit curve. However, it appears that an imposed criticality limit of 300°F may not be adequate to bound the 10 CFR Part 50, Appendix G core critical operation P-T limit curve all the way up to normal operating pressure. Explain how a core criticality limit of 300°F is adequate to bound operation up to normal operating pressure, or propose a modified limit which would bound the core critical operation P-T limit curve. Further, whatever the criticality limit is, it should be noted on the P-T limit figure in the PTLR consistent with other minimum temperature requirements (see items 5 and 6 of the table in GL 96-03).

8. Consistent with items 5 and 6 of the table in GL 96-03, the minimum hydrotest temperature should be identified on the P-T limit curve in the PTLR.

9. To be consistent with the requirements in item 7 of the table in GL 96-03, Section 7.0 of the PTLR needs to be revised to include data and calculations related to the determination of the RPV material chemistry factors (CFs) from any relevant surveillance data. Calculations should include not only those related to the determination of CF from applicable surveillance data, but also those calculations related to the evaluation of the credibility of the surveillance data. Alternatively, making PTLR Reference 8.14, report CEN-636, Revision 2, an attachment to the PTLR would be adequate to resolve this item.

10. For clarity, how instrument uncertainty is treated in the development of the PTLR P-T limit curves should be discussed in the PTLR.