

March 16, 2004

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

SUBJECT: FORT CALHOUN STATION, UNIT NO. 1 – REQUEST FOR ADDITIONAL  
INFORMATION ON RELIEF REQUEST FOR PREVIOUS REPAIR OF  
PRESSURIZER NOZZLE (TAC NO. MC0196)

Dear Mr. Ridenoure:

By letter dated July 25, 2003, Omaha Public Power District (OPPD) submitted a relief request for the Fort Calhoun Station from the requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section XI, paragraph IWB-3132.2, "Acceptance by Repair," for a repaired pressurizer instrument nozzle. OPPD proposes, pursuant to 10 CFR 50.55a(a)(3)(ii), to use IWB-3132.4, "Acceptance by Analytical Evaluation," as an alternative to justify the continued operation of the unit without removing the flaw and without performing any Code-required inspections on this flaw.

The staff has completed its preliminary review of this submittal and has determined it needs additional information to complete the review. Our request for additional information is enclosed. This request was discussed with Richard Jaworski of your staff and it was agreed that a response would be provided within 30 days of receipt of this letter.

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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Fort Calhoun, NE 68023-0550

## **REQUEST FOR ADDITIONAL INFORMATION**

### **RELIEF REQUEST FOR PREVIOUS REPAIR OF PRESSURIZER NOZZLE**

#### **OMAHA PUBLIC POWER DISTRICT**

#### **FORT CALHOUN STATION, UNIT NO. 1**

#### **DOCKET NO. 50-285**

By letter dated July 25, 2003, Omaha Public Power District (the licensee) submitted a relief request for the Fort Calhoun Station, Unit No. 1 (FCS) from the requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section XI, paragraph IWB-3132.2, "Acceptance by Repair," for a repaired pressurizer instrument nozzle. The licensee proposes, pursuant to 10 CFR 50.55a(a)(3)(ii), to use IWB-3132.4, "Acceptance by Analytical Evaluation," as an alternative to justify the continued operation of the unit without removing the flaw and without performing any Code-required inspections on this flaw. The staff has completed its preliminary review of this relief request and has determined that the following additional information is needed to complete the review.

1. Please provide Reference 7.1, Westinghouse Letter CSE-2000-106 dated October 25, 2000 (with attachment), and Reference 7.2, Westinghouse Electric Company LLC Calculation Note Number CN-CI-02-74, Revision 0, "Evaluation of Fatigue Crack Growth of Postulated Flaw At Omaha Fort Calhoun Pressurizer Lower Shell Instrumentation Nozzle," dated January 8, 2003, for our review.
2. Confirm that there is no built-in interference between the pressurizer vessel and the pressurizer nozzle.
3. Provide the stress analysis results of the repaired vessel-nozzle configuration considering the operating stresses and the residual stresses caused by the Inconel 152 overlay and the partial penetration weld. The stress analysis results should include gap or interference of the entire cylindrical surface between the vessel and the nozzle and the stresses of the weld overlay, the partial penetration weld, and the adjacent nozzle section. Meeting the American Society of Mechanical Engineers Boiler and Pressure Vessel Code Section III stress criteria needs to be demonstrated because this repair changes the pressure boundary and therefore is, by nature, of new construction.
4. If the stress analysis results indicate that a local gap exists in front of the weld, provide a fatigue crack growth analysis on the crack in front of the partial penetration weld. If the stress analysis results indicate that a continuous passage exists from the top of the original J-groove weld to the new partial penetration weld, provide a primary water stress corrosion cracking and fatigue crack growth analysis on the crack in front of the partial penetration weld.