

August 27, 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 (TAC NO. MC3214)

Dear Mr. Ridenoure:

By letter dated May 21, 2004, Omaha Public Power District (OPPD) submitted an amendment request for the Fort Calhoun Station, Unit 1. OPPD proposed to modify Technical Specification 2.3.(4), which concerns the volume of trisodium phosphate required in operating Modes 1 and 2. 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 Thomas Matthews 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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REQUEST FOR ADDITIONAL INFORMATION
LICENSE AMENDMENT REQUEST RELATED TO CHANGES
IN TRISODIUM PHOSPHATE (TSP) VOLUME REQUIREMENTS
OMAHA PUBLIC POWER DISTRICT
FORT CALHOUN STATION, UNIT NO. 1
DOCKET NO. 50-285

By letter dated May 21, 2004, Omaha Public Power District (OPPD) submitted an amendment request for the Fort Calhoun Station, Unit 1 (FCS) to modify the Basis for Technical Specification 2.3(4), "Emergency Core Cooling System." The proposed change would delete the specified fixed volume of TSP requirement and would use a new Figure 2-3, "TSP Volume Required for RCS Critical Boron Concentration (ARO, HZP, No Xenon)," instead. Figure 2-3 provides a graph of the volume of TSP required over the operating cycle. The staff has completed its preliminary review of this amendment request and has determined that the following additional information is needed to complete the review.

1. Figure 2-3 denotes a linear relationship between the minimum volume required of TSP to maintain pH above 7 associated with various reactor coolant system critical boron concentrations. OPPD should clarify if other mechanisms causing loss of TSP besides densification exist and how they were incorporated in the process of construction of the graph in Figure 2-3.
2. On page 6 of the submittal, OPPD stated that due to densification, the volume of TSP in the baskets typically decreases by approximately 5 percent. The densification process causes a proportional increase in density by reducing the volume. If there is no mass loss of TSP during the entire cycle, the amount of TSP corresponding to 131.9 ft³ would produce a low pH value at the beginning of cycle when boric acid concentration is high and a high pH value at the end of the cycle when boric acid concentration is low. What are these values of pH? Won't the high pH value at the end of the cycle negatively impact the equipment environmental qualification? Please explain.
3. Do the hydrated forms of TSP have different densities than the dodecahydrate form? If a difference exists, provide its value for a hydrated TSP with specific moisture content (in 47-57% range) used in your calculations.