



444 South 16th Street Mall  
Omaha NE 68102-2247

June 19, 2002  
LIC-02-0081

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D.C. 20555-0001

- References:
1. Docket No. 50-285
  2. Letter from OPPD (S. K. Gambhir) to NRC (Document Control Desk) dated March 19, 2002, "Response to NRC Bulletin 2002-01, "Circumferential Cracking of Reactor Pressure Vessel Head Penetration Nozzles"" (LIC-02-0034)
  3. NRC Bulletin 2002-01, "Reactor Pressure Vessel Head Degradation and Reactor Coolant Pressure Boundary Integrity"(NRC-02-034)
  4. Letter from OPPD (S. K. Gambhir) to NRC (Document Control Desk) dated October 19, 2001, "2002 Fort Calhoun Station (FCS) Reactor Vessel Head Inspection" (LIC-01-0103)
  5. Letter from OPPD (S. K. Gambhir) to NRC (Document Control Desk) dated August 31, 2001, "Response to NRC Bulletin 2001-01, Circumferential Cracking of Reactor Pressure Vessel Head Penetration Nozzles" (LIC-01-0075)
  6. NRC Bulletin 2001-01, "Circumferential Cracking of Reactor Pressure Vessel Head Penetration Nozzles" (NRC-01-098)

**SUBJECT: Results of 2002 Fort Calhoun Station (FCS) Reactor Vessel Head Inspection**

This letter provides the results of the visual inspection of the FCS Reactor Vessel Head in accordance with OPPD commitments made in References 2, 4, and 5 to perform a 100 percent effective visual examination of the reactor vessel head penetrations by removal of a few insulation panels and use of a borescope and/or crawler probe. This inspection was performed during the spring 2002 FCS refueling outage.

In accordance with NRC Bulletins 2001-01, Reference 3, and 2002-01, Reference 6, the attachment provides the report within 30 days after plant restart, June 1, 2002, following the inspection. No penetration nozzle leakage, cracking, or degradation was found.

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Please contact me if you have any questions.

A handwritten signature in cursive script, appearing to read "D. J. Bannister".

D. J. Bannister  
Plant Manager  
Fort Calhoun Station

DJB/RLJ/rlj

c: E. W. Merschoff, NRC Regional Administrator, Region IV  
A. B. Wang, NRC Project Manager  
J. G. Kramer, NRC Senior Resident Inspector  
Winston & Strawn

**FORT CALHOUN STATION 2002 OUTAGE REPORT ON THE REACTOR  
VESSEL HEAD EFFECTIVE VISUAL INSPECTION**

The 100% bare metal inspection of the Fort Calhoun Station (FCS) reactor vessel head occurred between May 12, 2002 and May 15, 2002 during the 2002 refueling outage. The examination was accomplished by the R. Brooks company using a Brooks Top of Reactor Head Inspection System (BTRIS) remotely controlled head crawler with video capabilities, supplemented where necessary with a borescope. All one hundred ninety-two (192) quadrants of the forty-eight (48) FCS vessel head penetration nozzles were investigated and satisfactorily dispositioned. One hundred twenty eight (128) quadrants were inspected using the BTRIS mounted camera and the remaining sixty-four (64) quadrants were inspected using a BTRIS mounted borescope. No accumulation of boric acid was observed in the vicinity of any of the nozzles. However, six (6) nozzle areas contained debris which was removed using compressed air from the crawler to produce an unobstructed view to facilitate an effective visual examination. The inspection and debris removal with compressed air used the Electric Power Research Institute (EPRI) document 1006296, "Visual Examination for Leakage of PWR Head Penetrations," Rev 1 as guidance.

The FCS reactor vessel head is in excellent condition with no observed boric acid wastage. Small amounts of old, non-active, light, dried deposits of boric acid were found on the reactor vessel head. These deposits originated from reactor coolant system rundown from above the reactor vessel head insulation, i.e., previously leaking incore instrumentation fittings and autoclave flange gaskets. These non-active deposits were not the result of nozzle or control element drive mechanism (CEDM) housing leakage. These light deposits are considered by EPRI criteria (EPRI document 1000975, "Boric Acid Corrosion Guidebook," Rev. 1) to be insignificant and will not contribute to corrosion or wastage on the reactor vessel head. Cleaning of these deposits with the expenditure of a significant radiation dose was therefore deemed unnecessary at this time.