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April 25, 2007
LIC-07-0034

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

Reference: Docket 50-285

**Subject: Annual Report for 2006 Loss of Coolant Accident
(LOCA)/Emergency Core Cooling System (ECCS) Models Pursuant
to 10 CFR 50.46**

In accordance with 10 CFR 50(46)(a)(3)(ii), the Omaha Public Power District (OPPDP) is submitting the annual 10 CFR 50.46 summary report for 2006. This summary report updates all identified changes or errors in the LOCA/ECCS codes, methods, and applications used by AREVA (formerly Framatome ANP) to model Fort Calhoun Station, Unit No. 1 (FCS). References 1 and 2 (see list of references on page 3) describe the Small Break (SB) and Large Break (LB) LOCA analysis methodology used by AREVA for the FCS Analysis of Record.

OPPDP has received the 2006 AREVA 10 CFR 50.46 Annual Notification Report for the SB and LB LOCA Analyses that are subject to the reporting requirements of 10 CFR 50.46. For 2006, there were no SB or LB LOCA Analysis Peak Clad Temperature (PCT) 10 CFR 50.46 Model Assessment errors. There was one 10 CFR 50.59 Model Assessment change for the LB LOCA Analysis PCT.

Attachment 1 provides the 2006 SB LOCA PCT Margin Utilization Summary for FCS. The SB LOCA analysis was redone in 2006 to support the fuel design change which utilized M5 cladding, grids, and guide tubes. The use of M5 at FCS was approved by the NRC in References 4 and 5. The SB LOCA methodology used in this analysis was approved by the NRC in Reference 6. The value of the PCT for the new analysis of record is 1537°F.

Attachment 2 provides the 2006 LB LOCA PCT Margin Utilization Summary for FCS. The LB LOCA analysis was also redone in 2006 in support of the M5 fuel design changes. This reanalysis utilized the AREVA Realistic LB LOCA methodology which was approved for use in References 7 and 8. There has been one change to the previously

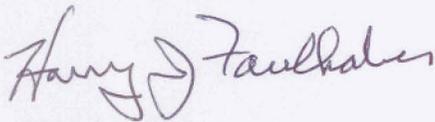
U. S. Nuclear Regulatory Commission
LIC-07-0034
Page 2

reported PCT as a result of Cycle 24 neutronic parameter changes. The value of the PCT is now 1636°F.

In summary, the FCS PCT values for SB and LB LOCA remain less than the 10 CFR 50.46(b) (1) acceptance criteria of 2200°F.

If you should have any questions, please contact Tom Matthews at (402) 533-6938. No commitments are made to the NRC in this letter.

Sincerely,

A handwritten signature in dark ink, appearing to read "H. J. Faulhaber". The signature is written in a cursive style with a large, stylized initial "H".

H. J. Faulhaber
Division Manager
Nuclear Engineering

Attachments:

1. FCS Small Break LOCA PCT Margin Utilization Summary
2. FCS Large Break LOCA PCT Margin Utilization Summary

References

1. EMF-2328(P) (A), Revision 0, "PWR Small Break LOCA Evaluation Model, S-RELAP5 Based," Framatome ANP, Inc. March 2001
2. EMF-2103(P)(A), Revision 0, "Realistic Large Break LOCA Methodology for Pressurized Water Reactors," Framatome ANP, Inc. April 2003
3. Letter from OPPD (H. J. Faulhaber) to NRC (Document Control Desk), "Annual Report for 2005 Loss of Coolant Accident (LOCA)/Emergency Core Cooling System (ECCS) Models Pursuant to 10 CFR 50.46," dated April 12, 2006 (LIC-06-0044)
4. Letter from NRC (A. B. Wang) to OPPD (R. T. Ridenoure), "Issuance of Amendment: Use of M5 Fuel Cladding," dated August 30, 2006
5. Letter from NRC (A. B. Wang) to OPPD (R. T. Ridenoure), "Correction to the Safety Evaluation for the Issuance of Amendment Re: Use of M5 Fuel Cladding," dated September 18, 2006
6. Letter from NRC (A. B. Wang) to OPPD (R. T. Ridenoure), "Issuance of Amendment RE: Addition of Topical Report References to TS 5.9.5, Core Operating Limits Report," dated March 4, 2002
7. Letter from NRC (A. B. Wang) to OPPD (R. T. Ridenoure), "Issuance of Amendment Re: Use of Areva NP, Inc, Realistic Large Break Loss-of-Coolant-Accident Methodology," dated November 3, 2006
8. Letter from NRC (A. B. Wang) to OPPD (R. T. Ridenoure), "Correction to the Safety Evaluation Regarding Issuance of Amendment Re: Use of Areva NP, Inc, Realistic Large Break Loss-of-Coolant-Accident Methodology," dated December 4, 2006

**Fort Calhoun Station Small Break LOCA
2006 Peak Clad Temperature Margin Utilization Summary**

LICENSING BASIS	<u>Clad Temperature (°F)</u>
Analysis of Record	1537
 MARGIN ALLOCATIONS (ΔPCT)	
A. Prior Permanent ECCS Model Assessments	0
B. 2006 10 CFR 50.46 Model Assessments (Permanent Assessments of PCT Margin)	0
 LICENSING BASIS PCT + MARGIN ALLOCATIONS	 1537

**Fort Calhoun Station Large Break LOCA
2006 Peak Clad Temperature Margin Utilization Summary**

LICENSING BASIS	<u>Clad Temperature (°F)</u>
Analysis of Record	1675
 MARGIN ALLOCATIONS (ΔPCT)	
A. Prior Permanent ECCS Model Assessments	0
B. 2006 10 CFR 50.46 Model Assessments (Permanent Assessments of PCT Margin)	0
C. 2006 10 CFR 50.59 Model Assessments	-39
 LICENSING BASIS PCT + MARGIN ALLOCATIONS	 1636