



SEP 15 2006

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10 CFR 50.90  
10 CFR 50.46

U S Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Prairie Island Nuclear Generating Plant Units 1 and 2  
Dockets 50-282 and 50-306  
License Nos. DPR-42 and DPR-60

Supplement to License Amendment Request (LAR) to Incorporate Large Break Loss Of Coolant Accident (LOCA) Analyses Using the Automated Statistical Treatment of Uncertainty Method

By letter dated July 6, 2006, Nuclear Management Company (NMC) submitted an LAR to incorporate new Large Break LOCA (LBLOCA) analyses using the realistic LBLOCA methodology in the NRC approved WCAP-16009-P-A, "Realistic Large Break LOCA Evaluation Methodology Using the Automated Statistical Treatment of Uncertainty Method (ASTRUM)" and revise Technical Specification (TS) 5.6.5.b to include reference to WCAP-16009-P-A. This letter supplements the LAR to address NRC requests for additional information (RAIs) regarding this LAR. NMC submits this supplement in accordance with the provisions of 10 CFR 50.90.

Enclosure 1 provides the NRC RAIs and NMC responses.

The supplemental information provided in this letter and enclosure does not impact the conclusions of the Determination of No Significant Hazards Consideration and Environmental Assessment presented in the July 6, 2006 submittal.

In accordance with 10 CFR 50.91, NMC is notifying the State of Minnesota of this LAR by transmitting a copy of this letter and enclosure to the designated State Official.

Summary of Commitments

This letter contains no new commitments and no revisions to existing commitments.

I declare under penalty of perjury that the foregoing is true and correct.  
Executed on **SEP 15 2006**



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Site Vice President, Prairie Island Nuclear Generating Plant Units 1 and 2  
Nuclear Management Company, LLC

Enclosures (1)

cc: Administrator, Region III, USNRC  
Project Manager, Prairie Island, USNRC  
Resident Inspector, Prairie Island, USNRC  
State of Minnesota

## Enclosure 1

### NRC Question:

**Q1. To show that the referenced generically approved LBLOCA analysis methodology applies specifically to each of the Prairie Island plants, provide a statement that NMC and its vendor have ongoing processes that assure that the ranges and values of the input parameters for the Prairie Island Unit 1 LBLOCA analyses, and for the Prairie Island Unit 2 LBLOCA analyses, conservatively bound the ranges and values of the as-operated plant parameters.**

Nuclear Management Company, LLC (NMC) response:

NMC and its vendor (Westinghouse) have ongoing processes that assure that the ranges and values of the input parameters for the Prairie Island Nuclear Generating Plant (PINGP), Unit 1 Large Break Loss of Coolant Accident (LBLOCA) analyses conservatively bound the ranges and values of the as-operated PINGP Unit 1 parameters. Likewise, NMC and its vendor (Westinghouse) have ongoing processes that assure that the ranges and values of the input parameters for the PINGP, Unit 2 LBLOCA analyses conservatively bound the ranges and values of the as-operated PINGP Unit 2 parameters.

**Q2. The LBLOCA analyses results for Prairie Island Unit 1 (reported in Table 1-2) and Prairie Island Unit 2 (reported in Table 2-2), each report "0" core wide oxidation. Even at the relatively low peak cladding temperatures calculated, this is not consistent with staff expectations.**

**The amount of total core-wide oxidation should be estimated and reported, regardless of how small that amount is.**

NMC response:

The amount of core-wide oxidation was conservatively estimated for PINGP Units 1 and 2. The total amount of core-wide oxidation for both PINGP Unit 1 and Unit 2 is less than 0.01%.

**Q3. Please describe how pre-existing oxidation is factored into the results for maximum local oxidation (LMO). If pre-existing oxidation is not factored into the reported results, please provide an estimate of the contribution.**

NMC response:

The pre-existing oxidation was not factored into the maximum local oxidation results presented for PINGP Unit 1 and Unit 2. The maximum expected total of the normal operation (pre-transient) and loss of coolant accident (LOCA) transient oxidation, for any time in life, was considered for the PINGP optimized fuel assembly (OFA) fuel. The pre-transient oxidation increases with burnup, from zero at beginning of life (BOL) to a maximum value at the discharge of the fuel (end of life, or EOL). The transient oxidation decreases from the near BOL value of 0.2% for PINGP Unit 1 and 0.5% for PINGP Unit 2 to a negligible value at EOL. The sum of the pre-transient plus transient oxidation remains below 17% at all times in life for the OFA fuel.