



Northern States Power Company
Prairie Island Nuclear Generating Plant
1717 Wakonade Dr. East
Weich, Minnesota 55089

February 10, 1998

10 CFR Part 50
Section 50.90

U S Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

PRAIRIE ISLAND NUCLEAR GENERATING PLANT
Docket Nos. 50-282 License Nos. DPR-42
50-306 DPR-60

License Amendment Request Dated February 10, 1998
One Time Reduction of Mode 6 Reactor Coolant System Boron Concentration

Attached is a request for a change to the Technical Specifications, Appendix A of the Operating Licenses, for the Prairie Island Nuclear Generating Plant. This request is submitted in accordance with the provisions of 10 CFR Part 50, Section 50.90.

Prairie Island Unit 2 was shut down on January 24, 1998 to repair a small leak on a part length control rod drive mechanism (CRDM). When Unit 2 was shutdown, it was believed that the repairs could be performed with the unit in the Cold Shutdown condition, and the reactor coolant system was only borated to the level necessary to support Cold Shutdown (Mode 5) operations, not to a concentration necessary to support Refueling (Mode 6) operation. As described in Exhibit A to this letter, it may be necessary to remove the reactor vessel head to complete the repairs on the part length CRDM. The removal of the reactor vessel head would place the unit in Mode 6 and it would be necessary to increase the reactor coolant system boron concentration to meet the requirements of the Technical Specifications.

Increasing the boron concentration uniformly throughout the reactor coolant system requires circulation of the coolant throughout the reactor coolant system. However, when in Mode 5, the reactor coolant pumps are secured and decay heat is removed via the residual heat removal (RHR) system. The RHR system does not provide forced circulation through all portions of the reactor coolant system. Increasing reactor coolant system boron concentration uniformly to the level required for entry into Mode 6, as required by Technical Specifications, would require operation of the reactor coolant pumps. However, because the part length CRDM that was leaking has been

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removed from the reactor vessel head, the reactor coolant system is not considered intact and a reactor coolant pump cannot be started.

This License Amendment Request proposes a limited duration change to the Prairie Island Technical Specifications that would allow a reduction in the boron concentration required for Mode 6. The current requirement of greater than or equal to 2000 ppm would be reduced to greater than or equal to 1900 ppm. Under the proposed change, if it became necessary to remove the reactor vessel head during the current Unit 2 forced outage, the active volume of the reactor coolant system would be maintained at a boron concentration of ≥ 1900 ppm to ensure that K_{eff} remains below 0.95 at all times.

Exhibit A contains a description of the proposed change, the reasons for requesting the change, the supporting safety evaluation and significant hazards determination. Exhibit B contains the current Prairie Island Technical Specification page marked up to show the proposed change. Exhibit C contains the revised Technical Specification page.

Note that although the proposed Technical Specification change applies only to Unit 2, and there are no technical changes to the Unit 1 specifications, the Unit 1 Technical Specifications are administratively affected since Northern States Power utilizes only one Technical Specification manual for both units. Therefore, when approved, the proposed changes should be incorporated into both the Unit 1 and Unit 2 Technical Specification pages.

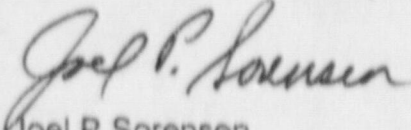
The proposed License Amendment will only be required if it becomes necessary to remove the reactor vessel head to support repairs during the current Unit 2 forced outage.

Since the processing of this License Amendment Request utilizing the provisions of 10 CFR Part 50, Section 50.91(a)(2) would result in a substantial delay in the Prairie Island Unit 2 repairs and the subsequent return to power operation, NSP respectfully requests handling of this License Amendment Request in accordance with the provisions of 10 CFR Part 50, Section 50.91(a)(5) where the Commission finds that an emergency situation exists.

If the proposed License Amendment is not processed in accordance with the provisions of 10 CFR Part 50, Section 50.91(a)(5), completion of the repairs on the Unit 2 reactor coolant system will be delayed, and Unit 2 will be prevented from resumption of plant operation at a cost of approximately \$150,000 per day for replacement power.

Because of the circumstances surrounding the repair of the Unit 2 part length CRDM and the unanticipated need to enter Mode 6 for the repairs, NSP was unable to predict that the proposed License Amendment would be required. NSP has used its best efforts in preparing for and implementing the repairs on Prairie Island Unit 2 and has not intentionally created an emergency situation to take advantage of the provisions of 10 CFR Part 50, Section 50.91(a)(5).

Please contact Gene Eckholt (612-388-1121) if you have any questions related to this License Amendment Request.



Joel P Sorensen
Plant Manager
Prairie Island Nuclear Generating Plant

c: Regional Administrator-III, NRC
NRF Project Manager, NRC
Senior Resident Inspector, NRC
State of Minnesota
Attn: Kris Sanda
J E Silberg

Attachments:

Affidavit

Exhibit A - Evaluation of Proposed Changes to the Technical Specifications.

Exhibit B - Proposed Changes Marked Up on Existing Technical Specification Pages.

Exhibit C - Revised Technical Specification Pages.