



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

August 22, 1996

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

Response to NRC Request For Additional Information Related to
Moveable Incore Detector Thimble Reduction License Amendment Request

The attached information is being provided in response to an NRC Staff request for additional information related to our License Amendment Request dated July 15, 1996, which proposed one-time only changes for Prairie Island Unit 1 Cycle 18 that would allow the use of the moveable incore detector system for measurement of the core peaking factors with less than 75% and greater than or equal to 50% of the detector thimbles available.

Attached is a summary of the results of the Prairie Island Unit 1 Cycle 18 low power physics testing, and a revision to Attachment 1 to Exhibit A of the July 15, 1996 License Amendment Request, updated to include the results of Unit 1 Cycle 18 flux maps 11 and 12.

In this letter we have made no new Nuclear Regulatory Commission Commitments. Please contact Gene Eckholt (612-388-1121) if you have any questions related to this License Amendment Request.

Michael D Wadley
Plant Manager
Prairie Island Nuclear Generating Plant

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USNRC
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NORTHERN STATES POWER COMPANY

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

Attachments:

Affidavit

Summary of the results of the Prairie Island Unit 1 Cycle 13 low power physics testing.

Revision to Attachment 1 to Exhibit A of the July 15, 1996 License Amendment Request.

UNITED STATES NUCLEAR REGULATORY COMMISSION

NORTHERN STATES POWER COMPANY
PRAIRIE ISLAND NUCLEAR GENERATING PLANT

DOCKET NO. 50-282
50-306

SUPPLEMENTAL INFORMATION IN SUPPORT OF A
REQUEST FOR AMENDMENT TO
OPERATING LICENSES DPR-42 & DPR-60

Northern States Power Company, a Minnesota corporation, with this letter is submitting additional information requested by the NRC Staff in support of the July 15, 1996 License Amendment Request related to the reduction of moveable incore detector thimbles.

This letter contains no restricted or other defense information.

NORTHERN STATES POWER COMPANY

By Michael D Wadley
Michael D Wadley
Plant Manager
Prairie Island Nuclear Generating Plant

On this 22nd day of August, 1996, before me a notary public in and for said County, personally appeared Michael D Wadley, Plant Manager, Prairie Island Nuclear Generating Plant, and being first duly sworn acknowledged that he is authorized to execute this document on behalf of Northern States Power Company, that he knows the contents thereof, and that to the best of his knowledge, information, and belief the statements made in it are true and that it is not interposed for delay.

Marcia K. LaCore



PRAIRIE ISLAND
UNIT ONE CYCLE 18
LOW POWER PHYSICS TESTING

Initial Criticality at 01:26 on 3-3-1996.

<u>Parameter</u>	<u>Measured Value</u>	<u>Predicted Value</u>	<u>Review Criteria</u>	<u>Error</u>
Critical Boron Concentration, ARO (ppm)	1964	1943	± 50 ppm	+ 21 ppm
Critical Boron Concentration, A bank in (ppm)	1821	1818	± 50 ppm	+ 3 ppm
ITC ARO (pcm/°F)	+0.6	+1.0	> -3.6 < +5.0	- 0.4
<u>Control Rod By Rod Swap</u>				
Control Bank A: Reference Bank (pcm)	1063	1118	± 10%	-4.9%
Control Bank B (pcm)	617	603	± 15%	+2.3%
Control Bank C (pcm)	912	913	± 15%	-0.1%
Control Bank D (pcm)	806	825	± 15%	-2.3%
Shutdown Bank A (pcm)	662	668	± 15%	-0.9%
Shutdown Bank B (pcm)	662	668	± 15%	-0.9%
Total of All Banks	4722	4795	± 10%	-1.5%

**Prairie Island
Summary of Flux Map Peaking Factors**

<u>Flux Map Number</u>	<u>Burnup (MWD/MTU)</u>	<u>% Power</u>	<u>FΔH Margin to Limit</u>	<u>FQ Margin to Limit</u>
1	5	30	15.4%	44.3%
2	10	48	12.2%	46.4%
3	35	70	10.6%	34.7%
4	155	100	3.8%	2.8%
5	225	100	4.4%	9.0%
6	235	100	3.5%	9.1%
7	1300	100	4.7%	5.0%
8	2425	100	4.1%	5.3%
9	3035	100	5.2%	7.8%
10	4168	100	5.3%	9.0%
11	5100	100	5.0%	9.5%
12	6142	100	5.1%	9.8%