NMC
Committed to Nuclear Excellence

Nuclear Management Company, LLC
Prairie Island Nuclear Generating Plant
1717 Wakonade Dr. East
Welch MN 55089

June 28, 2002

10 CFR Part 50
Section 50.90

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

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

Supplement to License Amendment Request dated December 11, 2000
Conversion to Improved Technical Specifications (ITS)

By letter dated, December 11, 2000, Prairie Island submitted a License Amendment Request (LAR) to convert the current Technical Specifications (CTS) using the guidance of NUREG-1431, Revision 1 as amended by NRC and industry Technical Specification Task Force (TSTF) documents. This letter supplements the subject LAR.

The NRC Staff, in meetings and telephone calls, has requested additional documentation in support of NMCs proposed methodology NAD-PI-004, $F_Q^W(Z)$ Penalty with Increasing $[F_Q^C(Z) / K(Z)]$ Trend. Attachment 1 to this letter provides this additional information.

The Significant Hazards Determinations and Environmental Assessments, as presented in the original December 11, 2000 submittal and as supplemented March 6, 2001, July 3, 2001, August 13, 2001, November 12, 2001, December 12, 2001, January 25, 2002, January 31, 2002, February 14, 2002, February 15, 2002, February 16, 2002, March 6, 2002, April 11, 2002, May 10, 2002, May 30, 2002, June 10, 2002 and June 25, 2002 bound the proposed license amendment.

A001

NMC is notifying the State of Minnesota of this LAR supplement by transmitting a copy of this letter and attachments to the designated State Official.

To the best of my knowledge and belief, the statements contained in this document are true and correct. In some respects these statements are not based on my personal knowledge, but on information furnished by other Prairie Island Nuclear Generating Plant (PINGP) and NMC employees, contractor employees, and/or consultants. Such information has been reviewed in accordance with company practice, and I believe it to be reliable.

In this letter NMC has not made any new or revised any Nuclear Regulatory Commission commitments. Please address any comments or questions regarding this matter to myself or Mr. Dale Vincent at 1-651-388-1121.

Mano K. Nazar
Site Vice President
Prairie Island Nuclear Generating Plant

C: Regional Administrator - Region III, NRC
Senior Resident Inspector, NRC
NRR Project Manager, NRC
James Bernstein, State of Minnesota

Attachments:
Affidavit
1. Additional Information in Response to Questions on NAD-PI-004, $F_Q^W(Z)$ Penalty with Increasing $[F_Q^C(Z) / K(Z)]$ Trend

UNITED STATES NUCLEAR REGULATORY COMMISSION

NUCLEAR MANAGEMENT COMPANY, LLC

PRAIRIE ISLAND NUCLEAR GENERATING PLANT DOCKET NO. 50-282
50-306

REQUEST FOR AMENDMENT TO
OPERATING LICENSES DPR-42 & DPR-60

SUPPLEMENT TO LICENSE AMENDMENT REQUEST DATED DECEMBER 11, 2000
CONVERSION TO IMPROVED TECHNICAL SPECIFICATIONS (ITS)

By letter dated June 28, 2002, Nuclear Management Company, LLC, a Wisconsin corporation, is submitting additional information in support of the License Amendment Request originally submitted December 11, 2000.

This letter contains no restricted or other defense information.

NUCLEAR MANAGEMENT COMPANY, LLC

By _____
Michael D. Werner
Plant Manager
Prairie Island Nuclear Generating Plant

State of Minnesota

County of Goodhue

On this 28 day of June 2002 before me a notary public acting in said County, personally appeared Michael D. Werner, Plant Manager, Prairie Island Nuclear Generating Plant, and being first duly sworn acknowledged that he is authorized to execute this document on behalf of Nuclear Management Company, LLC, that he knows the contents thereof, and that to the best of his knowledge, information, and belief the statements made in it are true.

Dale M. Vincent

DALE M. VINCENT
NOTARY PUBLIC-MINNESOTA
My Commission Expires Jan. 31, 2005

Attachment 1
June 27, 2002

Additional Information in Response to Questions on NAD-PI-004, $F_Q^W(Z)$ Penalty with Increasing $[F_Q^C(Z) / K(Z)]$ Trend

The NRC staff has asked questions on NMC proposed methodology NAD-PI-004, Rev. 0, January 2001 - $F_Q^W(Z)$ Penalty with Increasing $[F_Q^C(Z) / K(Z)]$ Trend. The NRC questions and NMC answers are as follows:

NRC Question1. Section 3.0 of the topical report states that the second option for determining F_Q^A would be to calculate the percentage increase in the maximum F_Q nuclear prediction ($F_Q^P(Z)$) over approximately 31 EFPD intervals from the beginning of the Cycle until the End of the Cycle. Describe the methodology and bases used for calculating $F_Q^P(Z)$.

NMC Answer to Question 1:
The computer models and reactor physics methodology described in Reference 1 would be used to calculate $F_Q^P(Z)$ at exposure intervals during the cycle. From the differences in $F_Q^P(Z)$ from one exposure point to the next, the expected change in $F_Q^P(Z)$ for a 31 EFPD interval, starting at the initial exposure, would be determined. This expected change would be the F_Q^A from the predicted data. When compared to the F_Q^A from the historical data, the final F_Q^A which is the greater of the predicted and historical could be a function of cycle exposure.

NRC Question 2. Section 3.0 of the topical report states, "The F_Q^A reported in the COLR may vary with cycle exposure." Describe how F_Q^A will vary with cycle exposure.

NMC Answer to Question 2:
The response to question 1 describes how F_Q^A could be a function of cycle exposure and also see the example provided in Attachment 1 to NMC letter dated June 25, 2002.

NRC Question 3. In recent years, because of low leakage core designs, longer fuel cycles, increased use of burnable poisons, and the use of integral fuel burnable absorbers in Westinghouse plant cores, these plants have seen significant increases in the measured values of $F_Q^C(Z)$ between monthly measurements. You state that you can account for this increase by applying the F_Q^A factor based upon both an $F_Q^P(Z)$ calculation and historical data. Describe how the $F_Q^P(Z)$ calculation and historical information based on different core designs will remain bounding for future significantly modified core designs.

NMC Answer to Question 3:
The computer model predictions (calculated in accordance with Reference 1) for the cycle to which the COLR is applicable would provide the best available prediction of the increase in $F_Q(Z)$ for the next 31 EFPD. The computer model would cover changes in

poison loading, core designs, etc. The historical data gives additional conservatism based past performance for parts of the cycle where the computer model may not be predicting large increases. F_Q^A is the most limiting value based on historical data and predicted values ($F_Q^P(Z)$). $F_Q^P(Z)$ is based on the cycle to which the COLR is applicable using approved methodology. Therefore, changes in core designs will be accounted for in the $F_Q^P(Z)$ calculation.

NRC Question 4. To ensure terminology consistency, please provide a list of the acronyms used in this report.

NMC Answer to Question 4:

$F_Q(Z)$	Heat Flux Hot Channel Factor
F_Q^A	A factor to increase $F_Q^W(Z)$ in the event that the maximum $[F_Q^C(Z)/K(Z)]$ has increased since the previous evaluation of $[F_Q^C(Z)/K(Z)]$
$F_Q^C(Z)$	Heat Flux Hot Channel Factor evaluated from an incore flux map
$F_Q^P(Z)$	The predicted heat flux hot channel factor
$F_Q^W(Z)$	The $F_Q(Z)$ adjusted by an elevation dependent factor that accounts for non-equilibrium conditions. $F_Q^W(Z)= F_Q^C(Z)\ V(Z)$
K(Z)	A core height dependent factor based off of the Small Break LOCA analysis
V(Z)	A cycle dependent function that accounts for power distribution transients encountered during normal operation

Reference 1
NSPNAD-8101-A (latest approved revision), Qualification of Reactor Physics Methods for Application to Prairie Island, October 2000.