

UNITED STATES NUCLEAR REGULATORY COMMISSION

NORTHERN STATES POWER COMPANY

PRAIRIE ISLAND NUCLEAR GENERATING PLANT

DOCKET NOS. 50-282
50-306

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

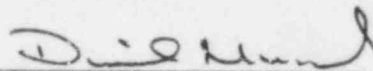
LICENSE AMENDMENT REQUEST DATED FEBRUARY 21, 1986

Northern States Power Company, a Minnesota corporation, requests authorization for changes to the Prairie Island Operating Licenses as shown on the attachments labeled Exhibit A and Exhibit B. Exhibit A describes the proposed changes along with reasons for the changes. Exhibit B contains copies of the Prairie Island Operating Licenses incorporating the proposed changes.

This letter contains no restricted or other defense information.

NORTHERN STATES POWER COMPANY

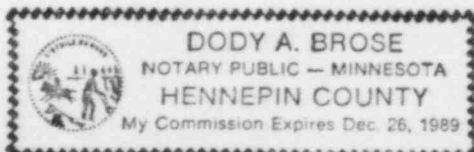
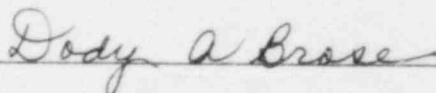
By



David Musolf

Manager-Nuclear Support Services

On this 21st day of February, 1986 before me a notary public in and for said County, personally appeared David Musolf, Manager-Nuclear Support Services, 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 is is not interposed for delay.



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Exhibit A

Prairie Island Nuclear Generating Plant

License Amendment Request Dated February 21, 1986

Description and Evaluation of Proposed
Change to Operating Licenses DPR-42 and DPR-60

Pursuant to 10 CFR Part 50, Section 50.90, the holders of Operating Licenses DPR-42 and DPR-60 hereby propose the following changes:

License Expiration Date

a. Change paragraph 2.D of the Facility Operating License for Unit No. 1 of the Prairie Island Nuclear Generating Plant, License No. DPR-42, to read:

D. This amended license is effective as of the date of issuance and shall expire at midnight August 9, 2013.

b. Change paragraph 2.D of the Facility Operating License for Unit No. 2 of the Prairie Island Nuclear Generating Plant, License No. DPR-60, to read:

D. This amended license is effective as of the date of issuance and shall expire at midnight October 29, 2014.

Refer to Exhibit B for the actual page changes.

Reasons for Change

The current Operating License expiration date is 40 years from the date of issuance of the Construction Permit (June 25, 1968 for both units). Because approximately 61 months were required to construct Unit No. 1 to the point of fuel loading and startup testing (76 months for Unit No. 2), the effective period of the Unit No. 1 license is approximately 34 years and 11 months (33 years and eight months for Unit No. 2). Current NRC policy is to issue operating licenses for a 40-year period beginning with the date of issuance. The requested change in expiration date of the Prairie Island Operating Licenses would provide for the 40-year period of operation that the units were initially designed for.

Northern States Power Company believes that the useful life of Prairie Island Unit No. 1 and Unit No. 2 is significantly more than the 40 years requested in this license amendment application. We are currently involved in a Plant Life Extension Prog-

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Reasons for Change (continued)

ram (PLEX) pilot project at our Monticello Nuclear Generating Plant. This program is being supported by the Electric Power Research Institute (EPRI) and the US Department of Energy (DOE). The purpose of this program is to determine the optimum safe operating life of the facility and establish a program of surveillance, testing, and planned replacement/refurbishment to support this goal. A similar PLEX pilot project is under way for Virginia Power Corporation's Surrey Unit No. 1, which is a Westinghouse pressurized water reactor plant similar in many respects to the Prairie Island Units. We are actively following both pilot projects and have plans to initiate a plant specific plant life extension program at Prairie Island in 1987.

Determination of Significant Hazards Considerations

The proposed change to the Operating License has been evaluated to determine whether it constitutes a significant hazards consideration as required by 10 CFR Part 50, Sections 50.91 using the standards provided in Section 50.92. This analysis is provided below:

1. The proposed amendment will not involve a significant increase in the probability or consequences of an accident previously evaluated.

Prairie Island Unit No. 1 and Unit No. 2 were designed and constructed primarily on the basis of 40 years of plant operation. For example, the reactor vessel was designed and fabricated for a 40-year life. A comprehensive vessel materials surveillance program is maintained in accordance with 10 CFR Part 50, Appendix H. Analyses performed to demonstrate compliance with the NRC pressurized thermal shock screening criteria indicate that approximately 80 years of plant operation is possible prior to reaching a limit.

The analyses contained in the Prairie Island Final Safety Analysis Report were performed primarily on the basis of 40 years of plant operation.

Analyses and information presented in the Prairie Island Environmental Report, in general, were not dependent on any specific period of plant operation.

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Determination of Significant Hazards Considerations (continued)

Procedures and programs are in place to detect abnormal deterioration and aging of critical plant components.

Examples include:

- a. Plant pressure retaining vessels, piping, and support systems are inspected in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and 10 CFR Part 50, Section 50.55(g). Safety related pumps and valves are included in a test program meeting the requirements of Section XI of the Code and the plant Technical Specifications.
- b. Safety related electrical equipment has been environmentally qualified in accordance with the requirements of 10 CFR Part 50, Section 50.49. Aging analyses establish required intervals for equipment replacement.
- c. A number of special inspections and investigations have been performed by the Prairie Island technical staff providing additional assurance that abnormal or unanticipated degradation will not occurring in components required for safe and reliable plant operation. These inspections have included such items as pipe, valve, and fitting wall thickness measurements in steam lines subject to erosion. Additional inspections of this nature will be identified as part of the Prairie Island plant specific PLEX program.

2. The proposed amendment will not create the possibility of a new or different kind of accident from any accident previously analyzed.

The proposed amendments involve only a change in the expiration date of the Operating Licenses. No safety analyses are affected. No new or different accident type is created. The accident analyses presented in the Updated Safety Analysis Report remain bounding.

3. The proposed amendment will not involve a significant reduction in the margin or safety.

The proposed amendment involves only a change in the expiration dates of the Operating Licenses. No safety margins are affected.

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The licensing basis of the plant, as described in the Updated Safety Analysis Report and the Environmental report, are applicable for 40 years of plant operation.

For the reasons stated above, we have concluded that these license amendments do not involve a significant hazards consideration. They consist of purely administrative changes in the term of the Operating Licenses which is permitted by the regulations of the Commission.

Review of Prairie Island Environmental Report

We have reviewed the Prairie Island Environmental Report dated May 12, 1971 as supplemented on November 5, 1971. We have concluded that the environmental impact associated with operation of the Prairie Island Unit No. 1 and Unit No. 2 for a 40-year period of operation was considered in this report. The Environmental Report, as supplemented, does not generally use or discuss a specific period of plant operation in the evaluations presented.

In the approximately 15 years of plant operation since the Environmental Report was issued, a number of modifications have been made to the Prairie Island plant and surrounding site and facilities. These modifications, in general, had the effect of improving the reliability and safety of the plant or reducing the environmental impact of plant operation. They include:

a. Facilities - Many modifications to the plant have been made since the original operating license has been issued. Significant modifications are described in the Prairie Island Updated Safety Analysis Report. Modifications made without prior NRC approval in accordance with the provisions of 10 CFR Part 50, Section 50.59, were reported on an annual basis to the Commission. Modifications requiring prior NRC approval were made following receipt of an NRC Safety Evaluation Report. No modification was found to affect the conclusions of the Prairie Island Environmental Report.

b. Land Use - Additional site buildings have been constructed and existing buildings have been expanded. The actual land area occupied by site buildings has not significantly increased, however.

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c. Thermal Effects - Modifications to the plant intake and and discharge structures have been made to further reduce the potential for adverse impact on aquatic life near the plant.

d. Radiological Effects and Radwaste Treatment Systems - Releases of radioactive liquid and gaseous wastes from the plant remain among the lowest of US nuclear generating plants. Volume of solid wastes shipped from the site are among the lowest of US nuclear generating plants. Computed offsite doses are typically less than one percent of the 10 CFR Part 50, Appendix I, guidelines of 10 mrad/year gamma and 20 mrad/year beta air dose and 15 mrem/year organ dose.

Occupational radiation exposure at the Prairie Island plant remains among the lowest of US nuclear generating plants. This is attributed to an excellent history of fuel integrity, a management commitment to as low as reasonably achievable exposures, and an experienced and motivated radiation protection support group.

We expect that insignificant radwaste system releases and extremely low occupational exposures will continue to be the norm for the life of the Prairie Island facility.

e. Area Population - While the plant site itself is within the City of Red Wing Minnesota, the land use in the immediate vicinity of the plant continues to be largely rural and is expected to remain so for the life of the facility. The total population within the ten-mile emergency planning zone remains relatively small.

EXHIBIT B

License Amendment Request Dated February 21, 1986

Docket Nos. 50-282 License Nos. DPR-42

50-306 DPR-60

Exhibit B consists of revised pages for the Prairie Island Unit No. 1 and Unit No. 2 Operating Licenses showing the proposed changes.