

September 23, 1986

Docket Nos. 50-282  
and 50-306

Mr. D. M. Musolf  
Nuclear Support Services Department  
Northern States Power Company  
414 Nicollet Mall - 8th Floor  
Minneapolis, Minnesota 55401

Dear Mr. Musolf:

The Commission has issued the enclosed Amendment Nos. 79 and 72 to Facility Operating License Nos. DPR-42 and DPR-60 for the Prairie Island Nuclear Generating Plant, Unit Nos. 1 and 2. These amendments consist of changes to the licenses in response to your application dated February 21, 1986.

The amendments change the expiration date for the Unit 1 Facility Operating License, DPR-42, from June 25, 2008, to August 9, 2013, and change the expiration date for the Unit 2 Facility Operating License, DPR-60, from June 25, 2008, to October 29, 2014.

A copy of the Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's next regular biweekly Federal Register notice.

Sincerely,

*/s/*

Dominic C. DiIanni, Project Manager  
Project Directorate #1  
Division of PWR Licensing-A

Enclosures:

1. Amendment No. 79 to DPR-42
2. Amendment No. 72 to DPR-60
3. Safety Evaluation

cc's: See next page

\*See Previous Concurrence

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Mr. D. M. Musolf  
Northern States Power Company

Prairie Island Nuclear Generating  
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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555



NORTHERN STATES POWER COMPANY

DOCKET NO. 50-282

PRAIRIE ISLAND NUCLEAR GENERATING PLANT UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 79  
License No. DPR-42

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Northern States Power Company (the licensee) dated February 21, 1986, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

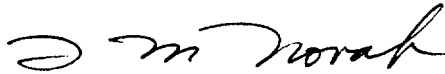
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2. Accordingly, Facility Operating License No. DPR-42 is hereby amended by changing Paragraph 2.D. to read as follows:

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

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Thomas M. Novak, Acting Director  
Division of PWR Licensing-A

Date of Issuance: September 23, 1986

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555



NORTHERN STATES POWER COMPANY

DOCKET NO. 50-306

PRAIRIE ISLAND NUCLEAR GENERATING PLANT UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 72  
License No. DPR-60

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Northern States Power Company (the licensee) dated February 21, 1986, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, Facility Operating License No. DPR-60 is hereby amended by changing Paragraph 2.D. to read as follows:

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

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Thomas M. Novak, Acting Director  
Division of PWR Licensing-A

Date of Issuance: September 23, 1986



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 79 AND 72

TO FACILITY OPERATING LICENSE NOS. DPR-42 AND DPR-60

NORTHERN STATES POWER COMPANY

PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNIT NOS. 1 AND 2

DOCKET NOS. 50-282 AND 50-306

Introduction

By application dated February 21, 1986, Northern States Power Company (NSP) requested amendments to the facility operating licenses for Prairie Island Nuclear Generating Plant, Unit Nos. 1 and 2. The proposed amendments would change the expiration date for the Unit 1 Facility Operating License, DPR-42, from June 25, 2008 to August 9, 2013, and change the expiration date for the Unit 2 Facility Operating License, DPR-60, from June 25, 2008, to October 29, 2014.

Discussion and Evaluation

Section 103.c of the Atomic Energy Act of 1954 provides that a license is to be issued for a specified period not exceeding 40 years. 10 CFR 50.51 specifies that each license will be issued for a fixed period of time not to exceed 40 years from date of issuance. 10 CFR 50.56 and 10 CFR 50.57 allow the issuance of an operating license pursuant to 10 CFR 50.51 after the construction of the facility has been substantially completed, in conformity with the construction permit and when other provisions specified in 10 CFR 50.57 are met. The currently licensed term for the Prairie Island Unit Nos. 1 and 2 is 40 years commencing with the issuance of the construction permits (June 25, 1968). Accounting for the time that was required for plant construction, this represents an effective operating license term of 34 years and 11 months for Unit 1 and 33 years and eight months for Unit 2. Consistent with Section 103.c of the Atomic Energy Act and Sections 50.51, 50.56 and 50.57 of the Commission's regulations, the licensee, by its application of February 21, 1986, seeks extensions of the operating license terms for Prairie Island Units 1 and 2 such that the fixed period of the licenses would be 40 years from the date of operating license issuance.

The licensee's request for extension of the operating licenses is based on the fact that a 40-year service life was considered during the design and construction of the plant. Although this does not mean that some components will not wear out during the plant lifetime, design features were incorporated which maximize the inspectability of structures, systems and equipment. Surveillance and maintenance practices which were implemented in accordance with the ASME

code and the facility Technical Specifications provide assurance that any unexpected degradation in plant equipment will be identified and corrected.

The design of the reactor vessel and its internals considered the effects of 40 years of operation at full power and a comprehensive vessel material surveillance program is maintained in accordance with 10 CFR Part 50, Appendix H. We have completed our analyses related to the pressurized thermal shock (PTS) rule, 10 CFR 50.61, for both units. By our letters dated June 23, 1986, the licensee was given results showing that the most critical weld materials for both reactor vessels meet the criterion of 10 CFR 50.61 by a very large margin at the end of the 40-year operating life. In addition to these calculations, surveillance capsules placed inside the reactor vessels provide a means of monitoring the cumulative effects of power operation.

Aging analyses have been performed for all safety-related electrical equipment in accordance with 10 CFR 50.49, "Environmental qualification of electrical equipment important to safety for nuclear power plants," identifying qualified lifetimes for this equipment. These lifetimes will be incorporated into plant equipment maintenance and replacement practices to ensure that all safety-related electrical equipment remains qualified and available to perform its safety function regardless of the overall age of the plant.

Based upon the above, it is concluded that extension of the operating licenses for Prairie Island Unit Nos. 1 and 2 to allow a 40-year service life is consistent with the safety analysis in that all issues associated with plant aging have already been addressed. Accordingly, we find the proposed change to the expiration date of the Prairie Island Unit Nos. 1 and 2 Facility Operating Licenses to be acceptable.

#### Environmental Consideration

A Notice of Issuance of an Environmental Assessment and Finding of No Significant Impact relating to the proposed extension of facility operating license termination dates for the Prairie Island Unit Nos. 1 and 2 was published in the Federal Register on

#### Conclusion

We have concluded, based on the considerations discussed above, that (1) there is a reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor:  
D. DiIanni

Date: September 23, 1986

Distribution Copies:  
Docket File 50-282/306

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