

**ENCLOSURE 1**

**RENEWED OPERATING LICENSE NUMBER DPR-42**

**ADAMS ACCESSION NO. ML11147A137**

NORTHERN STATES POWER COMPANY

DOCKET NO. 50-282

PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNIT 1

RENEWED FACILITY OPERATING LICENSE

Renewed Operating License No. DPR-42

1. The Atomic Energy Commission (the Commission) having found that:
  - A. The application to renew Facility Operating License No. DPR-42 by Northern States Power Company (NSPM) 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 and that all required notifications to other agencies or bodies have been duly made;
  - B. Construction of the Prairie Island Nuclear Generating Plant, Unit 1 (the facility), has been substantially completed in conformity with Provisional Construction Permit No. CPPR-45, as amended, the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
  - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
  - D. There is reasonable assurance: (i) that the activities authorized by this renewed operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the rules and regulations of the Commission;
  - E. NSPM is technically and financially qualified to engage in the activities authorized by this renewed operating license in accordance with the rules and regulations of the Commission;
  - F. NSPM has satisfied the applicable provisions of 10 CFR Part 140, Financial Protection Requirements and Indemnity Agreements", of the Commission's regulations;
  - G. The issuance of this renewed operating license will not be inimical to the common defense and security or to the health and safety of the public;
  - H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental costs and considering available alternatives, the issuance of this Renewed Facility Operating License No. DPR-42 is in accordance with 10 CFR Part 51, of the Commission's regulations and all applicable requirements of said Part 51 have been satisfied;

Renewed Operating License No. DPR-42

- I. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this renewed operating license will be in accordance with the Commission's regulations in 10 CFR Parts 30 and 70, including 10 CFR Section 30.33, 70.23 and 70.31; and
  - J. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1); and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by this renewed operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the facility, and that any changes made to the facility's current licensing basis in order to comply with 10 CFR 54.29(a) are in accordance with the Act and the Commission's regulations.
2. Accordingly, Facility Operating License DPR-42, issued to Northern States Power Company<sup>1</sup> on August 9, 1973, and amended on December 14, 1973, is superseded by Renewed Facility Operating License No. DPR-42, and is hereby amended in its entirety to read as follows:
- A. This license applies to the Prairie Island Nuclear Generating Plant, Unit 1, a pressurized water nuclear reactor and associated equipment (the facility), owned by the NSPM. The facility is located in Goodhue County, Minnesota, and is described in the "Final Safety Analysis Report" as supplemented and amended (Amendments 1 through 36) and the Environmental Report as supplemented and amended (Supplements 1 and 2).
  - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
    - (1) Pursuant to Section 104b of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities, NSPM to possess, use, and operate the facility at the designated location in Goodhue County, Minnesota, in accordance with the procedures and limitations set forth in this renewed operating license;
    - (2) Pursuant to the Act and 10 CFR Part 70, NSPM to receive, possess and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended as of May 11, 1976.

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<sup>1</sup> Northern States Power Company, was incorporated in Minnesota as a wholly owned subsidiary of Xcel Energy, Inc. effective August 18, 2000. This renewed operating license reflects the Commission's consent per 10 CFR Part 50, Section 50.80 to the license transfer approved by Order dated May 12, 2000.

- (3) Pursuant to the Act and 10 CFR Parts 30, 40 and 70, NSPM to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
  - (4) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, NSPM to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument and equipment calibration or associated with radioactive apparatus or components;
  - (5) Pursuant to the Act and 10 CFR Parts 30 and 70, NSPM to possess but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility;
  - (6) Pursuant to the Act and 10 CFR Parts 30 and 70, NSPM to transfer byproduct materials from other job sites owned by NSPM for the purpose of volume reduction and decontamination.
- C. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:
- (1) Maximum Power Level  
  
NSPM is authorized to operate the facility at steady state reactor core power levels not in excess of 1677 megawatts thermal.
  - (2) Technical Specifications  
  
The Technical Specifications contained in Appendix A, as revised through Amendment No. 201, are hereby incorporated in the renewed operating license. NSPM shall operate the facility in accordance with the Technical Specifications.
  - (3) Physical Protection  
  
NSPM shall fully implement and maintain in effect all provisions of the Commission-approved physical security, guard training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contains

Safeguards Information protected under 10 CFR 73.21, is entitled: "Prairie Island Nuclear Generating Plant Security Plan, Training and Qualification Plan, Safeguards Contingency Plan, and Independent Spent Fuel Storage Installation Security Program," Revision 1, submitted by letters dated October 18, 2006, and January 10, 2007.

(4) Fire Protection

NSPM shall implement and maintain in effect all provisions of the approved fire protection program as described and referenced in the Updated Safety Analysis Report for the Prairie Island Nuclear Generating Plant, Units 1 and 2, and as approved in Safety Evaluation Reports dated February 14, 1978, September 6, 1979, April 21, 1980, December 29, 1980, July 28, 1981, October 27, 1989, and October 6, 1995, subject to the following provision:

NSPM may make changes to the approved Fire Protection Program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

(5) Additional Conditions

The Additional Conditions contained in Appendix B, as revised through Amendment No. 188, are hereby incorporated into this license. NSPM shall operate the facility in accordance with the Additional Conditions.

(6) Mitigation Strategy License Condition

Develop and maintain strategies for addressing large fires and explosions and that include the following key areas:

- (a) Fire fighting response strategy with the following elements:
  - 1. Pre-defined coordinated fire response strategy and guidance
  - 2. Assessment of mutual aid fire fighting assets
  - 3. Designated staging areas for equipment and materials
  - 4. Command and control
  - 5. Training of response personnel

- (b) Operations to mitigate fuel damage considering the following:
  - 1. Protection and use of personnel assets
  - 2. Communications
  - 3. Minimizing fire spread
  - 4. Procedures for implementing integrated fire response strategy
  - 5. Identification of readily-available pre-staged equipment
  - 6. Training on integrated fire response strategy
  - 7. Spent fuel pool mitigation measures
  
- (c) Actions to minimize release to include consideration of:
  - 1. Water spray scrubbing
  - 2. Dose to onsite responders
  
- (7) Upon implementation of Amendment No. 195 adopting TSTF-448, Revision 3, the determination of control room envelope (CRE) unfiltered air in-leakage as required by SR 3.7.10.5, in accordance with TS 5.5.16.c (i), the assessment of CRE habitability as required by TS 5.5.16.c (ii), and assessing the CRE boundary as required by Specification 5.5.16.d, shall be considered met. Following implementation:
  - a. The first performance of SR 3.7.10.5, in accordance with Specification 5.5.16.c (i), shall be within the specified frequency of 6 years, plus the 18 month allowance of SR 3.0.2, as measured from December 3, 2004, the date of the most recent successful tracer gas test, as stated in the December 18, 2006 letter in response to Generic Letter 2003-01, or within the next 18 months if the time period since the most recent successful tracer gas test is greater than 6 years.
  
  - b. The first performance of the periodic assessment of CRE habitability, Specification 5.5.16.c (ii), shall be 3 years, plus the 9 month allowance of SR 3.0.2, as measured from December 3, 2004, the date of the most recent successful tracer gas test, as stated in the December 18, 2006 letter in response to Generic Letter 2003-01, or within the next 9 months if the time period since the most recent successful tracer gas test is greater than 3 years.
  
- (8) License Renewal License Conditions
  - (a) The licensee may make changes to the programs and activities described in the USAR supplement, submitted pursuant to 10 CFR 54.21(d), as revised during the license renewal application review process, provided the licensee evaluates such changes pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.

- (b) Appendix A of "Safety Evaluation Report Related to the License Renewal of Prairie Island Nuclear Generating Plant, Units 1 and 2," dated October 16, 2009, and supplemented on April 15, 2011, and the licensee's USAR supplement submitted pursuant to 10 CFR 54.21(d) describe certain future programs and activities to be completed before the period of extended operation. The licensee shall complete these activities no later than August 9, 2013, and shall notify the NRC in writing when implementation of these activities is complete.
  - (c) All capsules in the reactor vessel that are removed and tested must meet the test procedures and reporting requirements of American Society for Testing and Materials (ASTM) E 185-82 to the extent practicable for the configuration of the specimens in the capsule. Any changes to the capsule withdrawal schedule, including spare capsules, must be approved by the NRC prior to implementation. All capsules placed in storage must be maintained for future insertion. Any changes to storage requirements must be approved by the NRC.
- D. This renewed operating license is effective as of the date of issuance and shall expire at midnight August 9, 2033.

FOR THE NUCLEAR REGULATORY COMMISSION

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Eric J. Leeds, Director  
Office of Nuclear Reactor Regulation

Attachments:

1. Appendix A - Technical Specifications
2. Appendix B - Additional Conditions

Date of Issuance: June 27, 2011

Please refer to ADAMS accession number ML11172A020 for Appendices A and B for Prairie Island Nuclear Generating Plant, Unit 1.

The Technical Specifications did not change as a result of the renewal of the Prairie Island facility operating licenses.