



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

NORTHERN STATES POWER COMPANY

DOCKET NO. 50-282

PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.  
License No. DPR-42

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Nuclear Management Company, LLC, and Northern States Power Company (the licensees), dated April 16, 2008, as supplemented by letter on August 6, 2008, 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, the license is amended as indicated in the attachment to this license amendment.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Eric J. Leeds, Director  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Facility Operating License,  
Appendix A, and Appendix B

Date of Issuance:



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

NORTHERN STATES POWER COMPANY

DOCKET NO. 50-306

PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.  
License No. DPR-60

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Nuclear Management Company, LLC, and Northern States Power Company (the licensees), dated April 16, 2008, as supplemented by letter dated August 6, 2008, 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, the license is amended as indicated in the attachment to this license amendment.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Eric J. Leeds, Director  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Facility Operating License,  
Appendix A, and Appendix B

Date of Issuance:

ATTACHMENT TO LICENSE AMENDMENT NOS. AND

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

DOCKET NOS. 50-282 AND 50-306

Replace the following pages of Facility Operating License No. DPR-42 and DPR-60 with the attached revised pages. The changed areas are identified by marginal lines.

REMOVE

DPR-42, Pages 1 thru 4  
DPR-60, Pages 1 thru 4

INSERT

DPR-42, Pages 1 thru 4  
DPR-60, Pages 1 thru 4

Replace the following page of Appendix A, "Technical Specifications," with the attached revised page. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

REMOVE

5.0-5

INSERT

5.0-5

Replace the following page of Appendix B, "Additional Conditions," with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE

DPR-42, B-1  
DPR-60, B-1

INSERT

DPR-42, B-1  
DPR-60, B-1



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
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NORTHERN STATES POWER COMPANY

DOCKET NO. 50-282

PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNIT 1

FACILITY OPERATING LICENSE

License No. DPR-42  
Amendment No. 453,

1. The Atomic Energy Commission (the Commission) having found that:
  - A. The application for license filed 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 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 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 amended 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 Amendment No. 2 to Facility Operating License No. DPR-42 is in accordance with 10 CFR Part 50, Appendix D, of the Commission's regulations and all applicable requirements of said Appendix D have been satisfied; and
  - I. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this 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.
2. Pursuant to an Initial decision of the Atomic Safety and Licensing Board (ALB) dated April 2, 1974, 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 hereby amended in its entirety to read as follows:
- A. This amended 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 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.
    - (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;

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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 license, as amended, was amended effective this date to reflect the Commission's consent per 10 CFR Part 50, Section 50.80 to the license transfer approved by Order dated May 12, 2000.

- (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 amended 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 1650 megawatts thermal.

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. \_\_\_\_\_, are hereby incorporated in the 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.

Unit 1

Amendment No. 184,

(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. , 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



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NORTHERN STATES POWER COMPANY

DOCKET NO. 50-306

PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNIT 2

FACILITY OPERATING LICENSE

License No. DPR-60  
Amendment No. 144,

1. The Atomic Energy Commission (the Commission) having found that:
  - A. The application for license filed 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 2 (the facility), has been substantially completed in conformity with Provisional Construction Permit No. CPPR-46, 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 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 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 amended 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 Facility Operating License No. DPR-60 is in accordance with 10 CFR Part 50, Appendix D, of the Commission's regulations and all applicable requirements of said Appendix D have been satisfied; and
  - I. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40 and 70, including 10 CFR Section 30.33, 40.32, 70.23 and 70.31.
2. Facility Operating License No. DPR-60 is hereby issued to read as follows:
- A. This license applies to the Prairie Island Nuclear Generating Plant, Unit 2, a pressurized water nuclear reactor and associated equipment (the facility), owned by the Northern States Power Company<sup>1</sup> (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 38) 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 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.
    - (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;

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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 license, as amended, was amended effective this date to reflect the Commission's consent per 10 CFR Part 50, Section 50.80 to the license transfer approved by Order dated May 12, 2000.

- (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 purposes of volume reduction and decontamination.

C. This amended 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 1650 megawatts thermal.

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. \_\_\_\_\_, are hereby incorporated in the 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.

Unit 2

Amendment No.

(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. , 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

## 5.0 ADMINISTRATIVE CONTROLS

5.3 Plant Staff Qualifications

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- 5.3.1 Each member of the plant staff shall meet or exceed the minimum qualifications of Regulatory Guide 1.8, Revision 1, September 1975 except for (1) the operations manager who shall meet the requirements of ANSI N18.1-1971, except that NRC license requirements are as specified in TS 5.2.2.e, and (2) the education and experience eligibility requirements for operator license applicants, and changes thereto, shall be those previously reviewed and approved by the NRC, specifically those referenced in NMC\* letter dated March 19, 2003.
- 5.3.2 For the purpose of 10 CFR 55.4, a licensed senior reactor operator (SRO) and a licensed reactor operator (RO) are those individuals who, in addition to meeting the requirements of TS 5.3.1, perform the functions described in 10 CFR 50.54(m).
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\* NMC is maintained as historical information

APPENDIX B

ADDITIONAL CONDITIONS

FACILITY OPERATING LICENSE NO. DPR-42

Northern States Power Company (NSPM) shall comply with the following conditions on the schedules noted below:

<u>Amendment Number</u>	<u>Additional Condition</u>	<u>Implementation Date</u>
128	1. NSPM will provide a licensed operator in the control room on an interim basis for the dedicated purpose of identifying an earthquake which results in a decreasing safeguards cooling water bay level. This operator will be in addition to the normal NSPM administrative control room staffing requirements and will be provided until License Condition 2 is satisfied.	Prior to Unit 2 entering Mode 2  Completed – See Amendment No. 140
128	2. NSPM will submit dynamic finite element analyses of the intake canal banks by July 1, 1997 for NRC review. By December 31, 1998, NSPM will complete, as required, additional analyses or physical modifications which provide the basis for extending the time for operator post-seismic cooling water load management and eliminating the dedicated operator specified in License Condition 1.	July 1, 1997, and December 31, 1998, as stated in Condition 2.  Completed – See Amendment No. 140
128	3. Based on the results of License Condition 2, NSPM will revise the Updated Safety Analysis Report to incorporate the changes into the plant design bases. These changes will be included in the next scheduled revision of the Updated Safety Analysis Report following completion of License Condition 2 activities.	At the next USAR update following completion of Condition 2, but no later than June 1, 1999.
130	4. Prairie Island will assure that heavy loads do not present a potential for damaging irradiated fuel through use of: 1) a single-failure-proof crane with rigging and procedures which implement Prairie Island commitments to NUREG-0612; or 2) spent fuel pool covers with their implementing plant procedures for installation and use.	This is effective immediately upon issuance of the amendment.
133	5. NSPM will assure that during the implementation of steam generator repairs utilizing the voltage-based repair criteria, the total calculated primary to secondary side leakage from the faulted steam generator, under main steam line break conditions (outside containment and upstream of the main steam isolation valves), will not exceed 1.42 gallons per minute (based on a reactor coolant system temperature of 578 °F).	This is effective immediately upon issuance of the amendment

APPENDIX BADDITIONAL CONDITIONSFACILITY OPERATING LICENSE NO. DPR-60

Northern States Power Company (NSPM) shall comply with the following conditions on the schedules noted below:

<u>Amendment Number</u>	<u>Additional Condition</u>	<u>Implementation Date</u>
120	1. NSPM will provide a licensed operator in the control room on an interim basis for the dedicated purpose of identifying an earthquake which results in a decreasing safeguards cooling water bay level. This operator will be in addition to the normal NSPM administrative control room staffing requirements and will be provided until License Condition 2 is satisfied.	Prior to Unit 2 entering Mode 2  Completed – See Amendment No. 131
120	2. NSPM will submit dynamic finite element analyses of the intake canal banks by July 1, 1997 for NRC review. By December 31, 1998, NSPM will complete, as required, additional analyses or physical modifications which provide the basis for extending the time for operator post-seismic cooling water load management and eliminating the dedicated operator specified in License Condition 1.	July 1, 1997, and December 31, 1998, as stated in Condition 2.  Completed – See Amendment No. 131.
120	3. Based on the results of License Condition 2, NSPM will revise the Updated Safety Analysis Report to incorporate the changes into the plant design bases. These changes will be included in the next scheduled revision of the Updated Safety Analysis Report following completion of License Condition 2 activities.	At the next USAR update following completion of Condition 2, but no later than June 1, 1999.
122	4. Prairie Island will assure that heavy loads do not present a potential for damaging irradiated fuel through use of: 1) a single-failure-proof crane with rigging and procedures which implement Prairie Island commitments to NUREG-0612; or 2) spent fuel pool covers with their implementing plant procedures for installation and use.	This is effective immediately upon issuance of the amendment.
125	5. NSPM will assure that during the implementation of steam generator repairs utilizing the voltage-based repair criteria, the total calculated primary to secondary side leakage from the faulted steam generator, under main steam line break conditions (outside containment and upstream of the main steam isolation valves), will not exceed 1.42 gallons per minute (based on a reactor coolant system temperature of 578°F).	This is effective immediately upon issuance of the amendment.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

NORTHERN STATES POWER COMPANY

DOCKET NO. 72-10

PRAIRIE ISLAND INDEPENDENT SPENT FUEL STORAGE INSTALLATION

AMENDMENT TO MATERIALS LICENSE NO. SNM-2506

Amendment No. 6  
License No. SNM-2506

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The amendment application dated April 16, 2008, as supplemented by letter on August 6, 2008, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I;
  - B. The Prairie Island Independent Spent Fuel Storage Installation will continue to operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance that (i) the activities authorized by this amendment can be conducted without endangering public health and safety, and (ii) 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 public health and safety; 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, the license is amended by the enclosed changes to Materials License No. SNM-2506, indicated by margin notations.
3. This license amendment is effective as of the date of its issuance.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Eric J. Benner, Chief  
Licensing Branch  
Division of Spent Fuel Storage and Transportation  
Office of Nuclear Material Safety  
and Safeguards

Enclosure: Amended License

Date of Issuance: September 22, 2008

### LICENSE FOR INDEPENDENT STORAGE OF SPENT NUCLEAR FUEL AND HIGH-LEVEL RADIOACTIVE WASTE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter 1, Part 72, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, and possess the power reactor spent fuel and other radioactive materials associated with spent fuel storage designated below; to use such material for the purpose(s) and at the place(s) designated below; and to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified herein.

<b>Licensee</b>	
1. Northern States Power Company, a Minnesota corporation (NSPM) <sup>1</sup>	3. License No. SNM-2506  Amendment No. 6
2. 414 Nicollet Mall Minneapolis, Minnesota, 55401-1927	4. Expiration Date October 31, 2013  5. Docket or Reference No. 72-10

6. Byproduct, Source, and/or Special Nuclear Material	7. Chemical or Physical Form	8. Maximum Amount That Licensee May Possess at Any One Time Under This License
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A. Spent fuel assemblies from Prairie Island Nuclear Station Units 1 and 2 reactors, using natural water for cooling and enriched not greater than 3.85 percent U-235, and associated radioactive materials related to receipt, storage and transfer of the fuel assemblies.	A. As UO <sub>2</sub> clad with zirconium or zirconium alloys	A. 715.29 TeU of spent fuel assemblies
B. Irradiated fuel assembly inserts from the Prairie Island Nuclear Station Units 1 and 2 reactor. An insert may be a burnable poison rod assembly (BPRA) or a thimble plug device (TPD).	B. SS 304 structure, Inconel 718 spring, and borated pyrex glass.	B. One BPRA or TPD per spent fuel assembly.

<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 license, as amended, was amended to reflect the Commission's consent per 10 CFR Part 72, Section 72.50, to the license transfer approved by order dated May 12, 2000.

**LICENSE FOR INDEPENDENT STORAGE OF SPENT NUCLEAR  
FUEL AND HIGH-LEVEL RADIOACTIVE WASTE  
SUPPLEMENTARY SHEET**

9. Authorized Use: For use in accordance with statements, representations, and the conditions of the Technical Specifications and Safety Analysis Report dated August 31, 1990, and supplements dated October 29, 1990; April 2, June 5, October 9 and 31, November 15, December 11, 20, and 23, 1991; January 17, February 6, 10, and 12, March 2 and 5, April 3, 22, and 23, July 10, August 12, 13, and 14, 1992; October 2, 1995; August 31, October 29 and November 24, 1999; and February 2, March 14 and October 16, 2000; February 12, 2001; April 16 and August 8, 2008.

The material identified in 6 and 7 above is authorized for receipt, possession, storage, and transfer.

10. Authorized Place of Use: The licensed material is to be received, possessed, transferred, and stored at the Prairie Island ISFSI located on the Prairie Island Nuclear Generating Plant site in Goodhue County, Minnesota.
11. This site is described in Chapter 2 of the Technical Specifications and Safety Analysis Report (TS/SAR) for the Prairie Island ISFSI.
12. The Technical Specifications contained in Appendix A attached hereto are incorporated into the license. NSPM shall operate the installation in accordance with the Technical Specifications in Appendix A.
13. NSPM shall fully implement and maintain in effect all provisions of the ISFSI physical security, guard training and qualification, and safeguards contingency plans previously approved by the Commission and all amendments made pursuant to the authority of 10 CFR 72.56, 72.44(e), and 72.186. The plans, which contain safeguards information protected under 10 CFR 73.21, are entitled: "Prairie Island Nuclear Generating Plant Independent Spent Fuel Storage Installation Physical Security Plan," Revision 0, submitted by letter dated March 10, 1992; "Prairie Island Nuclear Generating Plant Independent Spent Fuel Storage Installation Security Force Training and Qualification Plan," Revision 0, submitted by letter dated March 10, 1992; and "Prairie Island Nuclear Generating Plant Independent Spent Fuel Storage Installation Safeguards Contingency Plan," Revision 0, submitted by letter dated March 10, 1992.
14. The Technical Specifications for Environmental Protection contained in Appendix A attached hereto are incorporated into the license.

Specifications required pursuant to 10 CFR 72.44(d), stating limits on the release of radioactive materials for compliance with limits of 10 CFR Part 20 and "as low as is reasonably achievable objective" for effluents are not applicable. TN-40 cask external surface contamination within the limits of Technical Specification 3.4.1 ensures that the offsite dose will be inconsequential. In addition, there are no normal or off-normal releases or effluents expected from the double-sealed storage casks of the ISFSI.

Specifications required pursuant to 10 CFR 72.44(d)(1), for operating procedures, for control of effluents, and for the maintenance and use of equipment in radioactive waste treatment systems, to meet the requirements of 10 CFR 72.104 are not applicable. There are, by the design of the sealed storage casks at the ISFSI, no effluent releases. Also, cask loading and unloading operations and waste treatment will occur at the Prairie Island Nuclear Generating Plant, under the specifications of its operating licenses.

15. No spent nuclear fuel shall be allowed to be loaded until such time as the following preoperational license conditions are satisfied:
- A A training exercise (Dry Run) of all TN-40 cask loading and handling activities shall be held, which shall include, but not be limited to, those listed, and which need not be performed in the order listed:

**LICENSE FOR INDEPENDENT STORAGE OF SPENT NUCLEAR FUEL AND HIGH-LEVEL RADIOACTIVE WASTE SUPPLEMENTARY SHEET**

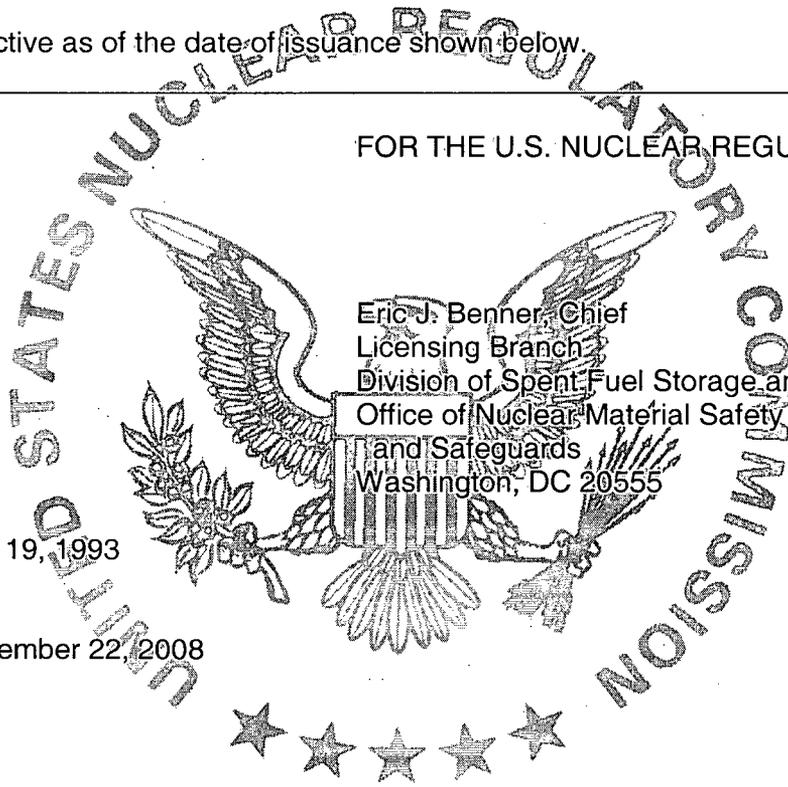
- a. Moving cask in and out of spent fuel pool area
  - b. Loading fuel assembly (using dummy assembly)
  - c. Cask drying, sealing, and cover gas backfilling operations
  - d. Moving cask to, and placing it on, the storage pad
  - e. Returning the cask to the auxiliary building
  - f. Unloading the cask
  - g. Decontaminating the cask
  - h. All dry-run activities shall be done using written procedures
  - i. The activities listed above shall be performed or modified and performed to show that each activity can be successfully executed before actual fuel loading.
- B The Prairie Island Nuclear Generating Plant Emergency Plan shall be reviewed and modified, as required, to include the ISFSI.
- C A training module shall be developed for the Prairie Island Nuclear Generating Plant Training Program, establishing an ISFSI Training and Certification Program that will include the following:
- a. TN-40 Cask Design (overview)
  - b. ISFSI Facility Design (overview)
  - c. ISFSI Safety Analysis (overview)
  - d. Fuel loading and cask handling procedures and off-normal procedures
  - e. ISFSI License (overview)
- D The Prairie Island Nuclear Generating Plant Radiation Protection Procedures shall be reviewed and modified, as required, to include the ISFSI.
- E The Prairie Island Nuclear Generating Plant Administrative Procedures shall be reviewed and modified, as required, to include the ISFSI.
- F A procedure shall be developed and implemented for the documentation of the characterizations performed to select spent fuel to be stored in the casks. Such procedure shall include independent verification of fuel assembly selection by an individual other than the original individual making the selection.
- G A procedure shall be developed and implemented for two independent determinations (two samples analyzed by different individuals) of the boron concentration in the water used to fill the cask cavity for fuel loading and unloading activities.

**LICENSE FOR INDEPENDENT STORAGE OF SPENT NUCLEAR  
FUEL AND HIGH-LEVEL RADIOACTIVE WASTE  
SUPPLEMENTARY SHEET**

H Written procedures shall be implemented to describe actions to be taken during operation, off-normal, and emergency conditions.

- 16. The design, construction, and operation of the ISFSI shall be accomplished in accordance with the U.S. Nuclear Regulatory Commission Regulations specified in Title 10 of the U.S. Code of Federal Regulations. All commitments to the applicable NRC regulatory guides and to engineering and construction codes shall be carried out.
- 17. Fuel and cask movement and handling activities that are to be performed in the Prairie Island Nuclear Generating Plant Auxiliary Building will be governed by the requirements of the Prairie Island Nuclear Generating Plant Facility Operating Licenses (DRP-42 and -60) and associated Technical Specifications.
- 18. This license is effective as of the date of issuance shown below.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION



Eric J. Benner, Chief  
Licensing Branch  
Division of Spent Fuel Storage and Transportation  
Office of Nuclear Material Safety  
and Safeguards  
Washington, DC 20555

Date of Issuance: October 19, 1993

As amended by  
Amendment 6 dated: September 22, 2008

ATTACHMENT TO LICENSE AMENDMENT NO. 6

TO MATERIALS LICENSE NO. SNM-2506

DOCKET NO. 72-10

Replace the following page of Appendix A, "Technical Specifications," with the attached revised page. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

REMOVE

6-1

INSERT

6-1

## 6.0 ADMINISTRATIVE CONTROLS

### 6.1 GENERAL

The Prairie Island ISFSI is located on the Prairie Island Nuclear Generating Plant site and will be managed and operated by Northern States Power Company, a Minnesota corporation (NSPM) staff. The administrative controls shall be in accordance with the requirements of the Prairie Island Nuclear Generating Plant Facility Operating Licenses (DPR-42 and -60) and associated Technical Specifications, as appropriate.

### 6.2 ENVIRONMENTAL MONITORING PROGRAM

The licensee shall include the Prairie Island ISFSI in the environmental monitoring program for the Prairie Island Nuclear Generating Plant. An environmental monitoring program is required pursuant to 10 CFR 72.44(d)(2). The licensee shall include the ISFSI in the environmental monitoring report for the Prairie Island Nuclear Generating Plant, and a copy shall be sent to the Director, Office of Nuclear Material Safety and Safeguards.

### 6.3 ANNUAL ENVIRONMENTAL REPORT

An annual report, as required by 10 CFR 72.44(d)(3), shall be submitted to the NRC Region III, Office, with a copy to the Director, Office of Nuclear Material Safety and Safeguards, within 60 days after January 1 of each year. This report should specify the quantity of each of the principal radionuclides released to the environment in liquid and in gaseous effluents during the previous year of operation and such other information as may be required by the Commission to estimate maximum potential radiation dose commitment to the public resulting from effluent release.