

February 17, 2000

Template
NRR-058

Mr. Michael D. Wadley, President
NSP Nuclear Generation
Northern States Power Company
414 Nicollet Mall
Minneapolis, MN 55401

SUBJECT: PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNITS 1 AND 2 -
ISSUANCE OF AMENDMENTS RE: SPENT FUEL POOL SPECIAL
VENTILATION SYSTEM TECHNICAL SPECIFICATIONS (TAC NOS. MA1678
AND MA1679)

Dear Mr. Anderson:

The Commission has issued the enclosed Amendment No. 147 to Facility Operating License No. DPR-42 and Amendment No. 138 to Facility Operating License No. DPR-60 for the Prairie Island Nuclear Generating Plant, Units 1 and 2, respectively. The amendments consist of changes to the Technical Specifications in response to your application dated March 2, 1998, as supplemented January 21, 2000.

The amendments change the second paragraph of TS 3.8.D, "Spent Fuel Pool Special Ventilation System," to clarify restrictions on movement of loads in the spent fuel pool enclosure with one train of spent fuel pool special ventilation system inoperable.

A copy of our related safety evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,
/RA/
Tae Kim, Senior Project Manager, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-282 and 50-306

- Enclosures: 1. Amendment No. 147 to DPR-42
- 2. Amendment No. 138 to DPR-60
- 3. Safety Evaluation

cc w/encl: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

February 17, 2000

Mr. Michael D. Wadley, President
NSP Nuclear Generation
Northern States Power Company
414 Nicollet Mall
Minneapolis, MN 55401

SUBJECT: PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNITS 1 AND 2 -
ISSUANCE OF AMENDMENTS RE: SPENT FUEL POOL SPECIAL
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The amendments change the second paragraph of TS 3.8.D, "Spent Fuel Pool Special Ventilation System," to clarify restrictions on movement of loads in the spent fuel pool enclosure with one train of spent fuel pool special ventilation system inoperable.

A copy of our related safety evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

Tae Kim, Senior Project Manager, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-282 and 50-306

Enclosures: 1. Amendment No. 147 to DPR-42
2. Amendment No. 138 to DPR-60
3. Safety Evaluation

cc w/encl: See next page

Prairie Island Nuclear Generating Plant,
Units 1 and 2

cc:

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Northern States Power Company
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Resident Inspector's Office
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Mr. Stephen Bloom, Administrator
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St. Paul, MN 55101-2145

Site Licensing
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Northern States Power Company
1717 Wakonade Drive East
Welch, MN 55089

Tribal Council
Prairie Island Indian Community
ATTN: Environmental Department
5636 Sturgeon Lake Road
Welch, MN 55089

Site General Manager
Prairie Island Nuclear Generating Plant
Northern States Power Company
1717 Wakonade Drive East
Welch, MN 55089

January 2000



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. 147
License No. DPR-42

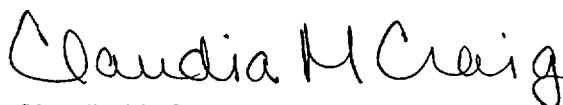
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Northern States Power Company (the licensee) dated March 2, 1998, and January 21, 2000, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and 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 by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-42 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 147 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of its issuance and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Claudia M. Craig, Chief, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: February 17, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 147

FACILITY OPERATING LICENSE NO. DPR-42

DOCKET NO. 50-282

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE

3.8-4

INSERT

3.8-4

3.8.C. Small Spent Fuel Pool Restrictions

No more than 45 recently discharged assemblies shall be located in the small pool (pool No. 1).

D. Spent Fuel Pool Special Ventilation System

1. Both trains of the Spent Fuel Pool Special Ventilation System shall be OPERABLE during movement of irradiated fuel assemblies in the spent fuel pool enclosure (except as specified in 3.8.D.2 and 3.8.D.3 below).
2. With one train of the Spent Fuel Pool Special Ventilation System inoperable, the movement of irradiated fuel assemblies in the spent fuel enclosure is permissible during the following 7 days, provided the redundant train is demonstrated OPERABLE prior to proceeding with the movements.
3. With both trains of the Spent Fuel Pool Special Ventilation System inoperable, suspend movement of irradiated fuel assemblies in the spent fuel pool enclosure.
4. The provisions of specification 3.0.C are not applicable.

E. Spent Fuel Pool Storage

1. Fuel Assembly Storage

- a. The combination of initial enrichment, burnup and decay time of each spent fuel assembly stored in the spent fuel pool shall be within the unrestricted range of Figures TS.3.8-1 or TS.3.8-2, as applicable, or fuel assemblies shall be stored in accordance with Specification 5.6.A.1.e.
- b. If the requirements of 3.8.E.1.a are not met, immediately initiate action to move any noncomplying fuel assembly to an acceptable location.
- c. The provisions of Specification 3.0.C are not applicable.

2. Spent Fuel Pool Boron Concentration

- a. The spent fuel pool boron concentration shall be $\geq 1,800$ ppm when fuel assemblies are stored in the spent fuel pool.
- b. If the spent fuel pool boron concentration is not within limit, then immediately:
 1. Suspend movement of fuel assemblies in the spent fuel pool, and
 2. Initiate action to restore spent fuel pool boron concentration to within limit.
- c. The provisions of Specification 3.0.C are not applicable.



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. 138
License No. DPR-60

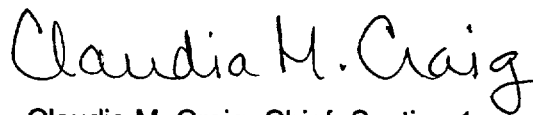
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Northern States Power Company (the licensee) dated March 2, 1998, and January 21, 2000, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and 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 by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-60 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 138 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Claudia M. Craig, Chief, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: February 17, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 138

FACILITY OPERATING LICENSE NO. DPR-60

DOCKET NO. 50-306

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE

3.8-4

INSERT

3.8-4

3.8.C. Small Spent Fuel Pool Restrictions

No more than 45 recently discharged assemblies shall be located in the small pool (pool No. 1).

D. Spent Fuel Pool Special Ventilation System

1. Both trains of the Spent Fuel Pool Special Ventilation System shall be OPERABLE during movement of irradiated fuel assemblies in the spent fuel pool enclosure (except as specified in 3.8.D.2 and 3.8.D.3 below).
2. With one train of the Spent Fuel Pool Special Ventilation System inoperable, the movement of irradiated fuel assemblies in the spent fuel enclosure is permissible during the following 7 days, provided the redundant train is demonstrated OPERABLE prior to proceeding with the movements.
3. With both trains of the Spent Fuel Pool Special Ventilation System inoperable, suspend movement of irradiated fuel assemblies in the spent fuel pool enclosure.
4. The provisions of specification 3.0.C are not applicable.

E. Spent Fuel Pool Storage

1. Fuel Assembly Storage

- a. The combination of initial enrichment, burnup and decay time of each spent fuel assembly stored in the spent fuel pool shall be within the unrestricted range of Figures TS.3.8-1 or TS.3.8-2, as applicable, or fuel assemblies shall be stored in accordance with Specification 5.6.A.1.e.
- b. If the requirements of 3.8.E.1.a are not met, immediately initiate action to move any noncomplying fuel assembly to an acceptable location.
- c. The provisions of Specification 3.0.C are not applicable.

2. Spent Fuel Pool Boron Concentration

- a. The spent fuel pool boron concentration shall be $\geq 1,800$ ppm when fuel assemblies are stored in the spent fuel pool.
- b. If the spent fuel pool boron concentration is not within limit, then immediately:
 1. Suspend movement of fuel assemblies in the spent fuel pool, and
 2. Initiate action to restore spent fuel pool boron concentration to within limit.
- c. The provisions of Specification 3.0.C are not applicable.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 147

TO FACILITY OPERATING LICENSE NO. DPR-42

AND AMENDMENT NO. 138 TO FACILITY OPERATION LICENSE NO. DPR-60

NORTHERN STATES POWER COMPANY

PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNITS 1 AND 2

DOCKET NOS. 50-282 AND 50-306

1.0 INTRODUCTION

By application dated March 2, 1998, and January 21, 2000, Northern States Power Company (NSP or the licensee) requested changes to the Technical Specifications (TSs) for the Prairie Island Nuclear Generating Plant, Units 1 and 2. The proposed changes would revise the second paragraph of TS 3.8.D, "Spent Fuel Pool Special Ventilation System," to clarify restrictions on movement of loads in the spent fuel pool enclosure with one train of spent fuel pool special ventilation system inoperable. The January 21, 2000, supplemental letter provided clarifying information that was within the scope of the original *Federal Register* notice and did not change the initial proposed no significant hazards consideration determination.

2.0 EVALUATION

On September 15, 1997, the NRC issued Amendment Nos. 130 and 122 for Units 1 and 2, respectively, approving proposed changes to TS 3.8.D, based on the licensee's application dated May 7, 1997, as supplemented May 30, July 29, and September 12, 1997. Amendment Nos. 130 and 122 changed TS limitations on crane operations in the spent fuel pool enclosure relating to spent fuel pool special ventilation system operability. These changes were proposed by the licensee to allow movement of loads over spent fuel stored in the spent fuel pool enclosure with the spent fuel pool special ventilation system inoperable. However, Amendments Nos. 130 and 122 approved changes to TS 3.8.D.1 and TS 3.8.D.3, as proposed, but denied proposed changes to TS 3.8.D.2.

In its safety evaluation supporting Amendment Nos. 130 and 122, the staff stated the following as the basis for denying approval of proposed changes to TS 3.8.D.2:

Current TS 3.8.D.2, Spent Fuel Pool Special Ventilation System states:

With one train of the Spent Fuel Pool Special Ventilation System inoperable, fuel handling operations and crane operations with loads over spent fuel (inside the spent fuel pool enclosure) are permissible during the following 7 days, provided the redundant train is demonstrated OPERABLE prior to proceeding with those operations.

Proposed TS 3.8.D.2, Spent Fuel Pool Special Ventilation System states:

If one train of the Spent Fuel Pool Special Ventilation System is inoperable during movement of irradiated fuel assemblies in the spent fuel pool enclosure, restore the train to OPERABLE status within 7 days. If the inoperable train is not restored within 7 days, place the OPERABLE Spent Fuel Pool Special Ventilation System in operation or suspend movement of irradiated fuel assemblies in the spent fuel pool enclosure.

The basis for denial:

The NRC staff does not agree with the licensee's claim that the proposed change provides an approach consistent with the current TS such that if one train of spent fuel pool special ventilation system is inoperable the proposed TS would allow movement of irradiated fuel to continue for 7 days. With one train of SFPSVS [spent fuel pool special ventilation system] inoperable, the current TS does permit fuel handling operations and crane operations with loads over spent fuel (inside the spent fuel pool enclosure) for 7 days, but it also requires the redundant train to be demonstrated OPERABLE prior to proceeding with these operations. The proposed change to TS 3.8.D.2 is largely based upon a probabilistic argument that has not been quantified by the licensee. The staff believes that it does not meet the intent of the current TS, in that it allows one train to be inoperable for an indefinite period, thereby reducing the existing margin of safety. Therefore, this proposed change is denied.

3.0 EVALUATION

In its application dated March 2, 1998, the licensee resubmitted the proposed change to TS 3.8.D.2, which states:

With one train of the Spent Fuel Pool Special Ventilation System inoperable, the movement of irradiated fuel assemblies in the spent fuel pool enclosure is permissible during the following 7 days, provided the redundant train is demonstrated OPERABLE prior to proceeding with the movements.

The staff finds the proposed change to TS 3.8.D.2 acceptable since it clarifies the restrictions associated with moving heavy loads (i.e., movement of spent fuel, crane operation, etc.) inside the spent fuel pool enclosure with one train of SFPSVS inoperable, while maintaining the current requirements. The proposed change continues to allow movement of irradiated fuel assemblies in the spent fuel pool enclosure provided that the redundant SFPSVS train is

demonstrated operable. The proposed change does delete reference to "crane operations," thereby removing restrictions on crane operations in the spent fuel pool enclosure with one train of the SFPSVS inoperable. This change is bounded by TS 3.8.D.3, which allows crane operation in the spent fuel pool enclosure with both trains of SFPSVS inoperable.

In the safety evaluation issued with Amendment Nos. 130 and 122, the staff provided, in part, the following justifications for allowing crane operation with both trains of SFPSVS inoperable:

...SFPSVS operability is not required when the auxiliary building crane is used to move loads into the spent fuel pool enclosure due to the need to open the enclosure roof slot doors;...(c) states that the movement of heavy loads within the spent fuel pool enclosure is governed by the Prairie Island USAR [Updated Safety Analysis Report], NSP commitments NUREG-0612, ["Control of Heavy Loads at Nuclear Power Plants"], and plant implementing procedures in combination with physical upgrades of the auxiliary building crane and spent fuel pool bridge crane west hoist to assure that radiological releases due to load movements will not occur. Thus, SFPSVS operability at all times is inconsistent with the system design.

The staff concludes that the above justifications are valid for allowing crane operation with one train of SFPSVS inoperable. The staff also notes that Amendments Nos. 130 and 122 have imposed, among others, the following license condition, which remains in effect, regarding movement of heavy loads:

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.

The licensee's supplemental letter dated January 21, 2000, provided correction to a typographical error in Exhibit C of the March 2, 1998, application.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Minnesota State official was notified of the proposed issuance of the amendments. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration and there has been no public comment on such finding (64 FR 27763). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) 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: T. Kim

Date: February 17, 2000