

August 28, 1986

Docket Nos. 50-282
and 306

Mr. D. M. Musolf, Manager
Nuclear Support Services
Northern States Power Company
414 Nicollet Mall
Midland Square, 4th Floor
Minneapolis, Minnesota 55401

Dear Mr. Musolf:

The Commission has issued the enclosed Amendment Nos. 77 and 70 to Facility Operating License Nos. DPR-42 and DPR-60 for the Prairie Island Nuclear Generating Plant, Unit Nos. 1 and 2, in response to your application dated June 6, 1986. The amendments were requested in response to Generic Letters (GLs) 82-28 and 83-37 and NUREG-0737, Item II.F.2 and supplemented by our safety evaluation report of May 8, 1986. The enclosed amendments revise the Technical Specifications by placing additional requirements in sections 3.15 and 4.1 as related to the inadequate core cooling instrumentation system (ICCI) associated with the subcooling margin monitors, core-exit thermocouples, and the reactor vessel level instrumentation systems (RVLIS).

We consider the review of the ICCI system complete except for a possible impact occurring from our review of the procedure generation package, the acceptance of the detailed control room design review (DCRDR) (GL 82-33), and the upgrading of the core-exit thermocouples. However, you have adequately responded to GL 82-28 and NUREG-0737, Item II.F.2, thus these items are considered complete for the Prairie Island Nuclear Generating Plant Unit Nos. 1 and 2.

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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,

Dominic C. DiIanni

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

Enclosures:

- 1. Amendment No. 77 to DPR-42
- 2. Amendment No. 70 to DPR-60
- 3. Safety Evaluation

cc's w/enclosures:
See Next Page

APH no legal objection

Office: LA/PAD#1
Surname: PShuttleworth *mlh*
Date: *08/14/86*

PM/PAD#1
JCD
08/15/86

OGC
QELD
~~07/186~~
8/20/86

RFD for
PD/PAD#1
GLear
07/20/86

Mr. D. M. Musolf
Northern States Power Company

Prairie Island Nuclear Generating
Plant

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LFMB (w/cy of TAC 45162 and 45163 w/Amd No. & date issued)



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. 77
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 June 6, 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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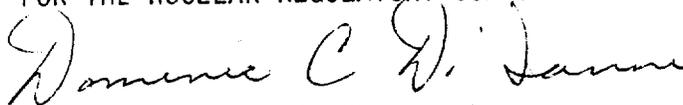
2. Accordingly, the licenses are amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-42 are hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No.77 , 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.

FOR THE NUCLEAR REGULATORY COMMISSION



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

Attachment:
Changes to the Technical
Specifications

Date of Issuance: August 28, 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. 70
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 June 6, 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, the licenses are 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 are hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 70, 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.

FOR THE NUCLEAR REGULATORY COMMISSION



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

Attachment:
Changes to the Technical
Specifications

Date of Issuance: August 28, 1986

ATTACHMENT TO LICENSE AMENDMENT NOS. 77 AND 70
TO FACILITY OPERATING LICENSE NOS. DPR-42 AND DPR-60
DOCKET NOS. 50-282 AND 50-306

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages as indicated. The revised pages are identified by amendment number and contain vertical lines indicating the area of changes.

Remove

TS-iii
TS.3.15-1
TS.3.15-2
Table TS.3.15-1
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Table TS.4.1-1 (Page 4 of 5)

Insert

TS-iii
TS.3.15-1
TS.3.15-2
Table TS.3.15-1
Table TS.3.15-3
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	A. Containment System Integrity	TS.3.6-1
	B. Containment Internal Pressure	TS.3.6-3
	C. Containment and Shield Building Air Temperature	TS.3.6-3
	D. Containment Shell Temperature	TS.3.6-3
	E. Emergency Air Treatment Systems	TS.3.6-3A
	F. Electric Hydrogen Recombiners	TS.3.6-3A
3.7	Auxiliary Electrical Systems	TS.3.7-1
3.8	Refueling and Fuel Handling	TS.3.8-1
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3.11	Core Surveillance Instrumentation	TS.3.11-1
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	F. Yard Hydrant Hose Houses	TS.3.14-4
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3.15	Event Monitoring Instrumentation	TS.3.15-1
	A. Process Monitors	TS.3.15-1
	B. Radiation Monitors	TS.3.15-1
	C. Reactor Vessel Level Instrumentation	TS.3.15-2

3.15 EVENT MONITORING INSTRUMENTATION

Applicability

Applies to plant instrumentation which does not perform a protective function, but which provides information to monitor and assess important parameters during and following an accident.

Objectives

To ensure that sufficient information is available to operators to determine the effects of and determine the course of an accident to the extent required to carry out required manual actions.

Specification

A. Process Monitors

1. The event monitoring instrumentation channels specified in Table TS.3.15-1 shall be Operable.
2. With the number of Operable event monitoring instrumentation channels less than the Required Total Number of Channels shown on Table TS.3.15-1, either restore the inoperable channels to Operable status within seven days, or be in at least Hot Shutdown within the next 12 hours.
3. With the number of Operable event monitoring instrumentation channels less than the Minimum Channels Operable requirements of Table TS.3.15-1, either restore the minimum number of channels to Operable status within 48 hours or be in at least Hot Shutdown within the next 12 hours.

B. Radiation Monitors

1. The event monitoring instrumentation channels specified in Table TS.3.15-2 shall be Operable.
2. With the number of Operable event monitoring instrumentation channels less than the Required Total Number of Channels shown on Table TS.3.15-2, either restore the inoperable channels to Operable status within seven days, or prepare and submit a special report to the Commission within 30 days outlining the action taken, the cause of the inoperability, the plans and the schedule for restoring the system to Operable status.
3. With the number of Operable event monitoring instrumentation channels less than the Minimum Channels Operable requirement of Table TS.3.15-2, initiate the preplanned alternate method of monitoring the appropriate parameters in addition to submitting the report required in (2) above.

C. Specification - Reactor Vessel Level Instrumentation

1. The reactor vessel level instrumentation channels specified in Table TS.3.15-3 shall be operable
2. With the number of Operable reactor vessel level instrumentation channels less than the Required Total Number of Channels shown on Table TS.3.15-3, either restore the inoperable channels to Operable status within fourteen days, or be in at least Hot Shutdown within the next 12 hours.
3. With the number of Operable reactor vessel level instrumentation channels less than the Minimum Channels Operable requirements of Table TS.3.15-3, either restore the minimum number of channels to Operable status within 48 hours or be in at least Hot Shutdown within the next 12 hours.

Basis

The operability of the event monitoring instrumentation ensures that sufficient information is available on selected plant parameters to monitor and assess these variables during and following an accident. This capability is consistent with the recommendations of NUREG-0578, "TMI-2 Lessons Learned Task Force Status Report and Short Term Recommendations."

Core exit thermocouple readings necessary to meet the requirements of Specification 3.15.A are available from the Plant Process Computer, the Control Room Core Exit Thermocouple Display or if no other readout is available, from test equipment readings from the Core Exit Thermocouple Junction Boxes.

TABLE TS.3.15-1
EVENT MONITORING INSTRUMENTATION - PROCESS & CONTAINMENT

<u>Instrument</u>	<u>Required Total No. of Channels</u>	<u>Minimum Channels Operable</u>
1. Pressurizer Water Level	2	1
2. Auxiliary Feedwater Flow to Steam Generators (One Channel Flow and One Channel Wide Range Level for Each Steam Generator)	2/steam gen	1/steam gen
3. Reactor Coolant System Subcooling Margin	2	1
4. Pressurizer Power Operated Relief Block Valve Position (One Common Channel Temperature, One Channel Limit Switch per Valve, and One Channel Acoustic Sensor per Valve*)	2/valve	1/valve
5. Pressurizer Power Operated Relief Block Valve Position (One Common Channel Temperature, One Channel Limit Switch per Valve, and One Channel Acoustic Sensor per Valve*)	2/valve	1/valve
6. Pressurizer Safety Valve Position (One Channel Temperature per Valve and Common Acoustic Sensor**)	2/valve	1/valve
7. a. Containment Water Level (wide range)	2	1
b. Containment Water Level (narrow range)	2	1
8. Containment Hydrogen Monitor (2 sensors per Channel)	2	1
9. Containment Pressure (wide range)	2	1
10. Core Exit Thermocouples	4/core quadrant	2/core quadrant

* - A common acoustic sensor provides backup position indication for each pressurizer power operated relief valve and its associated block valve.

** - The acoustic sensor channel is common to both valves. When operable, the acoustic sensor may be considered as an operable channel for each valve.

TABLE TS.3.15-3

EVENT MONITORING INSTRUMENTATION - REACTOR VESSEL LEVEL

<u>Instrument</u>	<u>Required Total No. of Channels</u>	<u>Minimum Channels Operable</u>
1. Reactor Vessel Level Instrumentation*	2	1

Unit No. 1 - Amendment No. 77
Unit No. 2 - Amendment No. 70

* Includes the full range and dynamic head range

TABLE TS.4.1-1 (Page 4 of 5)

MINIMUM FREQUENCIES FOR CHECKS, CALIBRATIONS AND
TEST OF INSTRUMENT CHANNELS

<u>Channel Description</u>	<u>Check</u>	<u>Calibrate</u>	<u>Functional Test</u>	<u>Response Test</u>	<u>Remarks</u>
26 d. Reactor Trip Bypass Breaker	NA	NA	M(1)	R(2)	1) Manually trip the undervoltage trip attachment remotely (i.e. from the protection system racks). 2) Automatically trip the undervoltage trip attachment
27. Turbine Overspeed Protection Trip Channel	NA	R	M	NA	
28. Deleted					
29. Deleted					
30. Deleted					
31. Seismic Monitors	R	R	NA	NA	
32. Coolant Flow - RTD Bypass Flowmeter	S	R	M	NA	
33. CRDM Cooling Shroud	S	NA	R	NA	FSAR page 3.2-56
34. Reactor Gap Exhaust Air Temperature	S	NA	R	NA	
35a. Post-Accident Monitoring Instruments	M	R	NA	NA	Includes all those in Table TS.3.15-1 (except for containment hydrogen monitors which are separately specified in this table)
b. Post-Accident Monitoring Radiation Instruments	D	R	M	NA	Includes all those in Table TS.3.15-2
c. Post-Accident Monitoring Reactor Vessel Level Instrumentation	M	R	NA	NA	Includes all those in Table TS.3.15-3
36. Steam Exclusion Actuation System	W	Y	M	NA	See FSAR Appendix I, Section I.14.6
37. Overpressure Mitigation System	NA	R	R	NA	Instrument Channels for PORV Control Including Overpressure Mitigation System

Table TS.4.1-1
(Page 4 of 5)
REV

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 77 AND 70

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 letter dated June 6, 1986, Northern States Power Company (NSP), the licensee, requested amendments to Facility Operating License Nos. DPR-42 and DPR-60 for the Prairie Island Nuclear Generating Plant Unit Nos. 1 and 2 (PINGP). The amendments would change the technical specifications by including the operability and the surveillance requirements associated with the instrumentation for detecting inadequate core cooling consisting of subcooling margin monitors, core-exit thermocouples, and the reactor vessel level instrumentation systems (RVLIS). Specifically, additional requirements would be placed in sections 3.15 (Table TS.3.15-1, TS.3.15-2, and Table TS.3.15-3) and 4.1 (Table TS.4.1-1) of the Prairie Island Technical Specifications. These additional requirements would restrict plant operation resulting from the malfunctions of these instrumentation components and would provide periodic testing to assure adequate operability of these components when called for to perform the intended safety function.

EVALUATION

In our Generic Letter (GL) 82-28 dated December 10, 1982, actions were identified requiring all licensees of Westinghouse operating reactors to install and to assure operability of instrumentation for detecting inadequate core cooling. In addition, our GL 83-37 dated November 1, 1983 identified NUREG-0737, Item II.F-2 related to the inadequate core cooling instrumentation (ICCI) and requested the licensee to apply the model technical specification covering ICCI to the Prairie Island technical specifications. The licensee provided letters dated June 18, October 22, 1985 and April 4, 1986 that addresses our concerns related to the design of these instruments and modifications to the model technical specification in order to satisfy the specific application for Prairie Island. By letter dated May 8, 1986, the NRC issued a safety evaluation dealing with the design modification of the ICCI and finding the model technical specification submitted by the licensee's letter dated April 4, 1986 acceptable. As discussed in our May 8, 1986 safety evaluation, deviations of the proposed model technical specification (of the April 4, 1986 submittal) from our standard model technical specifications were found

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acceptable. The proposed changes associated with this amendment request (by letter dated June 6, 1986) are essentially the same as those previously approved by our safety evaluation issued on May 8, 1986 except for minor editorial changes required to fit these revisions into the existing technical specifications. We have reviewed these minor editorial changes and agree with the licensee that they are necessary in order to fit the changes into the existing text of the specifications and that they in no way change the previously approved requirements appearing in the model technical specifications. On this basis, the proposed technical specifications related to the subcooling margin monitors, core-exit thermocouples and the reactor vessel level instrument are found acceptable.

ENVIRONMENTAL CONSIDERATION

These amendments involve a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The 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 published a proposed finding that these amendments involve no significant hazards consideration and there has been no public comment on such finding. Accordingly, these amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9).

These amendments also involve changes in recordkeeping, reporting or administrative procedures or requirements. Accordingly, with respect to these items, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(10). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of these amendments.

CONCLUSION

We have 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, 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. C. DiIanni

Date: August 28, 1986