Docket Nos. 50-282/306

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:

SUBJECT: CORRECTION TO AMENDMENTS ON GENERIC LETTERS 82-28 AND 83-37 AND

NUREG-0737, ITEM II.F.2

Re: Prairie Island Nuclear Generating Plant, Unit Nos. 1 and 2

On August 28, 1986, the Commission issued Amendment Nos. 77 and 70 to Facility Operating License Nos. DPR-42 and DPR-60 for Prairie Island Nuclear Generating Plant, Unit Nos. 1 and 2 relating to the subject technical specifications. The correct amendment numbers for these issuances are 78 and 71, respectively. Please replace the previously issued amendments with the enclosed corrected amendments.

We regret any inconvenience caused by this error.

Sincerely,

Dominic C. Dilanni, Project Manager

Project Directorate #1

15/

Division of PWR Licensing-A

Enclosures: As Stated

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Mr. D. M. Musolf Northern States Power Company

cc: Gerald Charnoff, Esq. Shaw, Pittman, Potts and Trowbridge 1800 M Street, NW Washington, DC 20036

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Mr. William Miller, Auditor Goodhue County Courthouse Red Wing, Minnesota 55066



# UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D. C. 20555

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. 78 and 71 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.

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,

8609180237 860911 PDR ADOCK 05000282 P PDR

Dominic C. Dilanni, Project Manager Project Directorate #1

Division of PWR Licensing-A

Enclosures:

1. Amendment No. 78 to DPR-42

2. Amendment No. 71 to DPR-60

3. Safety Evaluation

cc's w/enclosures:
See Next Page



# 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. 78 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 (1) 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-42 are hereby amended to read as follows:

# (2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 78, 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. Dilanni, 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

## MORTHERN STATES POWER COMPANY

DOCKET NO. 50-306

# PRAIRIE ISLAND NUCLEAR GENERATING PLANT UNIT NO. 2

# AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 71 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 (1) 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 CFP 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. 71, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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

FOR THE NUCLEAR REGULATORY COMMISSION

Dominic C. Dilanni, 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. 78 AND 71

# 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	<u>Insert</u>
TS-iii	TS-iii
TS.3.15-1	TS.3.15-1
TS.3.15-2	TS.3.15-2
Table TS.3.15-1	Table TS.3.15-1
	Table TS.3.15-3
Table TS.4.1-1 (Page 4 o	f 5) Table TS.4.1-1 (Page 4 of 5)

## TABLE OF CONTENTS

IS SECTION	TITLE	PAGE
3.5	Instrumentation System	TS.3.5-1
3.6	Containment System	TS.3.6-1
	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
	D. Spent Fuel Pool Special Ventilation System	TS.3.8-3
3.9	Radioactive Effluents	TS.3.9-1
	A. Liquid Effluents	TS.3.9-1
	B. Gaseous Effluents	TS.3.9-3
	C. Solid Radioactive Waste	TS.3.9-6
	D. Dose from All Uranium Fuel Cycle Sources	TS.3.9-7
	E. Radioactive Liquid Effluent Monitoring Instrumentation	TS.3.9-7
	F. Radioactive Gaseous Effluent Monitoring	TS.3.9-8
	Instrumentation	
3.10	Control Rod and Power Distribution Limits	TS.3.10-1
3.10	A. Shutdown Reactivity	TS.3.10-1
	B. Power Distribution Limits	TS.3.10-1
	C. Quadrant Power Tilt Limits	TS.3.10-4
	D. Rod Insertion Limits	TS.3.10-5
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	F. Inoperable Kod Position Indicator Channels	TS.3.10-6
	G. Inoperable Rod Limitations	TS.3.10-6
	H. Rod Drop Time	TS.3.10-7
	I. Monitor Inoperability Requirements	TS.3.10-7
	J. DNB Parameters	TS.3.10-8
3.11	Core Surveillance Instrumentation	TS.3.11-1
3.12	Snubbers	TS.3.12-1
3.13	Control Room Air Treatment System	TS.3.13-1
3.14	Fire Detection and Protection Systems	TS.3.14-!
	A. Fire Detection Instrumentation	TS.3.14-1
	B. Fire Suppression Water System	TS.3.14-1
	C. Spray and Sprinkler Systems	TS.3.14-2
	D. Carbon Dioxide System	TS.3.14-3
	E. Fire Hose Stations	TS.3.14-3
	F. Yard Hydrant Hose Houses	TS.3.14-4
	G. Penetration Fire Barriers	TS.3.14-4
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

	Turknumont	Required Total No.	Minimum Channels Operable	•
	Instrument	2.	t	
1.	Pressurizer Water Level		• /	
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	1
વ	Reactor Coolant System Subcooling Margin	2	1	ı
	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	1
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	l/valve	
6.	Pressurizer Safety Valve Position (One Channel Temperature per Valve and Common Acoustic Sensor**)	2/valve	1/valve	
Un: 7.	7. a. Containment Water Level (wide range)	2	1	
1.1. ( ) t t	b. Containment Water Level (narrow range)	2	1	
	. Containment Hydrogen Monitor (2 sensors per Channel)	2	1	
1 1		2.	1	ł
Amendment Amendment	. Containment Pressure (wide range) . Core Exit Thermocouples	4/core quadrant	2/core quadrant	
		the for each prossuris	er nower operated	

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

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

## EVENT MONITORING INSTRUMENTATION - REACTOR VESSEL LEVEL

	Instrument	Required Total No. of Channels	Minimum Channels Operable
ι.	Reactor Vessel Level Instrumentation*	2	1

Amendment Amendment

NO .

<sup>\*</sup> Includes the full range and dynamic head range

# MINIMUM FREQUENCIES FOR CHECKS, CALIBRATIONS AND TEST OF INSTRUMENT CHANNELS

		Channel Description	Check	<u>Calibrate</u>	Functional Test	Response Test	Remarks
	26 d.	Reactor Trip Bypass Breaker	NA	NA	M(1)	R(2)	<ol> <li>Manually trip the undervoltage trip attachment remotely (i.e. from the protection system racks).</li> <li>Automatically trip the undervoltage trip attachment</li> </ol>
٠	27.	Turbine Overspeed Protection Trip Channel	NA	R	M	ΝΛ	{
	28. 29. 30.	Deleted Deleted Deleted					
	31.	Seismic Monitors	R	R	NA	NA	
	32.	Coolant Flow - RTD Bypass Flowmeter	S	R	М	NΑ	
	33.	CRDM Cooling Shroud	S	NA	R	NA	FSAR page 3.2-56
Unj.t	34.	Reactor Gap Exhaust Air Temperature	S	NA	R	NA	
No	35a.	Post-Accident Monitoring Instruments	М	R	NΛ	NA	Includes all those in Table TS.3.15-1 (except for containment hydrogen monitors which are separately specified in this table)
Amendment	ь.	Post-Accident Monitoring Radiation Instruments	D	R	М	NA	Includes all those in Table TS.3.15-2
ment No.	с.	Post-Accident Monitoring Reactor Vessel Level Instrumentation	М	R	ΝΛ	NΛ	Includes all those in Table TS.3.15-3
	36.	Steam Exclusion Actuation System	W	Y	М	NA	See FSAR Appendix I, Section I.14.6
, 55, 59 <u>-67</u> , 6	37.	Overpressure Mitigation System	NΛ	R	R	NΛ	Instrument Channels for PORV Control Including Overpressure Mitigation System

Unit No. 1 - Amendment No. / \$5,89-\$1,62,£; Unit No. 2 - Amendment No. 49,53,55,57,£2



# UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D. C. 20555

# SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 78 AND 71

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

NORTHERN STATES POWER COMPANY

PRAIPIE 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

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. Dilanni

Date: August 28, 1986.