November 28, 1983

Docket No. 50-263

Mr. D. M. Musolf
Nuclear Support Services Department
Northern States Power Company
414 Nicollet Mall - 8th Floor
Minneapolis, Minnesota 55401

Dear Mr. Musolf:

The Commission has issued the enclosed Amendment No. 18 to Facility Operating License No. DPR-22 for the Monticello Nuclear Generating Plant. The amendment consists of changes to the Technical Specifications in response to your September 24, 1982 application, as supplemented by letter dated February 7, 1983.

The revisions to the Technical Specifications increase the allowable deviation in the trip setpoint of the temperature switches in the main steamline tunnel from 2 to 10°F.

Other changes requested in your September 24, 1982 submittal are still under staff review and will be addressed by separate Safety Evaluation and license amendment.

A copy of the related Safety Evaluation is also enclosed.

Sincerely,

Original signed by/

Helen Nicolaras, Project Manager
Operating Reactors Branch #2
Division of Licensing

Enclosures:
1. Amendment No. 18 to DPR-22
2. Safety Evaluation

cc w/enclosures:
See next page

DISTRIBUTION:	Docket File	NRC PDR	LPDR	ORB#2 Reading	DEisenhut
SNorris	HNicolaras	OELD	SECY	LJHarmon	EJordan
JTaylor	TBarnhart-4	WJones	DBrinkman	ACRS-10	OPA, C.Miles
RDiggs	NSIC	HDenton	Extra - 5		

DL:ORB#2	DL:ORB#2	DL:ORB#2	DL:AD:OR	OELD
SNorris	HNicolaras:pob	DVassallo	GLainas	L Bachmann
11/9/83	11/15/83	11/15/83	11/28/83	11/17/83

Mr. D. M. Musolf
Northern States Power Company
Monticello Nuclear Generating Plant

cc:

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

NORTHERN STATES POWER COMPANY

DOCKET NO. 50-263

MONTICELLO NUCLEAR GENERATING PLANT

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 18
License No. DPR-22

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Northern States Power Company (the licensee) dated September 24, 1982, as supplemented February 7, 1983, 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 requirements;

   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-22 is hereby amended to read as follows:

   2. Technical Specifications

      The Technical Specifications contained in Appendix A as revised through Amendment No. 18 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 the issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Domenic B. Vassallo, Chief
Operating Reactors Branch #2
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: November 28, 1983

ATTACHMENT TO LICENSE AMENDMENT NO. 18

FACILITY OPERATING LICENSE NO. DPR-22

DOCKET NO. 50-263

Replace the following pages of the Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change.

Remove	Insert
70	70

Table 3.2.7
Trip Functions And Deviations

	Trip Function	Deviation
Reactor Building Ventilation Isolation and Standby Gas Treatment System Initiation Specification 3.2.E.3 and Table 3.2.4	Ventilation Plenum Radiation Monitors	+0.2 Mr/Hr
	Refueling Floor Radiation Monitors	+5 Mr/Hr
	Low Reactor Water Level	-6 inches
	High Drywell Pressure	+ 1 psi
Primary Containment Isolation Functions Table 3.2.1	Low Low Water Level	-3 inches
	High Flow in Main Steam Line	+2 $
	High Temp. in Main Steam Line Tunnel	+10°F
	Low Pressure in Main Steam Line	-10 psi
	High Drywell Pressure	+1 psi
	Low Reactor Water Level	-6 inches
	HPCI High Steam Flow	+7,500 lb/hr.
	HPCI Steam Line Area High Temp.	+2°F
	RCIC High Steam Flow	+2250 lb/hr
	RCIC Steam Line Area High Temp	+2°F

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 18 TO FACILITY OPERATING

LICENSE NO. DPR-22

NORTHERN STATES POWER COMPANY

MONTICELLO NUCLEAR GENERATING PLANT

DOCKET NO. 50-263

1.0 Introduction

By letter dated September 24, 1982, Northern States Power Company (the licensee) proposed changes to the Technical Specifications (TS) of Facility Operating License No. DPR-22 for the Monticello Nuclear Generating Plant. The revisions to the Technical Specifications concern the temperature switches in the main steamline tunnel. The current Technical Specifications specify a trip setpoint of 200°F, with an allowable deviation of 2°F. The proposed changes would authorize an increase of the allowable deviation to 10°F.

Other changes requested in the September 24, 1982 submittal are still under staff review and will be addressed by separate Safety Evaluation and license amendment.

2.0 Background and Discussion

The main steamline tunnel provides a passage for the main steamlines between the reactor and the main turbine. When a steamline break inside the tunnel is detected, the main steamlines will automatically isolate. For small breaks, those on the order of five to ten gallons per minute (gpm), the temperature switches inside the tunnel provide the primary means of detection. For large breaks, the temperature switches backup the high steam flow instrumentation.

As part of the September 24, 1982 application, the licensee attached a report which was prepared by its consultant, EDS Nuclear, Inc. This evaluation includes a safety analysis supporting a temperature limit of 212°F for the main steamline tunnel. That is, a five to ten gpm break in a main steamline will raise the tunnel temperature to 212°F. The establishment of the trip setpoint is based upon this value and instrumentation considerations. The establishment of the allowable deviation is based upon the drift of the setpoint.

3.0 Evaluation

High Temperature Switches in the Main Steamline Tunnel, Allowable Deviation

The staff reviewed the licensee's application and associated report which was prepared by EDS Nuclear, Inc. In a January 5, 1983 letter to the licensee, the staff requested additional information. In a February 7, 1983 letter, the licensee addressed the staff's concerns and provided data on the drift of the switch setpoint.

Safety Analysis Limit of 212°F

EDS Nuclear, Inc. performed an evaluation, for the licensee, to determine the temperature rise in the main steam line tunnel area. EDS Nuclear considered a break size on the order of five to ten gpm in either the main steamline or the three inch main steam drain line. Their results indicate that a break of this size is sufficient to increase the main steamline tunnel temperature to at least 212°F. The present trip setting for the temperature switches located in the main steamline tunnel is specified by Technical Specifications, at 200°F with an allowable deviation of 2°F. The current trip setting of the temperature switches is not being changed, but the allowable deviation is being increased. With the new temperature switch deviation of 10°F, the new maximum allowable trip setting will be 210°F, which is less than the calculated safety limit of 212°F.

Therefore, we conclude that because sufficient margin exists between the trip setpoint (200°F) and the safety limit (212°F), the proposed increase in the allowable deviation is acceptable.

Allowable Deviation of the Trip Setpoint

In the February 7, 1983 response to the NRC, the licensee provided data on the drift of the switch setpoints. The drift data shows a Gaussian distribution with a standard deviation of 3.8°F from the setpoint (200°F). The probability of a temperature switch drifting beyond 210°F (setpoint of 200°F plus the proposed allowable deviation of 10°F) is very low. Therefore, reasonable assurance exists that an allowable deviation of 10°F is adequate.

The total allowance in the protection channel, i.e., the margin of 12°F between the safety analysis limit and the trip setpoint, needs to equal at least the combined channel uncertainties and errors.

By increasing the allowable deviation, or uncertainty due to drift from 2° to 10°F, the adequacy of the total allowance, and thus the trip setpoint, was determined. Previously only 2°F of the 12°F total allowance was allocated to drift. The requested amendment will change that to 10°F, leaving the difference to account for all other uncertainties.

One acceptable method of combining channel uncertainties is to combine them into independent groups and then take the square root of the sum of the squares of each group. Using this method, the allowance for the other independent uncertainties comes to 6.63°F. This value provides adequate margin for all the other channel uncertainties. As such, there is sufficient margin in the present value of the setpoint.

Evaluation Summary

The proposed changes that would increase the main steamline tunnel temperature switches allowable deviation from 2°F to 10°F for the Monticello Nuclear Generating Plant are found to be acceptable. Furthermore, the trip setpoint remains adequate in the context of a larger allowed drift. Therefore, we find acceptable the revision to TS Table 3.2.7 that increases the allowable deviation, from 2° to 10°F that is associated with the trip setpoint of the temperature switches in the main steamline tunnel.

4.0 Environmental Considerations

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact, and pursuant to 10 CFR Section 51.5(d)(4) that an environmental impact statement, or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of the amendment.

5.0 Conclusions

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 this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: November 28, 1983

Principal Contributor: M. Wigdor
G. Thomas