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Docket No. 50-263

MAY 15 1979

Mr. L. O. Mayer, Manager
 Nuclear Support Services
 Northern States Power Company
 414 Nicollet Mall - 8th Floor
 Minneapolis, Minnesota 55401

Dear Mr. Mayer:

The Commission has issued the enclosed Amendment No. **39** to Provisional Operating License No. DPR-22 for the Monticello Nuclear Generating Plant. The amendment consists of changes to the Technical Specifications in response to your application dated December 1 as revised December 7, 1978.

This amendment involves a modification to the Low Pressure Coolant Injection subsystem pump performance requirements.

Copies of the Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,

Original signed by

Thomas A. Ippolito, Chief
 Operating Reactors Branch #3
 Division of Operating Reactors

Enclosures:

1. Amendment No. **39**
2. Safety Evaluation
3. Notice

cc w/enclosures:
 See next page

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 6/1/79
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OFFICE →	ORB #3	ORB #3	AD-EOP	OELD	ORB #3
SURNAME →	SSheppard	TKevern:mjf	BGrimes	CHL	Tippolito
DATE →	5/4/79	5/4/79	5/9/79	5/11/79	5/9/79



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

May 15, 1979

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Northern States Power Company
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Thomas A. Appolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Enclosures:

1. Amendment No. 39
2. Safety Evaluation
3. Notice

cc w/enclosures:
See next page

Mr. L. O. Mayer

- 2 -

May 15, 1979

cc w/enclosures:

Gerald Charnoff, Esquire
Shaw, Pittman, Potts and
Trowbridge
1800 M Street, N. W.
Washington, D. C. 20036

Arthur Renquist, Esquire
Vice President - Law
Northern States Power Company
414 Nicollet Mall
Minneapolis, Minnesota 55401

Mr. L. R. Eliason
Plant Manager
Monticello Nuclear Generating Plant
Northern States Power Company
Monticello, Minnesota 55362

Russell J. Hatling, Chairman
Minnesota Environmental Control
Citizens Association (MECCA)
Energy Task Force
144 Melbourne Avenue, S. E.
Minneapolis, Minnesota 55414

Mr. Kenneth Dzugan
Environmental Planning Consultant
Office of City Planner
Grace Building
421 Wabasha Street
St. Paul, Minnesota 55102

Sandra S. Gardebring
Executive Director
Minnesota Pollution Control Agency
1935 W. County Road B2
Roseville, Minnesota 55113

Mr. Steve Gadler
2120 Carter Avenue
St. Paul, Minnesota 55108

Anthony Z. Roisman
Natural Resources Defense Council
917 15th Street, N. W.
Washington, D. C. 20555

The Environmental Conservation Library
Minneapolis Public Library
300 Nicollet Mall
Minneapolis, Minnesota 55401

State Department of Health
ATTN: Secretary & Executive Officer
University Campus
Minneapolis, Minnesota 55440

Mr. D. S. Douglas, Auditor
Wright County Board of Commissioners
Buffalo, Minnesota 55313

Director, Technical Assessment
Division
Office of Radiation Programs (AW-459)
US EPA
Crystal Mall #2
Arlington, Virginia 20460

U. S. Environmental Protection Agency
Federal Activities Branch
Region V Office
ATTN: EIS COORDINATOR
230 South Dearborn Street
Chicago, Illinois 60604

Mr. Robert N. Lazo, Esquire
Chairman
Atomic Safety and Licensing Board
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dr. Richard F. Cole
Atomic Safety Licensing Board
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dr. Walter H. Jordan
881 West Outer Drive
Oak Ridge, Tennessee 37830



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

NORTHERN STATES POWER COMPANY

DOCKET NO. 50-263

MONTICELLO NUCLEAR GENERATING PLANT, UNIT NO. 1

AMENDMENT TO PROVISIONAL OPERATING LICENSE

Amendment No. 39
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 December 1, 1978 as revised December 7, 1978, 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 3.B. of Provisional Operating License No. DPR-22 is hereby amended to read as follows:


B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 39, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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

FOR THE NUCLEAR REGULATORY COMMISSION


Thomas A. Ippolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 15, 1979

ATTACHMENT TO LICENSE AMENDMENT NO. 39

PROVISIONAL OPERATING LICENSE NO. DPR-22

DOCKET NO. 50-263

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

Remove

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Insert

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3.0 LIMITING CONDITIONS FOR OPERATION

3. From and after the date that two of the LPCI pumps or admission valves are made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding seven days unless such pumps or admission valves are made operable sooner, provided that during such seven days all active components of both core spray systems, the containment cooling subsystem (including 2 LPCI pumps) and the diesel generators required for operation of such components (if no external source of power were available) shall be demonstrated to be operable at least once each day.
4. A maximum of one drywell spray loop (containment cooling mode of RHR) may be inoperable for 30 days when the reactor water temperature is greater than 212°F. If the loop is not returned to service within 30 days, the orderly shutdown of the reactor will be initiated and the reactor water temperature shall be reduced to less than 212°F.
5. Each LPCI subsystem (RHR) pump shall be capable of delivering 4,000 gpm $\pm 10\%$ against a system head corresponding to three pumps delivering 12,000 gpm at a reactor pressure of 20 psi above the suppression chamber pressure. If this

4.0 SURVEILLANCE REQUIREMENTS

3. When it is determined that the LPCI subsystem is inoperable, both core spray systems, the containment cooling subsystem, and the diesel generators required for operation of such components (if no external source of power were available) shall be demonstrated to be operable immediately and daily thereafter.
4. During each five year period, an air test shall be performed on the drywell spray headers and nozzles.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 39 TO PROVISIONAL OPERATING LICENSE NO. DPR-22

NORTHERN STATES POWER COMPANY

MONTICELLO NUCLEAR GENERATING PLANT

DOCKET NO. 50-263

Introduction

By letter⁽¹⁾ dated December 1, 1978 and revised by letter⁽²⁾ dated December 7, 1978, the Northern States Power Company (the licensee) requested amendment to the Technical Specifications appended to Operating License No. DPR-22 for Monticello Nuclear Generating Plant. The proposed change involves a modification to the Low Pressure Coolant Injection (LPCI) subsystem pump performance requirements. The reason for the change stems from the results of recent tests performed to determine actual piping losses of the Monticello LPCI subsystem, for the case of three LPCI pumps running simultaneously. Up until these tests, piping losses for three pumps running were based on calculations. The test results indicated that actual piping losses were higher than previously thought. When using the new actual losses to determine LPCI pump delivery capability as required by the Technical Specifications, it was found by the licensee that little or no margin existed between actual pump performance and the minimum pump performance required by the current Technical Specifications. Accordingly, the licensee has proposed to change the Technical Specifications by effectively reducing the minimum required delivery capability for each pump by 10%. This change would provide the licensee with reasonable margin to accommodate any degradation in pump performance, although the change itself would not result in any actual reduction in flow capability from that associated with the as-built system.

Evaluation

The pumps of the Residual Heat Removal (RHR) system are sized on the basis of the flow required during the Low Pressure Coolant Injection mode of operation, which is the mode requiring the maximum flow rate. This mode of RHR is provided to restore and maintain the reactor vessel coolant inventory following a loss of coolant accident so that the core is adequately cooled thereby preventing excessive fuel clad temperatures. The present Monticello Technical Specifications require that each of the pumps in the LPCI subsystem be capable of delivering at least 4000 gpm against a reactor system pressure of 20 psi. The present test procedures also involve testing each pump separately, while accounting

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for LPCI system piping losses associated with three pumps running to determine pump delivery capability for design basis LPCI mode (three pumps running) conditions. The proposed specification would require that each LPCI subsystem pump be capable of delivering at least 3600 gpm against a system head corresponding to three pumps delivering 12,000 gpm against a reactor pressure 20 psi above suppression chamber pressure. The proposed specifications therefore would allow for as much as a 10% (or 400 gpm) reduction in the minimum required delivery capability of each pump.

The licensee has considered the effects of the decrease in LPCI performance on the limiting large break Loss of Coolant Accident (LOCA) analysis for Monticello as well as the most severe small break LOCA. For Monticello, a BWR/3 with LPCI loop selection logic, the worst single failure for the large break DBA-LOCA is failure of the LPCI injection valve. This failure leaves no LPCI available to mitigate the accident. When viewed from this limiting perspective, any reduction in LPCI pump flow capability will not effect previously accepted LOCA analyses. Thus, although the proposed technical specification could allow a reduction in LPCI pump flow capability and hence a somewhat worse LOCA consequences (higher PCT) for the expected case (LPCI injection valve does not fail), the limiting licensing basis event remains unaffected. For small breaks, the licensee states that the worst single failure is the direct current (DC) power source failure.⁽³⁾ For this failure two of the four LPCI pumps are available together with one core spray train and the Automatic Depressurization System.⁽⁴⁾ The results of the reanalysis of the small break, over a break spectrum from 0 to 0.3 ft² showed that the maximum PCT remains well below 2200°. This analysis modeled the two available LPCI pumps with 10% reduction in LPCI flow. Thus the worst small break case remains non-limiting relative to the DBA.

The effects of a DC power source failure on the small and large breaks are also being generically reviewed by the staff. Although we have not completed our review, based on the stated systems available with a DC power source failure, we believe that there will not be changes to the generic or plant-specific small break results that will make the small break results become more limiting than the large break. Thus we conclude that Monticello Nuclear Generating Plant will be in conformance with all of the requirements of 10 CFR 50.46 and Appendix K to 10 CFR 50 when operating in accordance with the proposed Technical Specifications.

Conclusions

We have determined that the license 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 this amendment.

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) 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.

Dated: May 15, 1979

References

1. Northern States Power Company letter (L. Mayer) to USNRC, dated December 1, 1978.
2. Northern States Power Company letter (L. Mayer) to USNRC, dated December 7, 1978.
3. General Electric letter (R. Engle) to USNRC (P. Check) dated November 1, 1978.
4. Northern States Power Company letter (L. Mayer) to USNRC, dated April 24, 1979.

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-263NORTHERN STATES POWER COMPANYNOTICE OF ISSUANCE OF AMENDMENT TO PROVISIONAL
OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 39 to Provisional Operating License No. DPR-22, issued to Northern States Power Company, which revised Technical Specifications for operation of the Monticello Nuclear Generating Plant (the facility) located in Wright County, Minnesota. The amendment is effective as of its date of issuance.

The amendment permits a modification to the Low Pressure Coolant Injection subsystem pump performance requirements.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.


The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental impact statement, or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of this amendment.

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For further details with respect to this action, see (1) the application for amendment dated December 1, 1978, revised December 7, 1978, (2) Amendment No. 39 to License No. DPR-22, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. and at the Environmental Conservation Library, Minneapolis Public Library, 300 Nicollet Mall, Minneapolis, Minnesota. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland, this 15th day of May 1979.

FOR THE NUCLEAR REGULATORY COMMISSION


Thomas A. Ippolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors