APR 1 - 1976

Docket No. 50-263

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

Gentlemen:

In response to your request dated March 11, 1976, the Commission has issued the enclosed Amendment No. 18 to Provisional Operating License No. DPR-22 for the Monticello Nuclear Generating Plant. The amendment consists of changes to the Technical Specifications to add a new isolation valve and modify the use of existing isolation valves which will serve as part of the new nitrogen recirculation system.

Copies of the related Safety Evaluation and the Federal Register Notice are also enclosed.

Sincerely,
Original Signed by
Richard D. Stuart for
Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

Enclosures:
1. Amendment No. 18 to License No. DPR-22
2. Safety Evaluation
3. Federal Register Notice

cc w/enclosures:
See next page

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APR 1 - 1976

cc w/enclosures:
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Minneapolis, Minnesota 55401

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

cc w/enclosures and cy of NSP's filing dtd. 3/11/76:
Warren H. Lawson, M. D.
Secretary and Executive Officer
State Department of Health
University Campus
Minneapolis, Minnesota 55440

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

NORTHERN STATES POWER COMPANY

DOCKET NO. 50-263

MONTICELLO NUCLEAR GENERATING PLANT

AMENDMENT TO PROVISIONAL 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 March 11, 1976, as modified by the NRC staff and the licensee, 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. An environmental statement or negative declaration need not be prepared in connection with the issuance of this amendment.

2. Accordingly, the license is amended by a change to the Technical Specifications as indicated in the attachment to this license amendment.

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

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by
Richard D. Smith for
Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

Attachment:
Changes to the
Technical Specifications

Date of Issuance: APR 1 4 1976

ATTACHMENT TO LICENSE AMENDMENT NO. 18

PROVISIONAL OPERATING LICENSE NO. DPR-22

DOCKET NO. 50-263

Replace existing page 153 of the Technical Specifications with attached revised page. Changes on this page are denoted by marginal lines.

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TABLE 3.7.1

PRIMARY CONTAINMENT ISOLATION

Isolation Group	Valve Identification	Number of Valves		Maximum Operating Time (Sec)	Normal Position
		Inboard	Outboard		
1	Main Steam Line Isolation	4	4	$3 \leq T \leq 5$	Open
1	Main Steam Line Drain	1	1	60	Closed
1	Recirculation Loop Sample Line	1	1	60	Closed
2	Drywell Floor Drain		2	60	Open
2	Drywell Equipment Drain		2	60	Open
2	Drywell Vent		2	60	Closed
2	Drywell Vent Bypass		1	60	Closed
2	Drywell Purge Inlet		2	60	Open
2	Drywell and Suppression Chamber Air Makeup		1	60	Closed
2	Suppression Chamber to Drywell N_2 Recirculation		1	60	Open
2	Suppression Chamber Vent		2	60	Closed
2	Suppression Chamber Vent Bypass		1	60	Open
2	Shutdown Cooling System	1	1	120	Closed

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 18 TO PROVISIONAL OPERATING LICENSE NO. DPR-22

NORTHERN STATES POWER COMPANY

MONTICELLO NUCLEAR GENERATING PLANT

DOCKET NO. 50-263

INTRODUCTION

By letter dated March 11, 1976, the Northern States Power Company (NSP) requested an amendment to Provisional Operating License No. DPR-22 for the Monticello Nuclear Generating Plant. The request involves revisions to the Technical Specifications with regard to the addition of a new automatic isolation valve and the modification of usage of existing automatic isolation valves, all associated with the installation of a nitrogen recirculation system.

BACKGROUND

As a result of recent structural analyses performed in conjunction with a generic review of pressure-suppression pool dynamic loads for the General Electric BWR Mark I containments, it was determined that if pool dynamic loads resulting from a postulated loss-of-coolant accident (LOCA) are considered, the margin of safety in the containment design for the Monticello Nuclear Power Station is lower than originally intended. Subsequently, Northern States Power Company (the licensee) agreed to institute a "differential pressure control system" to mitigate the pool dynamic loads and thereby restore the margin of safety in the containment design. The differential pressure control system would establish a positive differential pressure between the drywell and torus regions of the containment. This would reduce the height of the water leg in the downcomers and subsequently would reduce the LOCA hydrodynamic loads.

To control combustible gases following a postulated loss-of-coolant accident, the drywell atmosphere is inerted with nitrogen during normal operation. The inclusion of a positive differential pressure between the drywell and torus results in a loss of nitrogen from the drywell to the torus airspace from leakage through the vacuum breakers on the vent headers. To minimize the loss of nitrogen from the system, the licensee has proposed a recirculation system which would collect the nitrogen in the torus and return it to the drywell. The submittal was modified by the NRC staff and the licensee when pre-operational testing revealed that the proposed piping routing presented an excessive pressure drop which could not be overcome by the recirculation system blowers. The routing was changed and the change reviewed by the NRC staff.

DISCUSSION AND EVALUATION

The recirculation system consists of a two-inch line which forms a connection between the existing suppression chamber vent bypass line and the drywell atmosphere purge line. The recirculation line takes suction from the suppression chamber vent bypass line and branches into two parallel flow paths, each containing an upstream shutoff valve, a 100% capacity blower, a check valve, and a downstream shutoff valve in series. The parallel lines rejoin and discharge into the drywell atmosphere purge line. The existing automatic isolation valves on both the suppression chamber vent bypass and the drywell atmosphere purge line would be changed from a normally closed position to a normally open position to provide the flow path from the torus airspace to the drywell.

We have reviewed the proposed recirculation system for the Monticello Nuclear Power Station with regard to both containment isolation capability and potential adverse effects on a postulated loss-of-coolant accident. The installation of the proposed recirculation system has required the addition of a second automatic isolation valve on the suppression chamber vent bypass line to provide the proper containment isolation capability. The new isolation valve, designated CV-7440, is installed outboard of containment in series with an existing control valve, designated CV-2384, to provide redundant containment isolation capability. The outboard isolation valve, CV-7440, is an air operated valve which is open when the valve solenoid is energized and will close upon the receipt of a Group 2 isolation signal, the loss of the instrument bus associated with the outboard isolation valves, or the loss of instrument air. The inboard isolation valve, CV-2384, receives power from a separate instrument bus, and similarly will close upon loss of its instrument bus, on loss of instrument air or upon receipt of a Group 2 isolation signal. The position of both valves will be indicated in the control room, and the valves will be leak tested in accordance with Appendix J to 10 CFR 50.

A recirculation system could have an effect on the consequences of a postulated loss-of-coolant accident by allowing steam bypass of the pressure-suppression pool by direct communication of the drywell and the suppression chamber air-space. However, the low mass flow rate associated with the 2 inch size line in conjunction with the redundant capability to isolate both the suppression chamber vent bypass line and the drywell atmosphere purge line will result in a negligible amount of steam bypass. In addition, there will be a swing-disc check valve, located down stream of each blower, which would prevent reverse flow from the drywell and further lessen the chance of steam bypass. Therefore, the proposed design assures that the installation would have a negligible effect on a loss-of-coolant accident.

ENVIRONMENTAL CONSIDERATION

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 §51.5(d)(4) that an environmental statement, negative declaration, or environmental appraisal need not be prepared in connection with the issuance of this amendment.

CONCLUSION

We have concluded, based on the considerations discussed above, that: (1) because the changes do not involve a significant increase in the probability or consequences of accidents previously considered and do not involve a significant decrease in a safety margin, the changes do 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.

Date:

APR 14 1976

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-263

NORTHERN STATES POWER COMPANY

NOTICE OF ISSUANCE OF AMENDMENT TO
PROVISIONAL OPERATING LICENSE

Notice is hereby given that the U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 18 to Provisional Operating License No. DPR-22, issued to the Northern States Power Company (the licensee), which revised Technical Specifications for operation of the Monticello Nuclear Generating Plant (the facility) located in Wright County, Minnesota.

This amendment added a new automatic isolation valve and modified the usage of existing automatic isolation valves. These valves will be utilized as part of the nitrogen recirculation system.

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.

OFFICE ➤						
SURNAME ➤						
DATE ➤						

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 statement, negative declaration or environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) the application for amendment dated March 11, 1976, (2) Amendment No. 18 to License No. DPR-22, and (3) the Commission's concurrently issued 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 55401. A copy of items (2) and (3) may be obtained upon request addressed to the United States Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland, this 1976

FOR THE NUCLEAR REGULATORY COMMISSION

/s/

Richard D. Silver, (Acting Chief
Operating Reactors Branch #2
Division of Operating Reactors

OFFICE ➔						
SURNAME ➔						
DATE ➔						

DETERMINATION OF PROPOSED LICENSING AMENDMENT

Licensee: Northern States Power Company (Monticello)

Request for: Changes to Appendix A of POL No. DPR-22 to incorporate new containment isolation valve for N_2 recirculation (torus to drywell) system and modify status of existing valves to be used in system. System is used to minimize N_2 usage while maintaining minimum 1 PSI differential pressure (drywell to torus) to regain safety margins.

Request Date: March 11, 1976

Proposed Noticing Action:
( ) Pre-notice Recommended

(X) Post-notice Recommended

( ) Determination delayed pending completion of Safety Evaluation

Basis for Decision: The added valve and the existing valves which will serve as system boundaries are capable of automatic isolation. The entire system has been reviewed by Operational Technology and has been found acceptable. The modification will not result in an increase in the authorized power level and will not involve a new and different kind of accident nor decrease in safety margins. Thus, there is no significant hazards consideration.

Proposed NEPA Action:
( ) EIS Required

( ) Negative Declaration (ND) and Environmental Impact Appraisal (EIA) Required

(X) No EIS, ND or EIA Required

( ) Determination delayed pending completion of EIA

Basis for Decision: Use of the N_2 recirculation system reduces substantially the need for intermittent flow through the HEPA filters and charcoal absorbers of the standby gas treatment system to remove N_2 from the torus and thus maintain the required ΔP. Such reduction of flow will aid in assuring that the standby gas treatment system retains the capability to perform its safety function. The technical specification change does not authorize an increase in power level nor a change in effluent types or total amounts and will not result in any significant environmental impact.

Noticing Concurrences:

		Date:
1.	R. W. Snaider	4/9/76
2.	D. L. Ziemann	4/9/76
3.	K. R. Goller	4/9/76
4.	OELD (S. H. Lewis)	4/12/76