

May 1, 1984

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. 24 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 10, 1982 application as revised on July 29, 1983.

The revisions to the Technical Specifications allow plant operation with a vent or drain valve in the scram discharge volume to be inoperable and the redundant valve operable.

A copy of the related Safety Evaluation is also enclosed.

Sincerely,

Original signed by DBVassallo for/

Vernon L. Rooney, Project Manager
Operating Reactors Branch #2
Division of Licensing

Enclosure:

1. Amendment No. 24 to License No. DPR-22
2. Safety Evaluation

cc w/enclosures:

See next page

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

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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. 24
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 10, 1982, as revised on July 29, 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 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 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. 24 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


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

Attachment:
Changes to the
Technical Specifications

Date of Issuance: May 1, 1984

ATTACHMENT TO LICENSE AMENDMENT NO. 24

FACILITY 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

i
83
83A
92

Insert

i
83
83A
92

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3.0 LIMITING CONDITIONS FOR OPERATION

E. Reactivity Anomalies

At a specific steady state base condition of the reactor actual control rod inventory will be periodically compared to a normalized computed prediction of the inventory. If the difference exceeds one per cent, delta k, reactor power operation shall not be permitted until the cause has been evaluated and appropriate corrective action has been completed.

4.0 SURVEILLANCE REQUIREMENTS

E. Reactivity Anomalies

During the startup test program and at each startup following refueling outages, the actual rod inventory shall be compared to a normalized computed prediction of the inventory. These comparisons will be used as base data for reactivity monitoring during subsequent power operation throughout the fuel cycle. At specific power operating conditions, the actual rod configuration will be compared to the configuration expected based upon appropriately corrected past data. This comparison will be made at least every equivalent full power month.

3.3/4.3

83

3.0 LIMITING CONDITONS FOR OPERATION

F. Scram Discharge Volume

1. During reactor operation, the scram discharge volume vent and drain valves shall be operable, except as specified below.
2. If any scram discharge volume vent or drain valve is made or found inoperable, the integrity of the scram discharge volume shall be maintained by either:
 - a. Verifying daily, for a period not to exceed 7 days, the operability of the redundant valve(s), or
 - b. Maintaining the inoperable valve(s), or the associated redundant valve(s), in the closed position. Periodically the inoperable and the redundant valve(s) may both be in the open position to allow draining the scram discharge volume.

If a or b above cannot be met, at least all but one operable control rods (not including rods removed per specification 3.10.E or inoperable rods allowed by 3.3.A.2) shall be fully inserted within ten hours.

G. Required Action

If Specifications 3.3.A through D above are not met, an orderly shutdown shall be initiated and have reactor in the cold shutdown condition within 24 hours.

3.3/4.3

4.0 SURVEILLANCE REQUIREMENTS

F. Scram Discharge Volume

The scram discharge volume vent and drain valves shall be cycled quarterly.

Once per operating cycle verify the scram discharge volume vent and drain valves close within 30 seconds after receipt of a reactor scram signal and open when the scram is reset.

Bases Continued 3.3 and 4.3:

Deviations beyond this magnitude would not be expected and would require thorough evaluations. One per cent reactivity limit is considered safe since an insertion of this reactivity into the core would not lead to transients exceeding design conditions of the reactor systems.

As was noted above reactivity anomalies can be found by comparison of the actual control rod inventory to the predicted inventory at a selected base condition. For example, the predicted control rod inventory at 100% power at a specified point in time can be compared to the actual control rod inventory at 100% power and at the specified time to determine if a reactivity anomaly exists. The Monticello Plant has been designed to increase or decrease power level as the system load demand changes. For this type of plant an equilibrium condition of the variables important to making a control rod inventory prediction, specifically the reactivity effects of the xenon, is rarely achieved. The uncertainties of calculating the control rod inventory with non-equilibrium xenon conditions can result in errors which can be misconstrued as reactivity anomalies. Therefore, this specification calls for performing of rod inventory comparisons at a time when xenon will not be a source of error.

- F. The safety function of the scram discharge volume vent and drain valves is to limit the loss of reactor coolant leaked past the CRD seals while the scram valves are open. To accomplish this, the vent and drain valves must either be in the closed position or close in a timely manner upon scram initiation. The closure time of 30 seconds is based on a letter dated July 25, 1980 to J G Keppler (Region III) from D E Gilberts (NSP) concerning IE Bulletin No. 80-14. Redundant isolation valves have been provided for each vent and drain line. Closure of one of the valves in each line would be sufficient to maintain the integrity of the scram discharge volume.
- G. Whenever a specification (or specifications) can not be met for a particular mode of operation, the reactor would be placed in a mode for which the specification (or specifications) are not required. This requires immediate initiation of a reactor shutdown upon discovery that specifications 3.3A through 3.3D are not met.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 24 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 10, 1982, as revised on July 29, 1983, Northern States Power Company (the licensee) proposed changes to the Technical Specifications of Facility Operating License No. DPR-22 for the Monticello Nuclear Generating Plant. The revisions to the Technical Specifications would allow plant operation with a vent or drain valve in the scram discharge volume to be inoperable and the redundant valve operable.

2.0 Discussion

The safety function of the scram discharge volume vent and drain valves is to limit the loss of reactor coolant leakage past the control rod drive seals while the scram valves are open. The scram valves remain open during the interval from scram initiation to the resetting of the scram signal.

3.0 Evaluation

The licensee has modified the scram discharge system to include two scram discharge volumes each with two vent and drain valves, as compared with the single vent and drain valve configuration in the original system design. The purpose of the proposed changes in Sections 3.3/4.3 of the Technical Specifications is to account for the redundancy and diversity added to the system by the modification. The proposed changes do not require that the plant be shut down if one of the valves is inoperable.

The proposed change allows plant operation with one valve inoperable and the redundant valve operable. The operability of the redundant valve (operable) will be verified daily for a period not to exceed seven days. Plant operation will also be permitted if the inoperable valve or the associated redundant valve is maintained in the closed position with the provision that periodically the inoperable and the redundant valve

may both be in the open position to allow draining of the scram discharge volume. The plant can be in this condition for a period not to exceed seven days. If neither of the above conditions can be met, the plant is required to be at hot shutdown within ten hours.

The proposed changes in Section 3.3/4.3 of the Technical Specification are consistent with the staff guidelines as stated in the December 1, 1980 BWR Scram Discharge System Safety Evaluation, and do not represent a reduction in the ability of the system to perform its safety function, since the integrity of the scram discharge system can be maintained by the redundant drain or vent valve. Thus, we conclude that the proposed changes to Section 3.4/4.3 of the Technical Specifications are acceptable.

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

Principal contributor: T. Chan

Dated: May 1, 1984