

November 2, 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. 28 to Facility Operating License No. DPR-22 for the Monticello Nuclear Generating Plant. The amendment authorizes changes to the Technical Specifications in response to your application dated August 17, 1984.

The amendment revises the Technical Specifications (TSs) to reflect the use of hybrid design hafnium control rod assemblies. These assemblies will be used to replace standard control rod assemblies during the current Monticello refueling outage.

The other change pertaining to site boundaries proposed in the August 17, 1984 application is being handled by separate action.

A copy of the Safety Evaluation is enclosed.

Sincerely,

Original signed by/

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

Enclosures:

1. Amendment No. 28 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

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. 28
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 August 17, 1984, 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. 28, 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



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

Attachment:
Changes to the Technical
Specifications

Date of Issuance: November 2, 1984

ATTACHMENT TO LICENSE AMENDMENT NO. 28

FACILITY OPERATING LICENSE NO. DPR-22

DOCKET NO. 50-263

Replace page 230 of the Appendix "A" Technical Specifications with the enclosed page 230. The revised page is identified by Amendment number and contains vertical lines indicating the areas of change.

5.0 DESIGN FEATURES

5.1 Site

- A. The reactor center line is located at approximately 850,810 feet North and 2,038,920 feet East as determined on the Minnesota State Grid, South Zone. The nearest site boundary is approximately 1630 feet S 30° W of the reactor center line and the exclusion area is defined by the minimum fenced area shown in FSAR Figure 2.2.2a. Due to the prevailing wind pattern, the direction of maximum integrated dosage is SSE. The southern property line follows the northern boundary of the right-of-way for the Burlington Northern Railway.

5.2 Reactor

- A. The reactor core shall consist of not more than 484 fuel assemblies.
- B. The reactor core shall contain 121 cruciform-shaped control rods. The control rod material shall be boron carbide powder (B₄C) compacted to approximately 70% of theoretical density, except for the Hybrid I control rods which contain approximately 15% hafnium.

5.3 Reactor Vessel

- A. The pressure vessel shall be designed for a pressure of 1250 psig and a temperature of 562° F. The coolant recirculation system shall be designed for a pressure of 1148 psig on suction side of pump and 1248 psig at pump discharge. The applicable design codes shall be as described in Sections 4.2.3 and 4.3.1 of the Monticello Final Safety Analysis Report.

5.4 Containment

- A. The primary containment shall be of the pressure suppression type having a drywell and an absorption chamber constructed of steel. The drywell shall have a volume of approximately 134,200 ft³ and is designed to conform to ASME Boiler and Pressure Vessel Code Section III Class B for an internal pressure of 56 psig at 281° F and an external pressure of 2 psig at 281° F. The absorption chamber shall have a total volume of approximately 176,250 ft³.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 28 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 August 17, 1984 Northern States Power Company (the licensee) proposed to change the Technical Specifications (TSs) for the Monticello Nuclear Generating Plant to reflect the use of hybrid design hafnium control rod assemblies. Another change in the same proposal pertaining to control rod assemblies is being handled by a separate action.

2.0 Evaluation

The licensee has proposed converting the new control rods that have been developed by General Electric. These new control rods contain 12 hafnium absorber rods in place of 12 B_4C rods, and the remaining B_4C rods have improved cladding material. These new improved rods are referred to as Hybrid I Control Rod (HICR) assemblies. The HICR weight is the same as the present control rod assemblies, and the mechanical and nuclear properties are similar to the present control rod assemblies. A description of the HICR blades is found in the approved topical report NEDE-22290-A.

The use of the HICR assemblies in boiling water reactors (BWRs) has been reviewed and approved by the staff (Letter from C. O. Thomas (NRC) to J. F. Klapproth (GE), "Safety Evaluation of GE Hybrid-1," dated August 22, 1983). Since the use of Hybrid I Control Rod Assemblies for BWRs has been previously approved as described above, we conclude that their use is acceptable in the Monticello Nuclear Generating Plant. A Technical Specification change has been made to reflect the use of HICR assemblies and we find the change acceptable.

3.0 Environmental Considerations

This amendment involves 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 amendment involves 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

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has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

4.0 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: A. M. Gill

Dated: November 2, 1984