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Docket  
NRC PDR  
Local PDR  
ORB #2 Reading  
OELD  
OI&E (#)  
NDube  
JMcGough  
JSaltzman, OAI  
RMDiggs (2)  
BCBuckley  
DLZiemann  
KRGoller  
BScoot  
BScharf (15)  
EP LA - *G. Williams*  
EP PM - *R. BEVAN*  
TJCarter  
PCollins  
SVarga  
AESTeen

DEisenhut  
ACRS (16)  
TBAburnathy, DITE  
JRBuchanan  
LOlshan, TR

Docket No. 50-263

DEC 04 1975

Northern States Power Company  
ATTN: Mr. L. O. Mayer  
Director of Nuclear Support  
Services  
414 Nicollet Mall  
Minneapolis, Minnesota 55401

Gentlemen:

The Commission has requested the Federal Register to publish the enclosed Notice of Proposed Issuance of Amendment to Facility License No. DPR-22 for the Monticello Nuclear Generating Plant. The proposed amendment includes a change to the Technical Specifications based on our letter to you dated September 24, 1975.

The amendment would revise the Technical Specifications to (1) add requirements that would limit the period of time operation can be continued with immovable control rods that could have control rod drive mechanism collet housing failures and (2) require increased control rod surveillance when the possibility of a control rod drive mechanism collet housing failure exists.

Copies of our proposed license amendment with proposed changes to the Technical Specifications also are enclosed. A copy of our Safety Evaluation relating to this proposed action was forwarded to you with our letter dated September 24, 1975.

Sincerely,

Original Signed by:  
Dennis L. Ziemann

Dennis L. Ziemann, Chief  
Operating Reactors Branch #2  
Division of Reactor Licensing

## Enclosures:

1. Federal Register Notice
2. Proposed Amendment w/Proposed  
Technical Specification  
changes

CONF

JH

OFFICE ▶	RL:ORB #2	RL:ORB #2	OELD	RL:ORB #2		
SURNAME ▶	<i>RMD</i> RMDiggs:ah	<i>BCB</i> BCBuckley	<i>D. Simonson</i>	DLZiemann		
DATE ▶	11/20/75	11/21/75	12/01/75	12/04/75		

cc w/enclosures:

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

Gerald Charnoff  
Shaw, Pittman, Potts &  
Trowbridge  
910 - 17th Street, N. W.  
Washington, D. C. 20006

Howard J. Vogel, Esquire  
Legal Counsel  
2750 Dean Parkway  
Minneapolis, Minnesota 55416

Steve Gädler  
2120 Carter Avenue  
St. Paul, Minnesota 55108

Mr. Daniel L. Ficker  
Assistant City Attorney  
638 City Hall  
St. Paul, Minnesota 55102

Mr. Kenneth Dzugan  
Environmental Planning  
Consultant  
St. Paul City Planning  
421 Wabasha Street  
St. Paul, Minnesota 55102

Sandra S. Gardebring  
Special Assistant Attorney General  
Counsel for Minnesota Pollution  
Control Agency  
1935 W. County Road B2  
Roseville, Minnesota 55113

Anthony Z. Roisman, Esquire  
Berlin, Roisman and Kessler  
1712 N Street, N. W.  
Washington, D. C. 20036

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

cc w/enclosures and cy of NRC's  
9/24/75 Ltr. w/SER:  
Mr. D. S. Douglas, Autidot  
Wright County Board of Commissioners  
Buffalo, Minnesota 55313

cc w/enclosures and cy of NRC's  
9/24/75 Ltr. w/SER and cy of NSPCo's  
Ltr. dtd. 10/14/75:  
Warren R. Lawson, M. D.  
Secretary and Executive Officer  
State Department of Health  
University Campus  
Minneapolis, Minnesota 55440

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-263

NORTHERN STATES POWER COMPANY

NOTICE OF PROPOSED ISSUANCE OF AMENDMENT  
TO PROVISIONAL OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) is considering issuance of amendment to Provisional Operating License No. DPR-22 issued to the Northern States Power Company (the licensee) for operation of the Monticello Nuclear Generating Plant (the facility), a boiling-water reactor located in Wright County, Minnesota.

The amendment would revise the Technical Specifications to (1) add requirements that would limit the period of time operation can be continued with immovable control rods that could have control rod drive mechanism collet housing failures and (2) require increased control rod surveillance when the possibility of a control rod drive mechanism collet housing failure exists.

Prior to issuance of the proposed license amendment, the Commission will have made the findings required by the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations.

By JAN 12 1976 , the licensee may file a request for a hearing and any person whose interest may be affected by this proceeding may file a request for a hearing in the form of a petition for leave to intervene

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with respect to the issuance of the amendment to the subject facility operating license. Petitions for leave to intervene must be filed under oath or affirmation in accordance with the provisions of Section 2.714 of 10 CFR Part 2 of the Commission's regulations. A petition for leave to intervene must set forth the interest of the petitioner in the proceeding, how that interest may be affected by the results of the proceeding, and the petitioner's contentions with respect to the proposed licensing action. Such petitions must be filed in accordance with the provisions of this FEDERAL REGISTER notice and Section 2.714, and must be filed with the Secretary of the Commission, U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Docketing and Service Section, by the above date. A copy of the petition and/or request for a hearing should be sent to the Executive Legal Director, U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, and to Gerald Charnoff, Esquire of Shaw, Pittman, Potts and Trowbridge, 910 - 17th Street, N. W., Washington, D. C. 20006, the attorney for the licensee.

A petition for leave to intervene must be accompanied by a supporting affidavit which identifies the specific aspect or aspects of the proceeding as to which intervention is desired and specifies with particularity the facts on which the petitioner relies as to both his interest and his contentions with regard to each aspect on which intervention is requested. Petitions stating contentions relating only to matters outside the Commission's jurisdiction will be denied.

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All petitions will be acted upon by the Commission or licensing board, designated by the Commission or by the Chairman of the Atomic Safety and Licensing Board Panel. Timely petitions will be considered to determine whether a hearing should be noticed or another appropriate order issued regarding the disposition of the petitions.

In the event that a hearing is held and a person is permitted to intervene, he becomes a party to the proceeding and has a right to participate fully in the conduct of the hearing. For example, he may present evidence and examine and cross-examine witnesses.

For further details with respect to this action, see the Commission's letter to the Northern States Power Company dated September 24, 1975, and the attached proposed Technical Specifications and the Safety Evaluation by the Commission's staff dated September 24, 1975, and the Northern States Power Company's letter dated October 14, 1975, which 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. The license

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amendment and the Safety Evaluation may be inspected at the above locations, and a copy may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Reactor Licensing.

Dated at Bethesda, Maryland, this      DEC 04 1975

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed by:  
Dennis L. Ziemann  
Dennis L. Ziemann, Chief  
Operating Reactors Branch #2  
Division of Reactor Licensing

OFFICE ▶	RL:ORB #2 <i>RMD</i>	RL:ORB #2 <i>BCB</i>	OELD <i>DS</i>	RL:ORB #2 <i>DL</i>		
SURNAME ▶	RMDiggs	BCBuckley	DSwanson	DLZiemann		
DATE ▶	11/10/75	11/14/75	12/01/75	12/04/75		

NORTHERN STATES POWER COMPANY

DOCKET NO. 50-263

MONTICELLO NUCLEAR GENERATING PLANT

PROPOSED AMENDMENT TO PROVISIONAL OPERATING LICENSE

Amendment No.  
License No. DPR-22

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. 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; and
  - B. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.
2. Accordingly, the license is amended by a change to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 3.B of Facility License No. DPR-22 is hereby amended to read as follows:

"B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications, as revised by issued changes thereto through Change No. ."

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

FOR THE NUCLEAR REGULATORY COMMISSION

Karl R. Collier, Assistant Director  
for Operating Reactors  
Division of Reactor Licensing

Attachment:

OFFICE Change No. to the  
Technical Specifications

SURNAME Date of Issuance:  
DATE

ATTACHMENT TO PROPOSED LICENSE AMENDMENT

PROPOSED CHANGE TO THE TECHNICAL SPECIFICATIONS

PROVISIONAL OPERATING LICENSE NO. DPR-22

DOCKET NO. 50-263

Delete existing pages 76 and 83 of the Technical Specifications and insert the attached revised pages 76 and 83. The changed areas on the revised pages are shown by marginal lines.



### 3.0 LIMITED CONDITIONS FOR OPERATION

#### 2. Reactivity margin - stuck control rods.

Control rod drives which cannot be moved with control rod drive pressure shall be considered inoperable. The directional control valves for inoperable control rods shall be disarmed electrically and the rods shall be in such positions that Specification 3.3.A.1 is met. If more than six non-fully inserted rods are inoperable during power operation the reactor shall be placed in a shutdown condition. If a partially or fully withdrawn control rod drive cannot be moved with drive or scram pressure the reactor shall be brought to a shutdown condition within 48 hours unless investigation demonstrates that the cause of the failure is not due to a failed control rod drive mechanism collet housing.

#### B. Control Rod Withdrawal

1. Each control rod shall be coupled to its drive or completely inserted and the directional control valves disarmed electrically. This requirement does not apply when removing a control rod drive for inspection as long as the reactor is in the refueling mode.

### 4.0 SURVEILLANCE REQUIREMENTS

#### 2. Reactivity margin - stuck control rods.

Each partially or fully withdrawn operable control rod shall be exercised one notch at least once each week. This test shall be performed at least once per 24 hours in the event power operation is continuing with two or more inoperable control rods or in the event power operation is continuing with one fully or partially withdrawn rod which cannot be moved and for which control rod drive mechanism damage has not been ruled out. The surveillance need not be completed within 24 hours if the number of inoperable rods has been reduced to less than two and if it has been demonstrated that control rod drive mechanism collet housing failure is not the cause of an immovable control rod.

#### B. Control Rod Withdrawal

1. The coupling integrity shall be verified for each withdrawn control rod as follows:
  - (a) when the rod is fully withdrawn the first time subsequent to each refueling outage, observe that the drive does not go to the overtravel position; and

Bases Continued 3.3 and 4.3:

with drive pressure. If the rod is fully inserted and then disarmed electrically\*, it is in a safe position of maximum contribution to shutdown reactivity. If it is disarmed electrically in a non-fully inserted position, that position shall be consistent with the shutdown reactivity limitation stated in Specification 3.3.A.1. This assures that the core can be shutdown at all times with the remaining control rods assuming the strongest operable control rod does not insert. An allowable pattern for inoperable control rods, which shall meet this Specification, will be available to the operator. The number of rods permitted to be inoperable could be many more than the six allowed by the Specification, particularly late in the operation cycle; however, the occurrence of more than six could be indicative of a generic control rod drive problem and the reactor will be shutdown. Also if damage within the control rod drive mechanism and in particular, cracks in drive internal housings, cannot be ruled out, then a generic problem affecting a number of drives cannot be ruled out. Circumferential cracks resulting from stress assisted intergranular corrosion have occurred in the collet housing of drives at several BWRs. This type of cracking could occur in a number of drives and if the cracks propagated until severance of the collet housing occurred, a scram could be prevented in the affected rods. Limiting the period of operation with a potentially severed collet housing and requiring increased surveillance after detecting one stuck rod will assure that the reactor will not be operated with a large number of rods with failed collet housing.

**B. Control Rod Withdrawal**

1. Control rod dropout accidents as discussed in the FSAR can lead to significant core damage. If coupling integrity is maintained, the possibility of a rod dropout accident is eliminated. The overtravel position feature provides a positive check as only uncoupled drives may reach this position. Neutron instrumentation response to rod movement provides a verification that the rod is following its drive. Absence of such response to drive movements after the reactor is critical would indicate an uncoupled condition.
2. The control rod housing support restricts the outward movement of a control rod to less than 3 inches in the extremely remote event of a housing failure. The amount of reactivity which could be added by this small amount of rod withdrawal, which is less than a normal single withdrawal increment, will not contribute to any damage to the primary coolant system. The design basis is given in Section 6.5.1 of the FSAR and the design evaluation is given in

\*To disarm the drive electrically, two amphenol type plug connectors are removed from the drive insert and withdraw solenoids rendering the drive immovable. This procedure is equivalent to valving out the drive and is preferred since it allows continued cooling water flow and minimizes crud accumulation in the drive.