

October 12, 1990

Docket No. 50-263

Mr. T. M. Parker, Manager  
Nuclear Support Services  
Northern States Power Company  
414 Nicollet Mall  
Minneapolis, Minnesota 55401

Dear Mr. Parker:

SUBJECT: AMENDMENT NO. 75 TO FACILITY OPERATING LICENSE NO. DPR-22 - DIESEL OIL STORAGE TANK TECHNICAL SPECIFICATIONS (TAC NO. 77287)

The Commission has issued the enclosed Amendment No. 75 to Facility Operating License No. DPR-22 for the Monticello Nuclear Generating Plant. This amendment changes the Technical Specifications (TSs) in response to your application dated July 31, 1990.

The amendment revises the minimum quantity of diesel oil required to be available in the storage tank from 26,250 gallons to 32,500 gallons. The amendment also clarifies that "full load," for purposes of the diesel oil storage tank capacity calculation, is 2500 KW.

A copy of our related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

/s/

William O. Long, Project Manager  
Project Directorate III-1  
Division of Reactor Projects - III, IV, V  
& Special Projects  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 75 to License No. DPR-22
2. Safety Evaluation

cc w/enclosures: See next page

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Division of Reactor Projects - III, IV, V  
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9/11/90

PD/PDR:DRSP  
RPIerson  
9/12/90

OGC  
9/17/90

M.

~~Handwritten signature and date~~



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

October 12, 1990

Docket No. 50-263

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Northern States Power Company  
414 Nicollet Mall  
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Sincerely,

A handwritten signature in cursive script that reads "William O. Long".

William O. Long, Project Manager  
Project Directorate III-1  
Division of Reactor Projects - III, IV, V  
& Special Projects  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 75 to License No. DPR-22
2. Safety Evaluation

cc w/enclosures: See next page

Mr. T. M. Parker, Manager  
Northern States Power Company

Monticello Nuclear Generating Plant

cc:

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Plant Manager  
Monticello Nuclear Generating Plant  
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Monticello, Minnesota 55362

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Minnesota Department of Health  
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O. J. Arlien, Auditor  
Wright County Board of  
Commissioners  
10 NW Second Street  
Buffalo, Minnesota 55313



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. 75  
License No. DPR-22

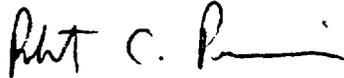
1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Northern States Power Company (the licensee) dated July 31, 1990 complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules 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:

Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 75, 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



Robert C. Pierson, Director  
Project Directorate III-1  
Division of Reactor Projects - III, IV, V  
& Special Projects  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: October 12, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 75

FACILITY OPERATING LICENSE NO. DPR-22

DOCKET NO. 50-263

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the attached pages. The revised pages are identified by amendment number and contain marginal lines indicating the area of change.

Insert

202  
204

Replace

202  
204

3.0 LIMITING CONDITIONS FOR OPERATION

c. For the diesel generators to be considered operable, there shall be a minimum of 32,500 gallons of diesel fuel (7 days supply for 1 diesel generator at full load @ 2500 KW) in the diesel oil storage tank.

4.0 SURVEILLANCE REQUIREMENTS

- c. At least once each Operating Cycle during shutdown simulate a loss of offsite power in conjunction with an ECCS actuation test signal, and:
1. Verify de-energization of the emergency busses and load shedding from the emergency busses.
  2. Verifying diesel starts from ambient conditions on the auto-start signal and is ready to accept emergency loads within ten seconds, energizes the emergency busses with permanently connected loads, energizes the auto-connected emergency loads in proper time sequence, and operates for greater than five minutes while its generator is loaded with the emergency loads.
- d. During the monthly generator test, the diesel fuel oil transfer pump and diesel oil service pump shall be operated.
- e. Once a month the quantity of diesel fuel available shall be logged.
- f. Once a month a sample of diesel fuel shall be taken and checked for quality.

Amendment No. 3, 75

Bases 3.9:

The general objective is to assure an adequate supply of power with at least one active and one standby source of power available for operation of equipment required for a safe plant shutdown, to maintain the plant in a safe shutdown condition, and to operate the required engineered safeguards equipment following an accident.

AC for shutdown requirements and operation of engineered safeguards equipment can be provided by either of the two standby sources of power (the diesel generators) or any of the three active sources of power (No. 1R, No. 2R, or No. 1AR transformers). Refer to Section 8 of the USAR.

To provide for maintenance and repair of equipment and still have redundancy of power sources, the requirement of one active and one standby source of power was established. The plant's main generator is not given credit as a source since it is not available during shutdown.

The plant 250 V dc power is supplied by two batteries. Most station 250 V loads are supplied by the original station 250 V battery. A new 250 V battery has been installed for HPCI loads and may be used for other station loads in the future. Each battery is maintained fully charged by two associated chargers which also supply the normal dc requirements with the batteries as a standby source during emergency conditions. The plant 125 V dc power is normally supplied by two batteries, each with an associated charger. Backup chargers are available.

The minimum diesel fuel supply of 32,500 gallons will supply one diesel generator for a minimum of seven days of full load operation. The diesel fuel oil requirement of 32,500 gallons ensures that one emergency diesel generator can run for 7 days at full load (2500 KW). The amount of fuel oil necessary to run one emergency diesel generator for 7 days is 31,248 gallons. The difference between these two volumes allows for instrument inaccuracy, tank volume uncertainties, and the location of the suction pipe. Additional diesel fuel can normally be obtained within a few hours. Maintaining at least seven days supply is therefore conservative.

In the normal mode of operation, power is available from the off-site sources. One diesel may be allowed out of service based on the availability of off-site power and the daily testing of the remaining diesel generator. Thus, though one diesel generator is temporarily out of service, the off-site sources are available, as well as the remaining diesel generator. Based on a monthly testing period (Specification 4.9), the seven day repair period is justified. (1)

(1) "Reliability of Engineered Safety Features as a Function of Testing Frequency", I.M. Jacobs, Nuclear Safety, Volume 9, No. 4, July - August 1968.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 75 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 July 31, 1990, Northern States Power Company (the licensee) requested an amendment to the Technical Specifications (TSs) appended to Facility Operating License No. DPR-22 for the Monticello Nuclear Generating Plant. The proposed amendment would revise the minimum quantity of diesel oil required to be available in the storage tank from 26,250 gallons to 32,500 gallons. The amendment would also clarify that "full load," for purposes of the diesel oil storage tank capacity calculation, is 2500 KW.

A discussion of the proposed changes and the NRC staff's evaluation and findings relative to each are addressed in Section 2 of this Safety Evaluation Report.

2.0 DISCUSSION AND EVALUATION

On May 30, 1990, the staff issued NRC INFORMATION NOTICE NO. 89-50 "INADEQUATE EMERGENCY DIESEL GENERATOR FUEL SUPPLY" advising licensees of the need to update fuel oil consumption calculations to reflect changes in equipment loading and operating times. Monticello's subsequent investigation concluded that the minimum oil storage tank level in the facility Technical Specifications, based on operating one emergency diesel generator at full load (2500 KW) for seven days, is low. The Technical Specifications presently requires a minimum level corresponding to 26,250 gallons. The amount of diesel fuel required to operate one emergency diesel generator at 2500 KW for seven days is 31,248 gallons.

Staff guidance for the calculation of fuel oil storage requirements is set forth in Regulatory Guide 1.137 "Fuel-Oil Systems for Standby Diesel Generators" which invokes the guidance of ANSI N195-1976, "Fuel Oil Systems for Standby Diesel Generators," Section 5.4. The guidance states that either of two methods may be used; (1) the calculation may assume that a diesel generator operates continuously at rated capacity for seven days, or (2) the calculation may be time-dependent based predicted time-dependent loads. The licensee's proposed changes are consistent with option (1) of the staff guidance, and are therefore acceptable.

It is noted that the actual capacity of the Monticello underground diesel oil storage tank is 60,000 gallons and fluid level is maintained above the low level alarm setpoints (40,330 gallons (LOW) and 35,575 gallons (LOW-LOW)). This practice provides additional margin with respect to Technical Specifications compliance and, in event of a design basis event would also provide sufficient diesel oil availability to permit limited operation of selected non-safety related equipment such as the plant heating boiler, diesel fire pump, etc. These features are acceptable.

### 3.0 ENVIRONMENTAL CONSIDERATION

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 or changes an inspection or surveillance requirement. We have 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 has previously published 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 CONCLUSION

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

Principal Contributor: W. Long

Dated: October 12, 1990