



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

August 1, 2016

Mr. Peter A. Gardner  
Site Vice President  
Monticello Nuclear Generating Plant  
Northern States Power Company - Minnesota (NSPM)  
2807 West County Road 75  
Monticello, MN 55362-9637

SUBJECT: MONTICELLO NUCLEAR GENERATING PLANT - ISSUANCE OF AMENDMENT  
RE: TECHNICAL SPECIFICATION SURVEILLANCE REQUIREMENT 3.5.1.3.B  
TO CORRECT ALTERNATE NITROGEN SYSTEM PRESSURE (CAC NO.  
MF6704)

Dear Mr. Gardner:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment No. 190 to Renewed Facility Operating License No. DPR-22 for the Monticello Nuclear Generating Plant. The amendment consists of changes to the technical specifications (TSs) in response to your application dated September 2, 2015.

The amendment revises TS Surveillance Requirement 3.5.1.3.b to require verification that the alternate nitrogen system pressure be greater than or equal to 1060 pounds per square inch gauge.

A copy of our related safety evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

A handwritten signature in black ink, appearing to be "Robert F. Kuntz", written over a large, stylized, abstract graphic element.

Robert F. Kuntz, Senior Project Manager  
Plant Licensing Branch III-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-263

Enclosures:

1. Amendment No. 190 to DPR-22
2. Safety Evaluation

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

NORTHERN STATES POWER COMPANY

DOCKET NO. 50-263

MONTICELLO NUCLEAR GENERATING PLANT

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 190  
License No. DPR-22

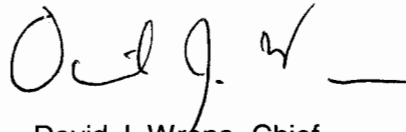
1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Northern States Power Company (NSPM, the licensee), dated September 2, 2015, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the 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 Renewed 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. 190, are hereby incorporated in the license. NSPM shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 90 days.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in black ink, appearing to read "D. J. Wrona", with a horizontal line extending to the right.

David J. Wrona, Chief  
Plant Licensing Branch III-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Renewed Operating  
License No. DPR-22 and  
Technical Specifications

Date of Issuance: August 1, 2016

ATTACHMENT TO LICENSE AMENDMENT NO. 190

RENEWED FACILITY OPERATING LICENSE NO. DPR-22

DOCKET NO. 50-263

Replace the following page of Renewed Facility Operating License DPR-22 with the attached revised page. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

REMOVE

3

INSERT

3

Replace the following pages of Appendix A, Technical Specifications, with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE

3.5.1-5

INSERT

3.5.1-5

2. Pursuant to the Act and 10 CFR Part 70, NSPM to receive, possess, and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operations, as described in the Final Safety Analysis Report, as supplemented and amended, and the licensee's filings dated August 16, 1974 (those portions dealing with handling of reactor fuel);
  3. Pursuant to the Act and 10 CFR Parts 30, 40 and 70, NSPM to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
  4. Pursuant to the Act and 10 CFR Parts 30, 40 and 70, NSPM to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
  5. Pursuant to the Act and 10 CFR Parts 30 and 70, NSPM to possess, but not separate, such byproduct and special nuclear material as may be produced by operation of the facility.
- C. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission, now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:
1. Maximum Power Level  
NSPM is authorized to operate the facility at steady state reactor core power levels not in excess of 2004 megawatts (thermal).
  2. Technical Specifications  
The Technical Specifications contained in Appendix A, as revised through Amendment No. 190, are hereby incorporated in the license. NSPM shall operate the facility in accordance with the Technical Specifications.
  3. Physical Protection  
NSPM shall implement and maintain in effect all provisions of the Commission-approved physical security, guard training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.5.1.1	Verify, for each ECCS injection/spray subsystem, locations susceptible to gas accumulation are sufficiently filled with water.	31 days
SR 3.5.1.2	<p>-----NOTE-----            Not required to be met for system vent flow paths opened under administrative control.            -----</p> <p>Verify each ECCS injection/spray subsystem manual, power operated, and automatic valve in the flow path, that is not locked, sealed, or otherwise secured in position, is in the correct position.</p>	31 days
SR 3.5.1.3	<p>Verify ADS pneumatic pressure is as follows for each required ADS pneumatic supply:</p> <p>a. S/RV Accumulator Bank header pressure <math>\geq</math> 88.3 psig; and</p> <p>b. Alternate Nitrogen System pressure is <math>\geq</math> 1060 psig.</p>	31 days
SR 3.5.1.4	<p>-----NOTE-----            Only required to be met in MODE 1.            -----</p> <p>Verify the RHR System intertie return line isolation valves are closed.</p>	31 days
SR 3.5.1.5	Verify correct breaker alignment to the LPCI swing bus.	31 days
SR 3.5.1.6	Verify each recirculation pump discharge valve cycles through one complete cycle of full travel or is de-energized in the closed position.	In accordance with the Inservice Testing Program



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 190 TO

RENEWED FACILITY OPERATING LICENSE NO. DPR-22

NORTHERN STATES POWER COMPANY

MONTICELLO NUCLEAR GENERATING PLANT

DOCKET NO. 50-263

1.0 INTRODUCTION

By application dated September 2, 2015, (Agencywide Documents Access and Management System (ADAMS Accession No. ML15246A530), Northern States Power Company (NSPM, the licensee), requested changes to the technical specifications (TSs) for Monticello Nuclear Generating Plant (MNGP).

The proposed changes would revise TS Surveillance Requirement 3.5.1.3.b to require verification that the MNGP alternate nitrogen system (ANS) required pressure be greater than or equal to 1060 pounds per square inch gauge (psig) instead of greater than or equal to 410 psig as is currently stated.

2.0 REGULATORY EVALUATION

Title 10 of *The Code of Federal Regulations* (10 CFR) Section 50.36(c)(3) states that SRs are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met.

NUREG-0737, "*Clarification of TMI Action Plan Requirements*," Item II.K.3.28, requires long term (100 day) post-accident depressurization capability to assure long term shutdown cooling operability.

3.0 TECHNICAL EVALUATION

As discussed in the license amendment request, the licensee determined that the current MNGP technical specification value for ANS is non-conservative. The non-conservatism exists based on non-conservative errors and deficiencies identified in the calculation that supports ANS operability. Upon discovery of the errors, the licensee implemented administrative controls to maintain ANS pressure above 1060 psig, in accordance with the guidance of U.S. Nuclear

Regulatory Commission (NRC or Commission) Administrative Letter 98-10, "*Disposition of Technical Specifications that are Insufficient to Assure Plant Safety*" (ADAMS Accession No. ML031110108). To correct the non-conservatism in the technical specifications, the licensee submitted the September 2, 2015, license amendment request.

The ANS system provides automatic, safety-related, long-term, backup pneumatic supply upon loss of the nonsafety-related instrument air/nitrogen system distribution. It is split into an A and B train, which services various loads, including six safety relief valves (SRVs) associated with the automatic depressurization system (ADS), low-low set (LLS), and the alternate shutdown and manual depressurization functions.

The NRC staff has reviewed the licensee's request to ensure it has no effect on the ability of the ANS system to perform its required ADS function. The NRC staff also reviewed the submitted information to ensure that the ANS system provides sufficient capacity to cycle the ADS valves five times at design pressure to satisfy Three Mile Island (TMI) action item II.K.3.28 of NUREG-0737.

Operability of the ANS is based on the capability to provide sufficient volume to its safety and required nonsafety loads. The loads of the B train of ANS bound those served by the A train. For that reason, the B train loads were used for calculation of the surveillance requirement pressure for ANS operability. The B train ANS loads consist of one ADS SRV, one LLS SRV, one manually operated SRV, four inboard main steam isolation valves, three T-ring seals on the containment purge and vent valves, and the hard piped vent system.

The licensee stated that a pressure switch in each ANS subsystem isolates the nitrogen supply from its loads when pressure decreases to 330 psig. To determine the required nitrogen bottle pressure for operability, the volume of nitrogen required to operate the loads was added to the volume of nitrogen remaining at the minimum pressure.

The licensee stated that an isentropic expansion of the nitrogen as it exits the bottles was assumed. This method is conservative to an isothermal expansion because it results in the lowest pressures in the ANS system. The Ideal Gas equation for isentropic expansion was used because the lower the pressure in the ANS system during operation of equipment, the more mass that will initially flow from the ANS tanks into the system. The required ANS load volume is added to the volume remaining in the nitrogen bottles at the time of low pressure isolation. A conservative isolation pressure of 500 psig was used which also allows additional margin for instrument error.

The NRC staff reviewed the description of the licensee's calculations in the amendment request, and verified that the ANS B train was capable of providing ten SRV actuations (five actuations for each of the two SRVs (one ADS and one LLS) supplied by ANS B train) supporting TMI action item II.K.3.28 in addition to other system design functions. Thus, the NRC staff concludes that the proposed change to TS surveillance requirement 3.5.1.3.b is consistent with the MNGP licensing basis, and therefore is acceptable.

#### 4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Minnesota State official was notified of the proposed issuance of the amendment. The State official had no comments.

#### 5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes the SRs. The NRC 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 has previously issued a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding (80 FR 61483; dated October 13, 2015). Accordingly, the 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 the amendment.

#### 6.0 CONCLUSION

The Commission has 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, (2) there is reasonable assurance that such activities will be conducted in compliance with the Commission's regulations, and (3) 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. Sweat

Date of issuance: August 1, 2016

August 1, 2016

Mr. Peter A. Gardner  
Site Vice President  
Monticello Nuclear Generating Plant  
Northern States Power Company - Minnesota (NSPM)  
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Sincerely,  
*/RA/*

Robert F. Kuntz, Senior Project Manager  
Plant Licensing Branch III-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

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**ADAMS Accession No.: ML16196A303**

OFFICE	LPL3-1/PM	LPL3-1/LA	SBPB/BC	STSB/BC	OGC/NLO	LPL3-1/BC	LPL3-1/PM
NAME	RKuntz	SRohrer	RDennig	AKlein	JLindell	DWrona	RKuntz
DATE	7/18/16	7/18/16	7/18/16	7/19/16	7/26/16	8/1/16	8/1/16

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