



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

June 21, 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 SPECIFICATIONS TASK FORCE STANDARD TECHNICAL  
SPECIFICATIONS CHANGE TRAVELER TSTF-523, REVISION 2, "GENERIC  
LETTER 2008-01, MANAGING GAS ACCUMULATION" (CAC NO. MF6479)**

Dear Mr. Gardner:

The U.S. Nuclear Regulatory Commission (NRC) has issued the enclosed Amendment No. 189 to Renewed 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 application dated July 25, 2015.

The amendment adopts NRC-approved Technical Specifications Task Force (TSTF) Standard Technical Specifications (STS) Change Traveler TSTF-523, Revision 2, "Generic Letter 2008-01, Managing Gas Accumulation."

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 "R. Kuntz", is written over a large, stylized, handwritten "A" or "K" shape.

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. 189 to DPR-22
2. Safety Evaluation

cc w/encls: Distribution via ListServ



**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. 189  
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 July 25, 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:

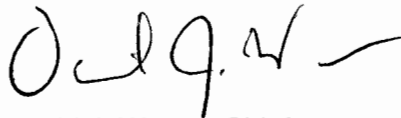
Enclosure 1

Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 189, 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 prior to the startup from the 2017 outage.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in black ink, appearing to read 'D. J. Wrona', followed by a horizontal flourish.

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: June 21, 2016

ATTACHMENT TO LICENSE AMENDMENT NO. 189

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

3.4.7-2  
-----  
3.4.8-2  
3.5.1-5  
3.5.2-3  
3.5.3-2  
3.6.1.8-2  
3.6.2.3-2  
3.9.7-2  
3.9.8-2

INSERT

3.4.7-2  
3.4.7-3  
3.4.8-2  
3.5.1-5  
3.5.2-3  
3.5.3-2  
3.6.1.8-2  
3.6.2.3-2  
3.9.7-2  
3.9.8-2

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.189, 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

RHR Shutdown Cooling System - Hot Shutdown  
3.4.7

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. No RHR shutdown cooling subsystem in operation.  <u>AND</u>  No recirculation pump in operation.	B.1 Initiate action to restore one RHR shutdown cooling subsystem or one recirculation pump to operation.	Immediately
	<u>AND</u>	
	B.2 Verify reactor coolant circulation by an alternate method.	1 hour from discovery of no reactor coolant circulation
	<u>AND</u>	Once per 12 hours thereafter
	<u>AND</u>	
	B.3 Monitor reactor coolant temperature and pressure.	Once per hour

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.4.7.1      -----NOTE----- Not required to be met until 2 hours after reactor steam dome pressure is less than the RHR shutdown cooling supply isolation interlock. ----- Verify one RHR shutdown cooling subsystem or recirculation pump is operating.	12 hours

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.4.7.2</p> <p>-----NOTE-----</p> <p>Not required to be performed until 12 hours after reactor steam dome pressure is less than the RHR shutdown cooling supply isolation interlock.</p> <p>-----</p> <p>Verify RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.</p>	<p>31 days</p>

RHR Shutdown Cooling System - Cold Shutdown  
3.4.8

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
	B.2 Monitor reactor coolant temperature and pressure.	Once per hour

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.8.1	Verify one RHR shutdown cooling subsystem or recirculation pump is operating.	12 hours
SR 3.4.8.2	Verify RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.	31 days



**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> <ul style="list-style-type: none"> <li>a. S/RV Accumulator Bank header pressure <math>\geq 88.3</math> psig; and</li> <li>b. Alternate Nitrogen System pressure is <math>\geq 410</math> psig.</li> </ul>	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

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY												
SR 3.5.2.2	Verify, for each required ECCS injection/spray subsystem, locations susceptible to gas accumulation are sufficiently filled with water.	31 days												
SR 3.5.2.3	<p>-----NOTE----- Not required to be met for system vent flow paths opened under administrative control. -----</p> <p>Verify each required 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 3.5.2.4	<p>Verify each required ECCS pump develops the specified flow rate against a system head corresponding to the specified reactor to containment pressure.</p> <table><thead><tr><th><u>System</u></th><th><u>Flow Rate</u></th><th><u>No. of Pumps</u></th><th><u>System Head Corresponding to a Reactor to Containment Pressure of</u></th></tr></thead><tbody><tr><td>Core Spray</td><td>≥ 2835 gpm</td><td>1</td><td>≥ 130 psi</td></tr><tr><td>LPCI</td><td>≥ 3870 gpm</td><td>1</td><td>≥ 20 psi</td></tr></tbody></table>	<u>System</u>	<u>Flow Rate</u>	<u>No. of Pumps</u>	<u>System Head Corresponding to a Reactor to Containment Pressure of</u>	Core Spray	≥ 2835 gpm	1	≥ 130 psi	LPCI	≥ 3870 gpm	1	≥ 20 psi	In accordance with the Inservice Testing Program
<u>System</u>	<u>Flow Rate</u>	<u>No. of Pumps</u>	<u>System Head Corresponding to a Reactor to Containment Pressure of</u>											
Core Spray	≥ 2835 gpm	1	≥ 130 psi											
LPCI	≥ 3870 gpm	1	≥ 20 psi											
SR 3.5.2.5	<p>-----NOTE----- Vessel injection/spray may be excluded. -----</p> <p>Verify each required ECCS injection/spray subsystem actuates on an actual or simulated automatic initiation signal.</p>	24 months												

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.5.3.1	<p>-----NOTE----- Not required to be met for system vent flow paths opened under administrative control. -----</p> <p>Verify each RCIC System 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 3.5.3.2	<p>-----NOTE----- Not required to be performed until 12 hours after reactor steam pressure and flow are adequate to perform the test. -----</p> <p>Verify, with reactor pressure <math>\leq 1025.3</math> psig and <math>\geq 950</math> psig, the RCIC pump can develop a flow rate <math>\geq 400</math> gpm against a system head corresponding to reactor pressure.</p>	In accordance with the Inservice Testing Program
SR 3.5.3.3	<p>-----NOTE----- Not required to be performed until 12 hours after reactor steam pressure and flow are adequate to perform the test. -----</p> <p>Verify, with reactor pressure <math>\leq 165</math> psig, the RCIC pump can develop a flow rate <math>\geq 400</math> gpm against a system head corresponding to reactor pressure.</p>	24 months
SR 3.5.3.4	<p>-----NOTE----- Vessel injection may be excluded. -----</p> <p>Verify the RCIC System actuates on an actual or simulated automatic initiation signal.</p>	24 months
SR 3.5.3.5	Verify the RCIC System locations susceptible to gas accumulation are sufficiently filled with water.	31 days

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.1.8.2	Verify each drywell spray header and nozzle is unobstructed.	10 years
SR 3.6.1.8.3	Verify RHR drywell spray subsystem locations susceptible to gas accumulation are sufficiently filled with water.	31 days

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.2.3.2	Verify each required RHR pump develops a flow rate $\geq 3870$ gpm through the associated heat exchanger while operating in the suppression pool cooling mode.	In accordance with the Inservice Testing Program
SR 3.6.2.3.3	Verify RHR suppression pool cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.	31 days

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
	B.3 Initiate action to restore one standby gas treatment subsystem to OPERABLE status.	Immediately
	<u>AND</u> B.4 Initiate action to restore isolation capability in each required secondary containment penetration flow path not isolated.	Immediately
C. No RHR shutdown cooling subsystem in operation.	C.1 Verify reactor coolant circulation by an alternate method.  <u>AND</u> C.2 Monitor reactor coolant temperature.	1 hour from discovery of no reactor coolant circulation  <u>AND</u> Once per 12 hours thereafter  Once per hour

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.7.1	Verify one RHR shutdown cooling subsystem is operating.	12 hours
SR 3.9.7.2	Verify required RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.	31 days

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
	B.3 Initiate action to restore isolation capability in each required secondary containment penetration flow path not isolated.	Immediately
C. No RHR shutdown cooling subsystem in operation.	<p>C.1 Verify reactor coolant circulation by an alternate method.</p> <p><u>AND</u></p> <p>C.2 Monitor reactor coolant temperature.</p>	<p>1 hour from discovery of no reactor coolant circulation</p> <p><u>AND</u></p> <p>Once per 12 hours thereafter</p> <p>Once per hour</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.9.8.1 Verify one RHR shutdown cooling subsystem is operating.	12 hours
SR 3.9.8.2 Verify RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.	31 days



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 189 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 July 15, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15196A576), Northern States Power Company (NSPM, the licensee), requested changes to the technical specifications (TSs) for Monticello Nuclear Generating Plant (MNGP). Specifically, the licensee requested to adopt U.S. Nuclear Regulatory Commission (NRC)-approved Technical Specifications Task Force (TSTF) Standard Technical Specifications (STS) Change Traveler TSTF-523, Revision 2, "Generic Letter 2008-01, Managing Gas Accumulation" (ADAMS Accession No. ML13053A075), dated February 21, 2013. The availability of this TS improvement was announced in the *Federal Register* on January 15, 2014 (79 FR 2700), as part of the consolidated line item improvement process.

The proposed change would revise surveillance requirements (SRs) related to gas accumulation for the emergency core cooling system (ECCS) and reactor core isolation cooling (RCIC) system. The proposed change would also add new SRs related to gas accumulation for the residual heat removal (RHR) systems. The TS Bases changes associated with these SRs would also be made.

The licensee stated that it has reviewed the information contained in the model safety evaluation dated December 23, 2013 (ADAMS Accession No. ML13255A169), and that the license amendment request is consistent with the NRC-approved TSTF-523.

2.0 REGULATORY EVALUATION

2.1 Background

Gas accumulation in reactor systems can result in water hammer, pump cavitation, and pumping of non-condensable gas into the reactor vessel. These effects may result in the subject system being unable to perform its specified safety function. The NRC issued Generic Letter



(GL) 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray [CS] Systems," in January 2008 to address the issue of gas accumulation in ECCS, DHR, and CS systems (ADAMS Accession No. ML072910759). The industry and NRC staff agreed that a change to the STS and plant-specific TS would be necessary to address some issues discussed in GL 2008-01. The TSTF-523 contains changes to the TS SRs and TS Bases to address some of the concerns in GL 2008-01. The licensee proposed amending the MNGP TS using a plant-specific adoption of the TSTF-523 changes.

## 2.2 Technical Specification Changes

Changes were proposed for SRs 3.5.1.1, 3.5.1.2, 3.5.2.2, 3.5.2.3, and 3.5.3.1, as well as the addition of new SRs 3.4.7.2, 3.4.8.2, 3.5.3.5, 3.6.1.8.3, 3.6.2.3.3, 3.9.7.2, and 3.9.8.2 to TS 3.4.7, "Residual Heat Removal (RHR) Shutdown Cooling System – Hot Shutdown," TS 3.4.8, "Residual Heat Removal (RHR) Shutdown Cooling System – Cold Shutdown," TS 3.5.1, "ECCS – Operating," TS 3.5.2, "ECCS – Shutdown," TS 3.5.3, "RCIC System," TS 3.6.1.8, "Residual Heat Removal (RHR) Drywell Spray," TS 3.6.2.3, "Residual Heat Removal (RHR) Suppression Pool Cooling," TS 3.9.7, "Residual Heat Removal (RHR) – High Water Level," and TS 3.9.8, "Residual Heat Removal (RHR) – Low Water Level," respectively.

## 2.3 Regulatory Review

The regulations in Appendix A to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50 or similar plant-specific principal design criteria provide design requirements. Appendix B to 10 CFR Part 50, the TSs, and the licensee quality assurance programs provide operating requirements. The regulatory requirements of 10 CFR Part 50, Appendix A, that are applicable to gas management in the subject systems include: General Design Criteria (GDC) 1, 34, 35, 36, 37, 38, 39 and 40. GDC 1 requires, in part, that the subject systems be designed, fabricated, erected, and tested to quality standards. GDC 34 requires an RHR system designed to maintain specified acceptable fuel design limits and to meet design conditions that are not exceeded if a single failure occurs and specified electrical power systems fail. GDC 35, 36, and 37 require an ECCS design that meets performance, inspection, and testing requirements. Additionally, the regulations in 10 CFR 50.46 provide specified ECCS performance criteria. GDC 38, 39, and 40 require a containment heat removal system design that meets performance, inspection, and testing requirements.

The plant design criteria for Monticello are listed in the Updated Safety Analysis Report (USAR) Section 1.2, "Principal Design Criteria." The AEC published the final rule that added Appendix A to 10 CFR Part 50, "General Design Criteria for Nuclear Power Plants," in the *Federal Register* (36 FR 3255) on February 20, 1971, with the rule effective on May 21, 1971. In accordance with an NRC staff requirements memorandum from S. J. Chilk to J. M. Taylor, "SECY-92-223 - Resolution of Deviations Identified During the Systematic Evaluation Program," dated September 18, 1992 (ADAMS Accession No. ML003763736), the Commission decided not to apply the final GDC to plants with construction permits issued prior to May 21, 1971, which includes Monticello. Monticello was not licensed to the 10 CFR 50, Appendix A GDC. The MNGP USAR provides an assessment against the proposed GDC in Appendix E. Similar to the GDC 1, and 35-40 requirements discussed above, the MNGP USAR Section E.2.1, states that "the reactor facility's essential components and systems are designed, fabricated, erected, and perform in accordance with the specified quality standards which are, as a minimum, in

accordance with applicable codes and regulations.” Similar to the GDC 34 requirements discussed above, the MNGP USAR states in Section E.2.7 that “the emergency core cooling systems (ECCS) are designed such that at least two different ECCSs of different phenomena are provided to prevent clad melt over the entire spectrum of postulated breaks. Such capability is available even with the loss of all off-site AC [alternate current] power.”

Quality assurance criteria provided in 10 CFR Part 50, Appendix B, that apply to gas management in the subject systems include: Criteria III, V, XI, XVI, and XVII. Criteria III and V require measures to ensure that applicable regulatory requirements and the design basis, as defined in 10 CFR 50.2, “Definitions,” and as specified in the license application, are correctly translated into controlled specifications, drawings, procedures, and instructions. Criterion XI requires a test program to ensure that the subject systems will perform satisfactorily in service and requires that test results shall be documented and evaluated to ensure that test requirements have been satisfied. Criterion XVI requires measures to ensure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances, are promptly identified and corrected, and that significant conditions adverse to quality are documented and reported to management. Criterion XVII requires maintenance of records of activities affecting quality.

The NRC’s regulatory requirements related to the content of the TSs are contained in 10 CFR 50.36(c). Section 10 CFR 50.36(c) requires that the TSs include items in the following categories: (1) safety limits, limiting safety systems settings, and limiting control settings; (2) limiting conditions for operation (LCO); (3) SRs; (4) design features; and (5) administrative controls. 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 LCOs will be met. Typically, TS Section 5 requires that licensees establish, implement, and maintain written procedures covering the applicable procedures recommended in Appendix A to Regulatory Guide (RG) 1.33, Revision 2, “Quality Assurance Program Requirements (Operation).” Appendix A to RG 1.33, Revision 2, identifies instructions for filling and venting the ECCS and decay heat removal system, as well as for draining and refilling heat exchangers. Standard TSs and most licensee TSs include SRs to verify that at least some of the subject systems piping is filled with water.

The NRC’s guidance for the format and content of licensee TSs is in NUREG-1433, “Standard Technical Specifications General Electric BWR/4 Plants” (ADAMS Accession Nos. ML12104A192 and ML12104A193).

Regulatory guidance for the NRC staff’s review of containment heat removal systems, ECCS, and RHR systems is provided in the following revisions and sections of NUREG-0800, “Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition” (SRP) during the review.

- Revision 5 of the SRP, Section 6.2.2, “Containment Heat Removal Systems,” dated March 2007 (ADAMS Accession No. ML070160661), provides the procedures concerning the review of containment heat removal under post-accident conditions to help ensure compliance with GDC 38, 39, and 40.

- Revision 3 of the SRP, Section 6.3, "Emergency Core Cooling System," dated March 2007 (ADAMS Accession No. ML070550068), provides the procedures concerning the review of ECCS to help ensure compliance with GDC 35, 36, and 37.
- Revision 5 of the SRP, Section 5.4.7, "Residual Heat Removal (RHR) System," dated May 2010 (ADAMS Accession Number ML100680577), provides the procedures concerning the review of RHR system as it is used to cool the reactor coolant system during and following shutdown to help ensure compliance with GDC 34.

### 3.0 TECHNICAL EVALUATION

The proposed changes adopted the TS format and content, to the extent practicable, contained in the changes made to NUREG-1433, "Standard Technical Specifications General Electric BWR/4 Plants" by TSTF-523.

The NRC staff compared the proposed changes to the existing SRs, as well as the regulatory requirements of 10 CFR 50.36(c).

The licensee proposed the following TS changes:

- (1) Add SR 3.4.7.2, which states, "Verify RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water" together with a note that states "Not required to be performed until 12 hours after reactor steam dome pressure is less than the RHR shutdown cooling supply isolation interlock" and a frequency of 31 days.
- (2) Add SR 3.4.8.2, which states, "Verify RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water" with a frequency of 31 days.
- (3) Revise the language for SR 3.5.1.1, from "Verify, for each low pressure ECCS injection/spray subsystem, the piping is filled with water from the pump discharge valve to the injection valve" to "Verify, for each ECCS injection/spray subsystem, locations susceptible to gas accumulation are sufficiently filled with water."
- (4) Add a note to SR 3.5.1.2, which states, "Not required to be met for system vent flow paths opened under administrative control."
- (5) Revise the language for SR 3.5.2.2, from "Verify, for each ECCS injection/spray subsystem, the piping is filled with water from the pump discharge valve to the injection valve" to "Verify, for each ECCS injection/spray subsystem, locations susceptible to gas accumulation are sufficiently filled with water."
- (6) Add a note to SR 3.5.2.3, which states, "Not required to be met for system vent flow paths opened under administrative control."
- (7) Add a note to SR 3.5.3.1, which states, "Not required to be met for system vent flow paths opened under administrative control."

- (8) Add SR 3.5.3.5, which states "Verify the RCIC System locations susceptible to gas accumulation are sufficiently filled with water" with a frequency of 31 days.
- (9) Add SR 3.6.1.8.3, which states, "Verify RHR drywell spray subsystem locations susceptible to gas accumulation are sufficiently filled with water" with a frequency of 31 days.
- (10) Add SR 3.6.2.3.3, which states, "Verify RHR suppression pool cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water" with a frequency of 31 days.
- (11) Add SR 3.9.7.2, which states, "Verify required RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water" with a frequency of 31 days.
- (12) Add SR 3.9.8.2, which states, "Verify RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water" with a frequency of 31 days.

The new language for the SRs was developed using licensee responses to GL 2008-01 and the NRC staff discussion contained in Task Interface Agreement (TIA) 2008-03, "Emergency Core Cooling System (ECCS) Voiding Relative to Compliance with Surveillance Requirements (SR) 3.5.1.1, 3.5.2.3, and 3.5.3.1" dated October 21, 2008 (ADAMS Accession No. ML082560209). Many of the GL 2008-01 responses stated that licensees identified system locations susceptible to gas accumulation. In the TIA, the NRC staff stated that the intent of the TS SRs, which state "full of water," may be met if the licensee can establish, through an Operability Determination, that there is a reasonable expectation that the system in question will perform its specified safety function. Therefore, the phrase "sufficiently filled with water," was recommended for the proposed TS changes. In the TS, "sufficiently filled with water" is understood to mean "sufficiently filled with water to support Operability." Section 50.36(c)(3) of 10 CFR states that one of the purposes of the SR is to verify that the LCO is met. Therefore, the new SR language, "Verify the [system name] locations susceptible to gas accumulation are sufficiently filled with water," is acceptable since this language will allow the licensee to make a conclusion as to whether or not a system is operable.

The proposed frequency of 31 days for SRs 3.4.7.2, 3.4.8.2, 3.5.3.5, 3.6.1.8.3, 3.6.2.3.3, 3.9.7.2, and 3.9.8.2 is consistent with the changes made to NUREG-1433, "Standard Technical Specifications General Electric BWR/4 Plants" by TSTF-523. The 31 day frequency takes into consideration the gradual nature of gas accumulation in the RHR Shutdown Cooling System, RHR Drywell Spray, RHR Suppression Pool Cooling, and RCIC system piping and the procedural controls governing system operation. Therefore, the proposed 31 day frequency for the new SRs is acceptable.

The addition of the note to TS 3.4.7.2, which states that the SR does not have to be performed until 12 hours after reactor steam dome pressure is less than the RHR shutdown cooling supply isolation interlock, provides a limited time to perform the surveillance after entering the applicability of the LCO. The note allows sufficient time to verify all RHR shutdown cooling

subsystem locations susceptible to gas accumulation are sufficiently filled with water upon entering the mode of applicability during a rapid shutdown. In addition MNGP TS Section 1.4 contains usage rules that define the proper use and application of frequency requirements and ensures the requirement to manage gas accumulation is not affected. Because the note (as controlled by TS 1.4) allows sufficient time to take actions necessary to maintain safety and is consistent with STS Section 1.4, the note is acceptable.

The addition of the notes that allow the SRs to not be met for system vent flow paths opened under administrative control is necessary to allow the licensee to use administratively controlled manual action to close the system vent flow path in order to maintain system Operability during system venting and performance of the proposed gas accumulation SR. Therefore, these notes are acceptable.

The NRC staff finds that the proposed SRs meet the regulatory requirements of 10 CFR 50.36 because they provide assurance that the necessary quality of systems and components will be maintained and that the LCO will be met. Therefore, the NRC staff finds the proposed amendment 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 or changes surveillance requirements. 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 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 61484). 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: M. Hamm, NRR

Date: June 21, 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 SPECIFICATIONS TASK FORCE STANDARD TECHNICAL  
SPECIFICATIONS CHANGE TRAVELER TSTF-523, REVISION 2, "GENERIC  
LETTER 2008-01, MANAGING GAS ACCUMULATION" (CAC NO. MF6479)

Dear Mr. Gardner:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment No. 189 to Renewed 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 application dated July 25, 2015.

The amendment adopts NRC-approved Technical Specifications Task Force (TSTF) Standard Technical Specifications (STS) Change Traveler TSTF-523, Revision 2, "Generic Letter 2008-01, Managing Gas Accumulation."

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,

/RA/

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. 189 to DPR-22
  2. Safety Evaluation
- cc w/encls: Distribution via ListServ

**DISTRIBUTION:**

PUBLIC  
RidsNrrPMMonticelloResource  
LPL3-1 r/f  
RidsNrrDssStsb Resource  
RidsNrrDorlLpl3-1 Resource

RidsAcrs\_MailCTR Resource  
RidsNrrDorlDpr Resource  
RidsRgn3MailCenter Resource  
RidsNrrLAMHenderson Resource

**ADAMS Accession No.: ML16125A165**

**\*via memo**

OFFICE	LPL3-1/PM	LPL3-1/LA	STSB/BC	OGC/NLO	LPL3-1/BC	LPL3-1/PM
NAME	RKuntz	MHenderson	AKlein*	MYoung	DWrona	RKuntz
DATE	05/12/16	05/10/16	04/14/16	06/16/16	06/21/16	06/21/16

**OFFICIAL RECORD COPY**