



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

July 27, 2012

Mr. Mark A. Schimmel
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: TESTING OF MAIN STEAM SAFETY/RELIEF VALVES (TAC NO. ME7920)

Dear Schimmel:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 168 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 February 2, 2012.

The amendment revises the Technical Specifications Surveillance Requirement (SR) 3.4.3.2, SR 3.5.1.12, and SR 3.6.1.5.1 to provide an alternative means for testing of main steam system safety/relief valves during various modes of operation.

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, reading "Peter S. Tam", is positioned above the typed name.

Peter S. Tam, 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. 168 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. 168
License No. DPR-22

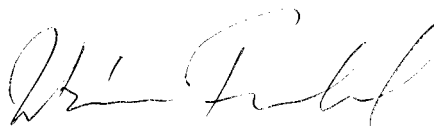
1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Northern States Power Company (NSPM, the licensee), dated February 2, 2012, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's 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. 168, 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 startup from the 2013 Refueling Outage.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in black ink, appearing to read 'Istvan Frankl', is positioned above the printed name and title.

Istvan Frankl, Acting Chief
Plant Licensing Branch III-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: July 27, 2012

ATTACHMENT TO LICENSE AMENDMENT NO. 168

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

INSERT

3

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 a marginal line indicating the area of change.

REMOVE

INSERT

3.4.3-2

3.4.3-2

3.5.1-7

3.5.1-7

3.6.1.5-2

3.6.1.5-2

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) and August 17, 1977 (those portions dealing with fuel assembly storage capacity);
 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 1775 megawatts (thermal).
 2. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 168, 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 3.4.3.1	Verify the safety function lift setpoints of the required S/RVs are 1109 ± 33.2 psig. Following testing, lift settings shall be 1109 ± 11.0 psig.	In accordance with the Inservice Testing Program
SR 3.4.3.2	<p>-----NOTE-----</p> <p>Not required to be performed until 12 hours after reactor steam flow is adequate to perform the test.</p> <p>-----</p> <p>Verify each required S/RV is capable of being opened.</p>	In accordance with the Inservice Testing Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.5.1.10	-----NOTE----- Vessel injection/spray may be excluded. -----	24 months
	Verify each ECCS injection/spray subsystem actuates on an actual or simulated automatic initiation signal.	
SR 3.5.1.11	-----NOTE----- Valve actuation may be excluded. -----	24 months
	Verify the ADS actuates on an actual or simulated automatic initiation signal.	
SR 3.5.1.12	-----NOTE----- Not required to be performed until 12 hours after reactor steam flow is adequate to perform the test. -----	In accordance with the Inservice Testing Program
	Verify each ADS valve is capable of being opened.	
SR 3.5.1.13	Verify automatic transfer capability of the LPCI swing bus power supply from the normal source to the backup source.	24 months

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.1.5.1	-----NOTE----- Not required to be performed until 12 hours after reactor steam flow is adequate to perform the test. -----	In accordance with the Inservice Testing Program
	Verify each LLS valve is capable of being opened.	
SR 3.6.1.5.2	-----NOTE----- Valve actuation may be excluded. -----	24 months
	Verify the LLS System actuates on an actual or simulated automatic initiation signal.	



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 168

RENEWED FACILITY OPERATING LICENSE NO. DPR-22

NORTHERN STATES POWER COMPANY

MONTICELLO NUCLEAR GENERATING PLANT

DOCKET NO. 50-263

1.0 INTRODUCTION

By letter dated February 2, 2012 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML12034A020), Northern States Power Company – Minnesota (NSPM), the licensee, submitted a request for amendment for Monticello Nuclear Generating Plant (MNGP). The proposed changes would modify Technical Specifications (TS) Surveillance Requirement (SR) 3.4.3.2, SR 3.5.1.12, and SR 3.6.1.5.1 to provide an alternative means for testing of main steam system safety/relief valves (S/RVs) during various modes of operation. These valves provide overpressure protection and automatic depressurization relief functions. The proposed changes would allow demonstration of the capability of the valves to perform their function without requiring that the valves be cycled with steam pressure while installed in the plant.

The proposed changes would allow the licensee to demonstrate valve operability by manually stroking the S/RV actuator, in conjunction with the American Society of Mechanical Engineers (ASME) *Code for Operation and Maintenance of Nuclear Power Plants* (OM Code) inservice testing (IST) program, without lifting the main valve disc. The main valve disc would be tested as required by the MNGP IST Program.

2.0 REGULATORY EVALUATION

Title 10 of the *Code of Federal Regulations* (10 CFR) 50.36, "Technical Specifications," provides the regulatory requirements for the contents required in a plant's TS. Criterion 3 of 10 CFR 50.36(c)(2)(ii) requires a limiting condition for operation to be established for a structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design-basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. 10 CFR 50.36 paragraph (c)(3) specifies that SRs should ensure that limiting conditions for operation are met. The licensee states that Criterion 3 of 10 CFR 50.36(c)(2)(ii) will continue to be met since full functionality will be tested under the proposed methodology.

The provisions of 10 CFR 50.55a, "Codes and Standards," specify that the inservice testing program of a nuclear power plant must follow the American Society of Mechanical Engineers Boiler and Pressure Vessel Code.

ENCLOSURE

3.0 TECHNICAL EVALUATION

3.1 Licensee's Basis for TS Changes

As a basis for the proposed TS changes, the licensee provided the following information.

The MNGP reactor pressure relief system consists of eight S/RVs located on the main steam lines within the drywell between the reactor pressure vessel (RPV) and the inboard main steam isolation valves. Each S/RV is provided with discharge piping which vents into the suppression pool (torus) via a T-quencher sparger. The S/RVs protect the RPV from overpressurization.

The S/RVs are three-stage, Target Rock model 67F, designed to be self-actuating on overpressure or remotely operated with an air actuator. In the safety mode, they self-actuate if reactor pressure exceeds the set pressure of approximately 1109 pounds per square inch gauge (psig). Once self-actuated, the valves will remain open until reactor pressure decreases to approximately 30 psi below the setpoint. All the S/RVs fulfill the same safety function, i.e., overpressure protection.

The S/RVs can be manually actuated with an air operator remotely from control panels and four of these S/RVs can be actuated from the Alternate Shutdown System panel (i.e., remote shutdown panel).

The Automatic Depressurization System (ADS), a part of the Emergency Core Cooling System (ECCS), is an automatic actuation logic system that provides a backup to the High Pressure Coolant Injection (HPCI) system. Three S/RVs (RV-2-71A, C and D) perform the ADS function. The ADS is designed to depressurize the reactor during a small-break loss-of-coolant accident so the low pressure system can inject if the HPCI system fails or is unable to maintain RPV water level. The ADS valves can be opened automatically or manually. Since ADS does not provide coolant makeup to the reactor, ADS is employed only in conjunction with Low Pressure Coolant Injection or Core Spray operation as a backup to the HPCI system.

The Low-Low Set System (LLS) is an automatic actuation logic that controls the opening and closing setpoint of three S/RVs (RV-2-71 E, G and H) following a reactor scram to maximize the time between lifts during pressurization transients. To assure that no more than one relief valve reopens following a reactor isolation event, three S/RVs are provided with lower opening and closing pressure setpoints. The lower setpoint causes the LLS valves to stay open longer, such that reopening of more than one S/RV is prevented on subsequent actuations. The LLS function prevents excessive short duration S/RV cycles with valve actuation at the relief setpoint.

Experience across the industry and at MNGP has shown that manual actuation of S/RVs during plant operation (start-up) can lead to valve seat leakage. Steam discharge from the S/RVs is routed to the suppression pool (torus), and the increased heat and fluid additions to the suppression pool require more frequent suppression pool cooling and pump-down operations. Main stage seat leakage also tends to mask the indications of pilot or second stage seat leakage. Pilot or second stage leakage can cause mal-operation of the S/RV, including spurious actuation and/or failure to reclose after actuation. Excessive leakage of any stage requires plant shutdown to replace the leaking S/RV.

The Boiling Water Reactor Owners' Group (BWROG) Evaluation of NUREG-0737, "clarification of TMI Action Plan Requirements," Item II.K.3.16, "Reduction of Challenges and Failures of Relief Valves," recommends that the number of S/RV openings be reduced as much as possible and that unnecessary challenges should be avoided. NUREG-1482, Rev. 1, "Guidelines for Inservice Testing at Nuclear Power Plants," Paragraph 4.3.2.1 states:

In recent years, the [Nuclear Regulatory Commission] NRC staff has received numerous requests for relief and/or TS changes related to the stroke testing requirements for BWR dual-function main steam safety/relief valves (S/RVs). Both Appendix I to the OM Code and the plant-specific TSs require stroke testing of S/RVs after they are reinstalled following maintenance activities. Several licensees have determined that in-situ testing of the SRVs with reactor pressure can contribute to undesirable seat leakage of the valves during subsequent plant operation and have received approval to perform stroke testing at a laboratory facility coupled with in-situ tests and other verifications of actuation systems as an alternative to the testing required by the OM Code and TS.

NUREG-0123, "Standard Technical Specifications for General Electric Boiling Water Reactors," and NUREG-0626, "Generic Evaluation of Feedwater Transients and Small Break Loss-of-Coolant Accidents in GE-Designed Operating Plants and Near-Term Operating License Applications," also recommend reducing the number of challenges to the S/RVs. The licensee's proposed changes in testing are consistent with the recommendations within the NUREGs discussed above.

The manual actuation test currently prescribed in the surveillances for the S/RVs, and for the ADS and LLS functions of those valves demonstrate the mechanical operation of the S/RVs. The pertinent year 2004 OM Code requirements, however, have changed from the previous editions and now permit the "valve disk stroke capability [to] be verified by mechanical examination or tests." Overlapping tests can now be credited to individually testing S/RV components. The licensee requested to revise the TS to reflect the testing provisions of the year 2004 OM Code, while retaining the current TS capability to manually actuate as an alternative in the surveillance requirements. Additionally, the licensee proposed to revise the surveillance frequency for these surveillances from nominally 24 months to "In accordance with the Inservice Testing Program."

Previous editions of the OM Code required that S/RVs with auxiliary actuating devices that have been maintained or refurbished in place, removed for maintenance and testing, or both, and reinstalled be remotely actuated at reduced or normal system pressure to verify open and close capability of the valve before resumption of electric power generation. Paragraph I-3410(d) was revised in the 2004 Edition of the ASME OM Code and no longer requires that S/RVs be opened and closed at reduced or normal system pressure following maintenance. Also, Paragraph I-3410(d) of the OM Code requires that each S/RV removed for maintenance or testing and reinstalled shall have the electrical and pneumatic connections verified either through mechanical and electrical inspection or test. Additionally, the 2004 OM Code does not require that an S/RV be tested as a unit. For example, the auxiliary actuating device can be tested independently of the main disk assembly.

The manual actuation tests currently prescribed in SR 3.4.3.2, SR 3.5.1.12 and SR 3.6.1.5.1 are currently performed once per operating cycle, i.e., at a nominal frequency of once every 24 months, corresponding to start-up from refueling outages. In lieu of performing a manual actuation of each S/RV once per cycle, the licensee proposed, in accordance with the 2004 OM Code, to credit overlapping code and TS SR testing to ensure the capability of the S/RV to open. The proposed revision to the SRs provides an alternative to the current requirement to demonstrate the capability of the relief valves to open when manually actuated during plant startup. This alternative provides another option to satisfy the current SR, allowing a determination to be made that the valve is capable of being opened. The combination of testing the S/RV actuator and solenoid valves, and verifications of the capability of the main S/RV to open, provide a complete verification of the functional capability and is in accordance with 2004 Edition of the ASME OM Code. The following excerpts from the licensee's February 2, 2012, application provide details of the proposed testing:

Setpoint testing is performed using steam at an offsite test facility as part of certification testing for each S/RV assembly, at intervals determined in accordance with the IST Program. The 2004 Edition of the ASME OM Code, Appendix I, Subsection I-3410, "Class 1 Main Steam Pressure Relief Valves with Auxiliary Actuating Devices," addresses the testing required on refurbished main steam pressure relief valves with auxiliary actuating devices.

Certification testing is performed for each S/RV assembly at an offsite test facility. In addition to demonstrating that the S/RV pilot stage will actuate on high steam pressure in the safety mode, this test overlaps with actuator functional testing to demonstrate the valve assembly will actuate in the relief mode (i.e., a manual lift via the actuator). After completion of certification testing, S/RV assemblies will be shipped to the plant without disassembly or alteration of valve components.

Receipt inspection will be performed in accordance with the requirements of the NSPM quality assurance program. The storage requirements in effect at the MNGP will ensure the valves are protected from exposure to the environment, airborne contamination, acceleration forces, and physical damage. Prior to installation the valve will again be inspected for foreign material.

Once the S/RV is installed and insulated, in accordance with paragraph I-3410(d), the S/RV assembly will be pneumatically and electrically connected. Proper connections will be verified in accordance with procedures. Also, electrical power to the control panel and signals causing application of power to the S/RV solenoid(s) will be verified to be present at the control panels per procedure.

The simulated automatic actuation tests specified in SR 3.5.1.11 and SR 3.6.1.5.2, and additional surveillances associated with Specification 3.3.5.1, "ECCS Instrumentation," and Specification 3.3.6.3, "LLS Instrumentation," demonstrate the ability of the various logics and controls to actuate the S/RVs up to the point of energizing the solenoids. These surveillance tests are performed

at a nominal 24-month FREQUENCY (i.e. once per operating cycle) in accordance with the Monticello TS, and are unaffected by this LAR [license amendment request].

S/RV actuator and solenoid valve functional testing will be performed in situ to verify the electrical and pneumatic connections at intervals determined in accordance with the IST Program.

In the actuator and solenoid valve functional test, the solenoid valve will be connected to the actuator. The solenoid valve will be energized, which pneumatically strokes the actuator. This dry lift test verifies the movement of the actuator stem and proper operation of the solenoid valve(s). S/RV actuator and solenoid valve functional testing are performed once per fuel cycle in accordance with the IST Program. Performance of this testing, along with the functional lift of the actuator at the test facility, and the simulated automatic actuation tests specified in SR 3.5.1.11 and SR 3.6.1.5.2, demonstrates the S/RV assembly will actuate in the relief mode.

The licensee's proposed testing uses overlapping tests to verify that the S/RVs function properly at operating conditions and are capable of being opened when installed in the plant. The use of overlapping tests to demonstrate OPERABILITY of active components is similar to applications elsewhere in the TS for other systems and components. The proposed alternative S/RV testing methodology tests the active components, and therefore, makes unnecessary the cycling of the S/RVs during startup with reactor steam.

The current manual actuation FREQUENCY for each S/RV specified in SR 3.4.3.2 (S/RV relief mode) and SR 3.5.1.12 (ADS) is once every "24 months." The current FREQUENCY for manual actuation of each S/RV specified in SR 3.6.1.5.1 (LLS) is once every "24 months on a STAGGERED TEST BASIS for each valve solenoid." Testing of the ADS and S/RV solenoids in SR 3.4.3.2 and SR 3.5.1.12 is currently performed at the same 24 month frequency, as specified above, since the solenoids actuate the S/RVs. Unlike the S/RV or ADS valves (which have one solenoid), the three LLS valves have two solenoids. Testing of the LLS solenoid valves is currently specified in SR 3.6.1.5.1 as performed once per "24 months on a STAGGERED TEST BASIS for each valve solenoid" (i.e., each solenoid is tested at a nominal 48 month frequency).

The licensee proposed to perform these surveillances "In accordance with the Inservice Testing Program." Specifying the required frequency through the IST Program is not a new approach, but occurs throughout the TS (e.g., SR 3.4.3.1 for verifying the safety function lift setpoints of the S/RVs). Performing testing in accordance with the IST Program retains appropriate legal control over the testing methodology and specified FREQUENCY, since performance is required and is governed by a code incorporated by reference into the regulation, i.e., 10 CFR 50.55a. Also, future OM Code changes could then be adopted without requiring a corresponding TS change, allowing NRC-endorsed code changes to be more rapidly put in place. Additionally, this will allow crediting IST Program tests performed at frequencies other than 24 months.

The licensee's proposed testing frequency for the LLS valve solenoids is more frequent than that currently specified in SR 3.6.1.5.1 but is desirable since it aligns S/RV and S/RV solenoid valve

testing performances to occur at the same frequency under the IST Program. This proposed LLS solenoid test frequency is more conservative than current TS requirements.

The probability of blocking an S/RV discharge line and preventing S/RV discharge, or ADS depressurization, or proper LLS operation is considered to be extremely remote. Following the initial demonstration during plant startup testing, improper valve functioning or blockage would arise only through S/RV assembly errors or the introduction of foreign material into the piping system. The NSPM Foreign Material Exclusion (FME) program provides the necessary requirements and guidance to prevent and control introduction of foreign materials into structures, systems, and components. These requirements are incorporated into specific S/RV maintenance procedures for S/RV refurbishment, testing, and change-out. These maintenance procedures and FME procedures and practices are sufficient to ensure proper mechanical functioning and unobstructed steam flow capability without periodic actuation testing.

The licensee stated that specific MNGP experience, in addition to industry experience, has shown that the current TS-required surveillance testing method increases the risk for S/RV leakage during power operation. The alternate testing method proposed by the licensee allows surveillance of the relief mode of operation of the S/RVs to be performed without physically lifting the valve disk off its seat at power. The proposed testing alternative reduces the risk of seat leakage by eliminating unnecessary valve stroking after performing the required ASME OM Code setpoint testing.

3.2 NRC Staff Evaluation of Proposed TS Changes

The NRC staff has reviewed the licensee's basis for the proposed TS changes and finds that with the proposed testing, the functional capabilities of the S/RVs will be adequately verified. The S/RV pilot assemblies are tested and certified at an offsite facility. Setpoint testing of the main valve is performed using steam at the offsite test facility as part of certification testing for each S/RV assembly. The certification test for the S/RV assembly also demonstrates that the S/RV pilot stage will actuate on high steam pressure in the safety mode. After completion of certification testing, S/RV pilot assemblies will be shipped to the plant without disassembly or alteration of valve components. Receipt inspection will be performed in accordance with the requirements of the MNGP quality assurance program. The storage requirements in effect at the MNGP will ensure that the valves are protected from exposure to the environment, airborne contamination, acceleration forces, and physical damage. Prior to installation, the valve will again be inspected for foreign material. Once the S/RV is reinstalled and insulated, the S/RV assembly will be pneumatically and electrically connected. Proper connections will be verified in accordance with MNGP procedures. Also, electrical power to the control panel and signals causing application of power to the S/RV solenoid(s) will be verified to be present at the control panels per the MNGP procedure.

In addition to the certification test at the offsite facility, the S/RV actuator and solenoid valve will also be functionally tested in-situ with no steam pressure (a so-called dry-lift test). During the dry-lift tests, the solenoid valve will be energized and then pneumatically stroke the actuator. This dry-lift test verifies the proper operation of the solenoid valve, the movement of the actuator stem, and the electrical/pneumatic connections.

The NRC staff determined that the combination of the steam testing of the S/RV assembly at the test facility and the solenoid and actuator functional testing at the site will provide a complete check of the capability of the valve to open and close. Therefore, the proposed TS changes will ensure the testing of the S/RV such that full functionality is demonstrated through overlapping tests without the need to stroke test the valves on-line under system steam pressure conditions. In addition, the NRC staff agrees that the current testing requirements could result in undesired seat leakage of the S/RVs during power operation. Excessive seat leakage could result in excessive suppression pool temperature and level or unidentified drywell leakage.

The NRC staff also determined that the licensee's FME program provides reasonable assurance that the S/RV discharge lines will remain unblocked and that foreign material will not interfere with valve operation.

The licensee proposes a TS change to test the S/RV main valve discs in accordance with the MNGP IST program as required by the ASME OM Code, which allows a 60 month test interval for all S/RVs. A minimum of 20 percent of the S/RV group is required to be tested in any 24-month interval. A major difference between the current TS-required S/RV manual actuation requirements and the ASME OM Code requirements is that the ASME OM Code allows a series of overlapping tests to individually test SRV components. Furthermore, the ASME OM Code (2004 Edition through the 2006 Addenda, which have been incorporated by reference into 10 CFR 50.55a) no longer requires in-situ S/RV testing. Another difference between the current TSs and the ASME OM Code is that the ASME OM Code requires less frequent testing of the S/RV components than the current TS requirement does. Instead of testing each S/RV as a unit every 24 months during startup following a refueling outage, the test frequency for all S/RV significant components can be extended for up to five years. However, the ASME OM Code, which is performance-based, requires S/RVs be tested more frequently if test failures occur. For example, the ASME OM Code requires that two additional valves be tested when a valve in the initial test group exceeds the set pressure acceptance criteria. All remaining valves in the group are required to be tested if one of the additional valves tested exceeds its set pressure acceptance criteria. Therefore, the ASME OM code S/RV test frequency would be equivalent to the current TS test frequency, if multiple test failures occur.

Testing of the LLS solenoid valves as currently specified in SR 3.6.1.5.1 is performed once per "24 months on a STAGGERED TEST BASIS for each valve solenoid" (i.e., each solenoid valve is tested at a nominal 48-month frequency). The proposed testing frequency for the LLS valve solenoids per the MNGP IST Program is 24 months, and is more frequent than that currently specified in SR 3.6.1.5.1. Therefore, the NRC staff finds that the proposed testing frequency is more conservative than the current TS requirements, and is acceptable.

Furthermore, the licensee noted that the current SRs will be retained as an option for testing S/RVs, i.e., if necessary, the S/RVs will be tested under reactor system pressure during plant startup. Retaining the option is acceptable because the current SRs had been determined by the NRC staff to be acceptable methods of verifying the S/RV operability.

Based on the above evaluation, the NRC staff determined that the proposed changes to the MNGP TS SR 3.4.3.2, SR 3.5.1.12, and SR 3.6.1.5.1 will demonstrate proper S/RV operation without the need for in-situ testing with reactor steam, and therefore, are acceptable.

3.3 Conclusion of Technical Evaluation

As described above, the licensee has proposed a change to the MNGP TS SRs, which would provide for alternative testing of the S/RVs to demonstrate proper functional operation, without the need to stroke test the valves on-line with system steam pressure conditions. Based on the above evaluation, the NRC staff concluded that the licensee has adequately justified the proposed changes to the TS for MNGP. Therefore, the proposed TS changes to SR 3.4.3.2, SR 3.5.1.12, and SR 3.6.1.5.1 are 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 use of facility components located within the restricted area as defined in 10 CFR Part 20. 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 (77 FR 13373, dated March 6, 2012). 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: John Huang, NRR

Date: July 27, 2012

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

July 27, 2012

SUBJECT: MONTICELLO NUCLEAR GENERATING PLANT - ISSUANCE OF AMENDMENT
RE: TESTING OF MAIN STEAM SAFETY/RELIEF VALVES (TAC NO. ME7920)

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The Nuclear Regulatory Commission has issued the enclosed Amendment No. 168 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 February 2, 2012.

The amendment revises the Technical Specifications Surveillance Requirement (SR) 3.4.3.2, SR 3.5.1.12, and SR 3.6.1.5.1 to provide an alternative means for testing of main steam system safety/relief valves during various modes of operation.

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/

Peter S. Tam, 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. 168 to DPR-22
 2. Safety Evaluation
- cc w/encls: Distribution via ListServ

DISTRIBUTION:

PUBLIC	LPL3-1 r/f	RidsNrrDorLpl3-1 Resource
RidsNrrPMMonticello Resource	RidsNrrLABTully Resource	RidsOgcRp Resource
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ADAMS Accession No.: **ML12185A216**

OFFICE	LPL3-1/PM	LPL3-1/LA	EPTB/BC*	NRR/ITSB/BC	OGC	LPL3-1/BC(A)	LPL3-1/PM
NAME	PTam	SRohrer for BTully	AMcMurtray	RElliott	JPindell	IFrankl	PTam
DATE	7/13/12	7/12/12	6/25/2012	7/23/12	7/18/12	7/27/12	7/13/12

*Safety evaluation transmitted by memo (Accession No. ML12164A777) of 6/25/2012.

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