



Monticello Nuclear Generating Plant
2807 W County Rd 75
Monticello, MN 55362

February 28, 2012

L-MT-12-019
10 CFR 50.55a(f)

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001

Monticello Nuclear Generating Plant
Docket 50-263
Renewed License No. DPR-22

Subject: 10 CFR 50.55a Requests Associated with the Fifth Ten-Year Inservice Testing Interval

Pursuant to 10 CFR 50.55a(a)(3)(i), the Northern States Power Company, a Minnesota corporation (NSPM), doing business as Xcel Energy, the licensee for the Monticello Nuclear Generating Plant (MNGP), hereby requests NRC authorization or approval of the enclosed 10CFR50.55a requests associated with the Fifth Inservice Testing (IST) Interval for Monticello Nuclear Generating Plant (MNGP).

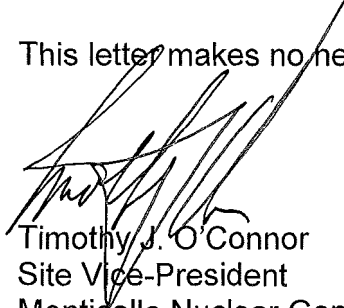
Relief Request No. VR 04 (enclosed) requests authorization to implement ASME Code Case OMN-17, Revision 0, "Alternative Rules for Testing ASME Class 1 Pressure Relief/Safety Valves", for the testing frequency on the Class 1 Main Steam Safety/Relief Valves on the basis that the proposed alternative provides an acceptable level of quality and safety. This 10 CFR 50.55a request has been authorized for other NRC licensees.

NSPM requests the NRC authorize this 10 CFR 50.55a requests by March 1, 2013, to support implementation of the IST fifth ten-year interval. This 10 CFR 50.55a request is proposed for the duration of the IST fifth ten-year interval.

Should you have questions regarding this letter, please contact Mr. Randy Rippey at (612) 330-6911.

Summary of Commitments

This letter makes no new commitments and no revisions to existing commitments.



Timothy J. O'Connor
Site Vice-President
Monticello Nuclear Generating Plant
Northern States Power Company-Minnesota

Enclosure

cc: Administrator, Region III, USNRC
Project Manager, Monticello Nuclear Generating Plant, USNRC
Resident Inspector, Monticello Nuclear Generating Plant, USNRC

ENCLOSURE

**MONTICELLO NUCLEAR GENERATING PLANT
PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(a)(3)(i)
RELIEF REQUEST VR04**

5 pages follow

VALVE RELIEF REQUEST
NUMBER – VR 04

Use of Code Case OMN-17, Revision 0, on the Class 1 Main Steam Safety Relief Valves

**Proposed Alternative In Accordance with 10CFR50.55a(a)(3)(i)
On the basis that the proposed alternative provides an acceptable level of
quality and safety.**

1. ASME Code Component(s) Affected

RV-2-71A, Main Steam Safety/Relief Valve (ADS) (Class 1)

RV-2-71B, Main Steam Safety/Relief Valve (Class 1)

RV-2-71C, Main Steam Safety/Relief Valve (ADS) (Class 1)

RV-2-71D, Main Steam Safety/Relief Valve (ADS) (Class 1)

RV-2-71E, Main Steam Safety/Relief Valve (Low-Low Set) (Class 1)

RV-2-71F, Main Steam Safety/Relief Valve (Class 1)

RV-2-71G, Main Steam Safety/Relief Valve (Low-Low Set) (Class 1)

RV-2-71H, Main Steam Safety/Relief Valve (Low-Low Set) (Class 1)

Component/System Function

The Nuclear Boiler System provides Reactor Pressure Vessel (RPV) overpressure protection by opening the Safety/Relief Valves (S/RVs). The valves must open in order to prevent over pressurization of the reactor coolant system thereby preventing failure of the reactor system due to overpressure. The overpressure relief operation is self-actuated. The valves will open automatically or manually by the air operator during depressurization operation.

Certain valves are a designated part of the Automatic Depressurization System (ADS) and must open to provide automatic reactor depressurization as a result of a small break in the nuclear system coincidental with a failure of the High Pressure Coolant Injection (HPCI) System. Rapid depressurization is necessary so that Low Pressure Coolant Injection (LPCI) and the Core Spray systems can operate to protect the fuel cladding. ADS is automatically actuated after receipt of simultaneous Residual Heat Removal (RHR) or Core Spray pump running and low-low reactor water level signals.

Component/System Function (Cont.)

In addition to the above, certain valves are designated as part of the S/RV Low-Low Set System and are set to open automatically at a set-point lower than the mechanical self-actuated set point to prevent the re-opening of a non-low-low set S/RV following a reactor isolation transient. The set-points of the low-low set S/RVs ensure that they will be the first S/RVs to open and the last to close. After opening and closing of a low-low set SRV, a time delay relay prevents the operator or the low-low set logic from immediately re-opening the S/RV to allow the water leg in the S/RV discharge line to recede. The valves will open as part of the SRV Low-Low Set System in the event of a reactor SCRAM with reactor pressure greater than the low-low setpoint and the SRV low-low set hand switch in the auto position.

2. **Applicable Code Edition and Addenda**

ASME OM Code-2004 Edition, with Addenda through OMb Code-2006.

3. **Applicable Code Requirement(s)**

Appendix I, Paragraph I-1320(a), 5-Year Test Interval, specifies that Class 1 pressure relief valves shall be tested at least once every 5 years, starting with initial electric power generation. No maximum limit is specified for the number of valves to be tested within each interval; a minimum of 20% of the valves from each valve group shall be tested within any 24-month interval. This 20% shall consist of valves that have not been tested during the current 5-year interval, if they exist. The test interval for any individual valve shall not exceed 5 years.

4. **Reason for Request**

MNGP transitioned from an 18-month fuel cycle to a 24-month fuel cycle on September 30, 2005 via Licensing Amendment No. 143. Prior to transitioning to the 24-month fuel cycle, ASME Code requirements could be satisfied by removing and testing approximately one-third of the 8 S/RVs each refueling outage in order to comply with the 5-year test interval requirements for Class 1 pressure relief valves imposed by the Code of record during that time. Since transitioning to the 24-month fuel cycle MNGP must remove at least one-half of the subject relief valves each refueling outage for off-site testing. The removal of approximately half of the 8 valves versus approximately a third of the valves each outage requires the removal of additional insulation, instrumentation, and other interferences. This additional work results in an undesirable increase in radiation exposure to maintenance personnel.

4. Reason for Request (Cont.)

The ASME Code committees have recently developed Code Case OMN-17, "Alternative Rules for Testing ASME Class 1 Pressure Relief/Safety Valves" which was published via ASME OM Code-2009 Edition. This Code Case has not been approved for use in US NRC Regulatory Guide 1.192, "Operation and Maintenance Code Case Acceptability, ASME OM Code, dated June 2003. The Code Case allows the Owner to extend the test frequencies for Class 1 pressure relief valves to a 72-month (6-year) test interval providing all the requirements of the Code Case are satisfied. The Code applicability specified in the Code Case is, in part, ASME OM Code 2001 Edition through the 2006 Addenda of Appendix I, Section I-1320. This is consistent with the 5th Interval Code of record for MNGP. MNGP currently meets or exceeds all the requirements specified in Code Case OMN-17.

5. Proposed Alternative and Basis for Use

As an alternative to the Code required 5-year test interval per Appendix I, paragraph I-1320(a), MNGP proposes that the subject Class 1 pressure relief valves be tested at least once every three refueling cycles (approximately 6 years/72 months) with a minimum of 20% of the valves tested within any 24-month interval. This 20% would consist of valves that have not been tested during the current 72-month interval, if they exist. The test interval for any individual valve would not exceed 72 months except that a 6-month grace period is allowed to coincide with refueling outages to accommodate extended shutdown periods.

After as-found set-pressure testing, the valves shall be disassembled and inspected to verify that parts are free of defects resulting from time-related degradation or service induced wear. As-left set-pressure testing shall be performed following maintenance and prior to returning the valve to service. Each valve shall have been disassembled and inspected prior to the start of the 72 month interval. Disassembly and inspection performed prior to the implementation of Code Case OMN-17 may be used.

The relief valve testing and maintenance cycle at MNGP consists of removal of the SRV complement requiring testing and transported to an off-site test facility. Upon receipt at the off-site facility the valves are subject to an as-found inspection and set pressure testing. Prior to the return of a complement of SRVs for installation in the plant, the valves are disassembled and inspected to verify that internal surfaces and parts are free from defects or service induced wear prior to the start of the next test interval. During this process, anomalies or damage are identified and dispositioned for resolution. Damaged or worn parts, springs, gaskets and

seals are replaced as necessary. The valve seats are relapped, if necessary. Following reassembly, the valve's set pressure is recertified. This existing process is in accordance with ASME OM Code Case OMN-17 paragraphs (d) and (e).

MNGP has reviewed the as-found set point test results for all of the SRV's tested since 1996 as detailed in table 1. The average as-found set pressure is 1100.4 psig. MNGP did not have any as-found tests since 1996 that exceeded the Technical Specifications as-found ± 33.2 psig acceptance criteria.

TABLE 1 Summary of As- Found Test Results of SRV

Valve ID	Set pressure	As-found Test Date	As-Found Set pressure	Results (%)
242	1109	4/8/2011	1090	-1.7
122	1109	4/7/2011	1095	-1.3
208	1109	12/2/2010	1095	-1.3
197	1109	12/3/2010	1079	-2.7
170	1109	11/20/2010	1102	-0.6
177	1109	12/3/2010	1091	-1.6
169	1109	12/6/2010	1088	-1.9
7	1109	12/3/2010	1110	0.1
5	1109	11/20/2010	1098	-1.0
6	1109	12/2/2010	1096	-1.2
217	1109	4/11/2009	1118	0.8
196	1109	4/10/2009	1109	0.0
194	1109	4/11/2009	1086	-2.1
216	1109	4/10/2009	1084	-2.3
195	1109	4/7/2007	1102	-0.6
119	1109	4/7/2007	1122	1.2
197	1109	4/6/2007	1094	-1.4
123	1109	4/6/2007	1113	0.4
5	1109	3/22/2005	1091	-1.6
53	1109	3/21/2005	1088	-1.9
122	1109	3/22/2005	1091	-1.6
217	1109	3/21/2005	1095	-1.3
6	1109	5/5/2003	1114	0.5
169	1109	5/5/2003	1101	-0.7
196	1109	5/6/2003	1094	-1.4
208	1109	5/6/2003	1100	-0.8
177	1109	11/17/2001	1101	-0.7
194	1109	11/16/2001	1116	0.6
216	1109	1/25/2000	1126	1.5
242	1109	1/25/2000	1095	-1.3
4	1109	4/2/1998	1109	0.0
122	1109	4/1/1998	1097	-1.1
123	1109	4/22/1996	1111	0.2
169	1109	4/22/1996	1113	0.4

MNGP submits that the proposed alternative of increasing the test interval for the subject Class 1 pressure relief valves from 5 years to 3 fuel cycles (approximately 6 years/72 months) would continue to provide an acceptable level of quality and safety while restoring the operational and maintenance flexibility that was lost when the 24-month fuel cycle created the unintended consequences of more frequent testing. This proposed alternative will continue to provide assurance of the valves' operational readiness and provides an acceptable level of quality and safety pursuant to 10CFR50.55a(a)(3)(i).

6. Duration of Proposed Alternative

The proposed alternative identified in this relief request shall be implemented during the Fifth Ten Year IST Interval beginning September 1, 2012.

7. Precedents

Perry Nuclear Power Plant, Docket No. 50-440, SER Date October 22, 2009, Safety Evaluation of Relief Requests for Third 10-Year Pump and Valve Inservice Testing Program (TAC Nos. ME0191 through ME0198) (re: VR-6)

Nine Mile Point Nuclear Station, Docket No. 50-410, SER Date April 17, 2001, Safety Evaluation of the Alternative to ASME Code Regarding Inservice Testing of Main Steam Safety/Relief Valves, (TAC No. MB0290).

8. References

Code Case OMN-17, Alternative Rules for Testing ASME Class 1 Pressure Relief/Safety Valves