Xcel Energy®

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

December 22, 2010

L-MT-10-070
10 CFR 50.73

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

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

LER 2009-001, Revision 2, "Containment Overpressure Not Ensured in the Appendix R Analysis"

References: 1) Letter from Northern States Power Company, a Minnesota corporation (NSPM), d/b/a Xcel Energy to NRC, "Licensee Event Report 2009-01 Revision 1, Containment Overpressure Not Ensured in the Appendix R Analysis", dated September 18, 2009

2) Letter from NSPM to NRC, "Notice of Withdrawal of Letter of Intent to Transition to 10 CFR 50.48(c)", dated July 16, 2010

3) Letter from NRC to NSPM, "Monticello Nuclear Generating Plant (MNGP) - Withdrawal from National Fire Protection Association Standard NFPA-805", dated October 22, 2010

A revision to the subject Licensee Event Report (LER) is attached. This revision reflects the withdrawal of the letter of intent to voluntarily implement 10 CFR 50.48(c) at Monticello Nuclear Generating Plant (MNGP)(Reference 2 and 3). Issues related to multiple spurious operations due to fire-induced circuit faults are being addressed using the guidance of Regulatory Guide 1.189, Revision 2, and are subject to enforcement discretion per Enforcement Guidance Memorandum 09-002, "Enforcement Discretion for Fire Induced Circuit Faults."

Summary of Commitments

This letter contains 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: Regional Administrator, Region III, USNRC
Project Manager, Monticello Nuclear Generating Plant, USNRC
Resident Inspector, Monticello Nuclear Generating Plant, USNRC
Institute of Nuclear Power Operations

NRC FORM 366 (10-2010) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104 EXPIRES: 10/31/2013

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to Infocollects.resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0066), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

# LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

| 1. FACILITY NAME | 2. DOCKET NUMBER | 3. PAGE |
|---|---|---|
| Monticello Nuclear Generating Plant | 05000 263 | 1 of 4 |

**4. TITLE**

Containment Overpressure Not Ensured in the Appendix R Analysis

| 5. EVENT DATE | | | 6. LER NUMBER | | | 7. REPORT DATE | | | 8. OTHER FACILITIES INVOLVED | |
|---|---|---|---|---|---|---|---|---|---|---|
| MONTH | DAY | YEAR | YEAR | SEQUENTIAL NUMBER | REV NO | MONTH | DAY | YEAR | FACILITY NAME | DOCKET NUMBER |
| | | | | | | | | | | 05000 |
| 04 | 02 | 2009 | 2009 | - 001 - | 02 | 12 | 22 | 2010 | FACILITY NAME | DOCKET NUMBER 05000 |

**9. OPERATING MODE**

5

**10. POWER LEVEL**

0%

**11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §:** *(Check all that apply)*

| | | | |
|---|---|---|---|
| ☐ 20.2201(b) | ☐ 20.2203(a)(3)(i) | ☐ 50.73(a)(2)(i)(C) | ☐ 50.73(a)(2)(vii) |
| ☐ 20.2201(d) | ☐ 20.2203(a)(3)(ii) | ☐ 50.73(a)(2)(ii)(A) | ☐ 50.73(a)(2)(viii)(A) |
| ☐ 20.2203(a)(1) | ☐ 20.2203(a)(4) | ☒ 50.73(a)(2)(ii)(B) | ☐ 50.73(a)(2)(viii)(B) |
| ☐ 20.2203(a)(2)(i) | ☐ 50.36(c)(1)(i)(A) | ☐ 50.73(a)(2)(iii) | ☐ 50.73(a)(2)(ix)(A) |
| ☐ 20.2203(a)(2)(ii) | ☐ 50.36(c)(1)(ii)(A) | ☐ 50.73(a)(2)(iv)(A) | ☐ 50.73(a)(2)(x) |
| ☐ 20.2203(a)(2)(iii) | ☐ 50.36(c)(2) | ☐ 50.73(a)(2)(v)(A) | ☐ 73.71(a)(4) |
| ☐ 20.2203(a)(2)(iv) | ☐ 50.46(a)(3)(ii) | ☐ 50.73(a)(2)(v)(B) | ☐ 73.71(a)(5) |
| ☐ 20.2203(a)(2)(v) | ☐ 50.73(a)(2)(i)(A) | ☐ 50.73(a)(2)(v)(C) | ☐ OTHER |
| ☐ 20.2203(a)(2)(vi) | ☐ 50.73(a)(2)(i)(B) | ☐ 50.73(a)(2)(v)(D) | Specify in Abstract below or in NRC Form 366A |

**12. LICENSEE CONTACT FOR THIS LER**

| NAME | TELEPHONE NUMBER (Include Area Code) |
|---|---|
| Leonard L. Sueper | 612.330.6917 |

**13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT**

| CAUSE | SYSTEM | COMPONENT | MANU-FACTURER | REPORTABLE TO EPIX | CAUSE | SYSTEM | COMPONENT | MANU-FACTURER | REPORTABLE TO EPIX |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

| 14. SUPPLEMENTAL REPORT EXPECTED | 15. EXPECTED SUBMISSION DATE | MONTH | DAY | YEAR |
|---|---|---|---|---|
| ○ YES (If yes, complete 15. EXPECTED SUBMISSION DATE). ⊙ NO | | | | |


**ABSTRACT** *(Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)*

During the review of calculations to respond to a request for additional information from the NRC in support of the station's Extended Power Uprate license amendment, station personnel discovered that although the plant credits Containment Overpressure, the Appendix R analysis does not ensure Containment Overpressure is maintained. The cause of the event was the calculation that credited the Containment Overpressure was either not reviewed by fire protection program personnel or program personnel failed to internalize the need for a revision to the Appendix R analysis. Until the issue is resolved per the guidance of Regulatory Guide 1.189, compensatory measures have been put in place to address the vulnerabilities.

## EVENT DESCRIPTION

On April 2, 2009, the plant was shutdown and in Mode 5 for a refueling outage. During the review of calculations to respond to a request for additional information from the NRC in support of the station's Extended Power Uprate license amendment, station personnel discovered that although the plant credits Containment Overpressure (COP), the Appendix R analysis does not ensure Containment Overpressure is maintained. For certain design basis accident scenarios, COP is required in order to ensure adequate net positive suction head (NPSH) is available for vessel injection and suppression pool cooling pumps. The station procedure for performing a shutdown from outside the control room did not contain any steps to require operators to ensure adequate NPSH was maintained. Although this issue was discovered in April 2009, the issue has existed since design basis accident reanalysis in 2002.

Depending on initial conditions, a fire in the cable spreading room or control room, with or without a fire induced loss of off site power, could cause two in-series valves to spuriously open leading to venting of containment. Venting of containment during this scenario could result in the loss of required NPSH for the 12 Core Spray (CS) [BM] and the 12 Residual Heat Removal (RHR) [BO] pumps [P]. With no operator action, inadequate NPSH could prevent vessel injection and or suppression pool cooling.

## EVENT ANALYSIS

The event was reportable under 10 CFR 50.73(a)(2)(ii) Degraded or Unanalyzed Condition. Since the issue was for past operability, there was no 10 CFR 50.72 report for this event.

The event is not considered a safety system functional failure since all required safety related systems would have been available to perform their safety functions.

## SAFETY SIGNIFICANCE

There was no impact to the health and safety of the public; and the risk significance is less than the red threshold requirements for 10 CFR 50.48.

Monticello maintains administrative controls for the introduction of combustible materials and ignition sources to limit the probability and severity of a fire. Fire detection equipment or continuous manning is provided in the affected areas for rapid detection. Fire extinguishers and hose stations are in place and fire brigade response is expected to be rapid and successful for any fire in the affected areas. These prevention, detection and suppression measures limit the frequency of fire induced loss of required COP to a very small value.

A Significance Determination Process evaluation was performed per the guidance of NRC Inspection Manual Chapter 0609, Appendix F, Fire Protection Significance Determination Process. In summary, this analysis determined that the change in Core Damage Frequency attributable to this event is less than the red risk threshold. Accordingly enforcement discretion via the provisions of Interim Enforcement Policy Regarding Enforcement Discretion for Certain Fire Protection Issues (10 CFR 50.48) is warranted.

## Cause

Fire protection engineering personnel either did not review or were unaware/did not internalize that COP was required for an Appendix R fire and that the Appendix R analysis might require revision to ensure COP was maintained. Although the calculation procedure in 2002 required a fire protection review for the potential to affect the fire protection analysis, the requirements were not clear enough to ensure the personnel performing the calculation revision obtained a fire protection review.

## Corrective Action

The calculation process has been revised since 2002. Specifically, completion of a Fire Protection Program checklist is now required by the fleet calculation procedure. Therefore, the process has already been revised to prevent this type of error, and no further action is required to prevent recurrence.

Remediation of these conditions will be coincident with MNGP's Regulatory Guide 1.189 project. The Regulatory Guide 1.189 project will either evaluate the non-compliant manual actions as acceptable or the non-compliant manual actions will be corrected via physical changes to the plant.

Procedure C.4-C has been revised to provide guidance to maintain the required NPSH for the CS and RHR pumps.

Until this issue is resolved, compensatory measures will be used to ensure the ability to safely shut down is maintained. Existing transient combustible material control procedures for the Control Room (CR) and Cable Spreading Room (CSR) are adequate and use will be continued. Additional/new compensatory measures will include:

- No hot work in the CR or CSR without shift manager approval. If hot work is required, Shift Manager (SM) and work supervisor must walk down the job and ensure adequate compensatory measures are taken.

- The CSR detection and suppression systems and CR smoke detectors will remain functional. If the CSR detection or suppression systems are non-functional, then station a continuous fire watch. If the CR smoke detectors are non-functional, station one fire watch to cover all of the affected back panel areas. Even though the CR is continuously manned, one fire watch will be stationed. This fire watch should carefully inspect all the back panel areas at least once every half hour.

**Failed Component Identification**

None

**Previous Similar Events**

None