



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

April 8, 2014

L-MT-14-029
10 CFR 50.73

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

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

LER 2014-002 "Torus to Drywell Vacuum Breaker Did Not Indicate Closed During Testing"

A Licensee Event Report (LER) for this occurrence is enclosed.

Summary of Commitments

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

A handwritten signature in cursive script, appearing to read 'Karen D. Fili'.

Karen D. Fili
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

**LICENSEE EVENT REPORT (LER)**(See Page 2 for required number of
digits/characters for each block)

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 FOIA, Privacy and Information Collections 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, (3150-0104), 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.

1. FACILITY NAME

Monticello Nuclear Generating Plant

2. DOCKET NUMBER

05000-263

3. PAGE

1 OF 3

4. TITLE

Torus to Drywell Vacuum Breaker Did Not Indicate Closed During Testing

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
02	07	2014	2014	002	00	04	08	2014	FACILITY NAME	DOCKET NUMBER
										05000
9. OPERATING MODE			11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)							
1			<input type="checkbox"/> 20.2201(b)		<input type="checkbox"/> 20.2203(a)(3)(i)		<input type="checkbox"/> 50.73(a)(2)(i)(C)		<input type="checkbox"/> 50.73(a)(2)(vii)	
			<input type="checkbox"/> 20.2201(d)		<input type="checkbox"/> 20.2203(a)(3)(ii)		<input type="checkbox"/> 50.73(a)(2)(ii)(A)		<input type="checkbox"/> 50.73(a)(2)(viii)(A)	
			<input type="checkbox"/> 20.2203(a)(1)		<input type="checkbox"/> 20.2203(a)(4)		<input checked="" type="checkbox"/> 50.73(a)(2)(ii)(B)		<input type="checkbox"/> 50.73(a)(2)(viii)(B)	
			<input type="checkbox"/> 20.2203(a)(2)(i)		<input type="checkbox"/> 50.36(c)(1)(i)(A)		<input type="checkbox"/> 50.73(a)(2)(iii)		<input type="checkbox"/> 50.73(a)(2)(ix)(A)	
10. POWER LEVEL 70%			<input type="checkbox"/> 20.2203(a)(2)(ii)		<input type="checkbox"/> 50.36(c)(1)(ii)(A)		<input type="checkbox"/> 50.73(a)(2)(iv)(A)		<input type="checkbox"/> 50.73(a)(2)(x)	
			<input type="checkbox"/> 20.2203(a)(2)(iii)		<input type="checkbox"/> 50.36(c)(2)		<input type="checkbox"/> 50.73(a)(2)(v)(A)		<input type="checkbox"/> 73.71(a)(4)	
			<input type="checkbox"/> 20.2203(a)(2)(iv)		<input type="checkbox"/> 50.46(a)(3)(ii)		<input type="checkbox"/> 50.73(a)(2)(v)(B)		<input type="checkbox"/> 73.71(a)(5)	
			<input type="checkbox"/> 20.2203(a)(2)(v)		<input type="checkbox"/> 50.73(a)(2)(i)(A)		<input type="checkbox"/> 50.73(a)(2)(v)(C)		<input type="checkbox"/> OTHER	
			<input type="checkbox"/> 20.2203(a)(2)(vi)		<input type="checkbox"/> 50.73(a)(2)(i)(B)		<input checked="" type="checkbox"/> 50.73(a)(2)(v)(D)		Specify in Abstract below or in NRC Form 366A	

12. LICENSEE CONTACT FOR THIS LER

LICENSEE CONTACT

Carrie Fosaaen, Licensing Engineer

TELEPHONE NUMBER (Include Area Code)

763-295-1357

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☐ YES (If yes, complete 15. EXPECTED SUBMISSION DATE) ☒ NO**15. EXPECTED SUBMISSION DATE**

MONTH	DAY	YEAR

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

On February 7, 2014, while performing the monthly torus to drywell vacuum breaker check procedure, vacuum breaker valve AO-2382A did not indicate closed as expected. The valve was cycled several times per an alarm response procedure for an open torus to drywell vacuum breaker until it indicated closed.

Analysis has shown the cause of the observed indication for vacuum breaker valve AO-2382A after cycling was inconsistent operation of the valve limit switches. Based on failure modes and effects analysis, the closed limit switches did not consistently indicate closed when the valve was, in fact, closed.

Vacuum breaker valve AO-2382A, its limit switches, and close indication circuit will be inspected to confirm the results of the failure mode and effects analysis during the next refueling outage or an earlier opportunity, if available.

**LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET**

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 FOIA, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollections.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), 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.

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
Monticello Nuclear Generating Plant	05000-263	YEAR	SEQUENTIAL NUMBER	REV NO.	2 OF 3
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NARRATIVE**EVENT DESCRIPTION**

On February 7, 2014, the plant was in Mode 1 at approximately 70% power. At 1005 during performance of the monthly torus to drywell vacuum breaker check procedure, vacuum breaker valve AO-2382A [VACB] did not indicate closed in the control room or locally in the reactor building as expected. Each vacuum breaker is provided with dual position switches which operate status lights in the control room and reactor building. The vacuum breaker was declared inoperable, and Technical Specification (TS) Action 3.6.1.7.B was entered. An alarm response procedure for an open torus to drywell vacuum breaker was entered and the valve was cycled four times until it was verified closed at both locations at 1013. After the torus to drywell vacuum breaker indicated closed, the vacuum breaker was declared operable and the TS Action 3.6.1.7.B exited. As a result of the failure of vacuum breaker valve AO-2382A to indicate closed, the monthly surveillance was suspended to evaluate.

EVENT ANALYSIS

The event is reportable in accordance with 10 CFR 50.73 (a)(2)(v)(D) as a condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to mitigate the consequences of an accident and in accordance with 10 CFR 50.73(a)(2)(ii)(B) as an unanalyzed condition. The event was reported in Event Notification 49808.

A review of the event determined that a safety system functional failure did not occur as defined in Nuclear Energy Institute (NEI) 99-02 Revision 7. An engineering analysis was performed which determined that the torus to drywell vacuum breaker was capable of performing its design basis function.

SAFETY SIGNIFICANCE

Vacuum breakers are provided to equalize the pressure between the suppression chamber (i.e., torus) and the drywell to prevent a backflow of water from the suppression chamber pool into the vent header system. An open vacuum breaker would allow communication between the drywell and suppression chamber airspace, and as a result, there would be a potential for suppression chamber over pressurization due to this bypass leakage if a loss of coolant accident were to occur. During performance of the monthly torus to drywell vacuum breaker check procedure, vacuum breaker valve AO-2382A stroked closed therefore, safety function was preserved.

CAUSE

Analysis has shown the cause of the observed indication for vacuum breaker valve AO-2382A after cycling was inconsistent operation of the valve limit switches. Based on failure modes and effects analysis, the closed limit switches did not consistently indicate closed when the valve was, in fact, closed.

**LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET**

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NARRATIVE

CORRECTIVE ACTION

The vacuum breaker valve AO-2382A, its limit switches, and close indication circuit will be inspected to confirm the results of the failure mode and effects analysis during the next refueling outage or an earlier opportunity, if available.

PREVIOUS SIMILAR EVENTS

There were no previous similar licensee event reports in the past three years.