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

August 8, 2011

L-MT-11-047
10 CFR 50.73

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

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

LER 2010-004, "Secondary Containment Inoperability Due to Ventilation Alignment Issue"

The Licensee Event Report (LER) for this occurrence is attached.

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 – Minnesota

Enclosure

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

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

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

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 3

4. TITLE

Secondary Containment Inoperability Due to Ventilation Alignment Issue

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
06	08	2011	2011	- 004 -	0	08	08	2011	FACILITY NAME	DOCKET NUMBER 05000

9. OPERATING MODE

1

10. POWER LEVEL

100

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 Specify in Abstract below or in NRC Form 366A
☐ 20.2203(a)(2)(vi)	☐ 50.73(a)(2)(i)(B)	☒ 50.73(a)(2)(v)(D)	

12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME	TELEPHONE NUMBER (*Include Area Code*)
Leonard 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
	NG	CDMP							

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 June 8, 2011 at 0800, with the reactor operating at 100% power, secondary containment (SCT)[NG] was declared inoperable after swapping the operating refuel floor supply air handling unit from V-AH-4A[AHU] to V-AH-4B. SCT differential pressure (D/P) was reduced to 0.17 inches of water column (WC) vacuum, which did not meet Technical Specification (TS) surveillance requirement SR 3.6.4.1.1 to maintain secondary containment vacuum greater than or equal to 0.25 inches WC vacuum. Refuel floor ventilation was restored to the previous configuration and secondary containment D/P returned to greater than 0.25 inches of WC vacuum. Vacuum was less than 0.25 inches WC vacuum for approximately 4 minutes.

The event was caused by a change in supply air flow rates between V-AH-4A and V-AH-4B when swapped.

Corrective actions include repairing a seized bypass damper [CDMP] on V-AH-4A and a procedure change to add precautions to the operating procedure for transferring refuel floor fans.

NARRATIVE

EVENT DESCRIPTION

The Reactor Building Ventilation system provides outside air to all levels and equipment rooms of the Reactor Building. Air pressure in the secondary containment (SCT) is maintained at a slight negative pressure by operating exhaust fans at a higher flow than the supply fans. The negative pressure, together with the integrity of the SCT minimizes exfiltration from the SCT.

The refueling floor ventilation is provided by redundant air handling units, V-AH-4A and V-AH-4B, which supply outside air. Only one supply fan is operated at a time to prevent positive pressure in the Reactor Building. During normal operation, the SCT differential pressure is controlled by throttling the variable inlet vane settings on the Reactor Building Exhaust fans V-EF-24A and V-EF-24B.

On 6/8/2011 at 0800, V-AH-4A was removed from service and V-AH-4B was placed in service. The SCT differential pressure became less negative; changing from approximately 0.6 inches water column (WC) vacuum to 0.17 inches WC vacuum. This did not meet Technical Specification surveillance requirement SR 3.6.4.1.1 for the SCT differential pressure which requires SCT pressure to be greater than or equal to 0.25 inches WC vacuum. Limiting Condition for Operation 3.6.4.1 was declared not met and the applicable action statement was entered. V-AH-4B was immediately removed from service and V-AH-4A was returned to service in order to meet SR 3.6.4.1.1.

EVENT ANALYSIS

The event is reportable to the NRC under 10 CFR 50.73(a)(2)(v)(C and D) - Event or Condition that could have Prevented Fulfillment of a Safety Function because Limiting Condition for Operation (LCO) 3.6.4.1 was declared not met . The station reported the event to the NRC under 10 CFR 50.72 (b)(3)(v)(C and D) on June 8, 2011. However, the Reactor Building ventilation system, including the intake fans, will trip on a SCT isolation and would not have affected the integrity of the SCT envelope or the ability of the Standby Gas Treatment system to perform its safety function of drawing a 0.25 inches WC vacuum. Therefore, this event is not considered a Safety System Functional failure for the purposes of Reactor Oversight Process performance indicator reporting per the guidance in NEI 99-02.

SAFETY SIGNIFICANCE

There were no nuclear, radiological or industrial safety significant consequences related to this event.

The Monticello risk assessment group reviewed the event for risk impact. The failure to maintain SCT vacuum has no direct or indirect impact on the frequency of core damage (CDF). No systems supporting critical safety functions, including support systems, were impacted due to the loss of SCT, and initiating event frequencies were not impacted. Large Early Release

Frequency is not significantly impacted since CDF is not affected, and the duration of the low SCT vacuum was very small. Based on the above, the safety significance was minor.

CAUSE

Although V-AH-4A and B are equally sized air handling units, significant differences in flow rates existed between them due to a seized reheat coil bypass damper on V-AH-4A. This resulted in significant swings in the SCT differential pressure during fan swapping before system dampers were repositioned to compensate. Following the previous fan swap that removed V-AH-4B from service and placed V-AH-4A into service on June 5, 2011, the Reactor Building exhaust fan variable inlet vane settings had been throttled closed from 80% to 55% to lower Reactor Building differential pressure to compensate for the lower air throughput of V-AH-4A. It was not recognized that when V-AH-4B was returned to operation for post maintenance testing on June 8, 2011, that the incoming Reactor Building supply air flow would increase and the previously throttled variable inlet vane setting would prevent the Reactor Building exhaust fans from maintaining the Reactor Building greater than 0.25 inches WC vacuum. Although the seizing of the reheat coil bypass damper had been identified in January 2011, the effect was masked somewhat during fan swaps during cold weather because the reheat face dampers were free to modulate as heating needs required. During warm weather the reheat face dampers are closed and no longer modulate flow.

CORRECTIVE ACTIONS

1. The bound reheat coil bypass damper on V-AH-4A will be reworked.
2. A procedure change has been generated to add precautions to the operating procedure for transferring refuel floor fans.

PREVIOUS SIMILAR EVENTS

On February 11, 2011 secondary containment was declared inoperable due to ice buildup on a SCT isolation damper (LER 2011-003).