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

August 26, 2011

L-MT-11-051
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 2011-005, "Power Range Monitor Channels Out of Alignment"

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.

8/26/11

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

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

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

Estimated burden per response to comply with this mandatory information 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 Section (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.

LICENSEE EVENT REPORT (LER)

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

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4. TITLE

Power Range Monitor Channels Out of Alignment

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	30	2011	2011	- 005 -	0	08	26	2011	FACILITY NAME	DOCKET NUMBER 05000

9. OPERATING MODE

1

10. POWER LEVEL

80

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
NA	NA	NA	NA	NA					

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 30, 2011, at 0516 with the reactor operating at 80% power, three of four Average Power Range Monitors (APRMs) exceeded Technical Specification 3.3.1.1.2 surveillance requirement to maintain the absolute difference between the Average Power Range Monitor (APRM) channels and the calculated power at ≤ 2% rated thermal power (RTP) while operating at ≥ 25% RTP. The event occurred during a control rod pattern adjustment supporting plant restart following a brief maintenance outage.

The cause was a greater than typical change in APRM response due to a power shape change following the completion of a reactivity maneuvering step. The impact on the APRMs of the power shape change had not been determined in advance and was therefore not anticipated. No requirement existed to perform this calculation.

An interim corrective action includes revising reactivity management procedures to include guidance for monitoring and adjusting gains on APRM's prior to each reactivity maneuvering step which could challenge the +/- 2% criteria.

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NARRATIVE

EVENT DESCRIPTION

Monticello Nuclear Generating Plant (MNGP) initiated a reactor startup on June 27, 2011. The reactor went critical at 0540 on June 27, 2011 and the plant was synchronized to the grid at 0935 on June 28, 2011. At 0516 on June 30, 2011, with the reactor at 80% power, Technical Specification (TS) 3.3.1.1 was entered due to Average Power Range Monitors (APRMs)[EIIS: IG] 1, 3, and 4 being more than +/- 2% different from Rated Thermal Power (RTP). This condition was not anticipated.

EVENT ANALYSIS

The event is reportable to the NRC under 10 CFR 50.73(a)(2)(v)(A and D) - Event or Condition that could have Prevented Fulfillment of a Safety Function because Limiting Condition for Operation (LCO) 3.3.1.1 A and C were declared not met . The station reported the event to the NRC under 10 CFR 50.72 (b)(3)(v)(A and D) on June 30, 2011. Due to the fact that two of the three APRMs that failed to meet the TS SR requirement were out of specification in the conservative direction, the APRM safety function was preserved. An automatic reactor scram would have initiated at a lower power level than required. The APRMs also provide a lower power limit below which the Oscillation Power Range Monitor (OPRM) [EIIS: IG] trips are not enabled. This power level was not approached. APRMs that are out of specification in the conservative direction also conservatively enable these OPRM trips. 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. Risk of a core damage or large early release from this event was not increased due to the three APRMs being outside of the allowable TS tolerance. The condition would have resulted in trip signal at a lower power level than required. The safety significance in terms of reactor safety and radiological release to the environment from three APRMs being declared inoperable in this event is considered not to be significant. There was no loss of safety function or degradation in the ability of the APRMs to send a reactor trip signal.

Based on the above, the safety significance was minor.

CAUSE

The cause was a greater than typical change in APRM response due to a power shape change following the completion of a reactivity maneuvering step. The impact on the APRMs of the power shape change had not been calculated in advance and was therefore not anticipated.

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NARRATIVE

CORRECTIVE ACTIONS

An interim corrective action includes revising reactivity management procedures to include guidance for monitoring and adjusting gains on APRM's prior to each reactivity maneuvering step which could challenge the +/- 2% criteria. Additional actions will be implemented based on the results of the causal evaluation.

PREVIOUS SIMILAR EVENTS

On November 4, 2010 all four APRM channels failed to meet the +/- 2% tolerance with respect to RTP following isolation of the 15B feedwater heater for repair (LER 2010-005).