



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

July 13, 2015

L-MT-15-054
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 2015-003-00 "Use of the Reactor Water Cleanup System to Lower Level without Declaring an Operation with a Potential to Drain the Reactor Vessel (OPDRV) with Secondary Containment Inoperable"

Enclosed is the Monticello Nuclear Generating Plant (MNGP) Licensee Event Report (LER) 2015-003-00 concerning use of the reactor water cleanup system to lower level without declaring an operation with a potential to drain the reactor vessel (OPDRV) without secondary containment operable. This condition is reportable to the NRC in accordance with 10 CFR 50.73(a)(2)(i)(B), as operations prohibited by Technical Specifications.

Summary of Commitments

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

A handwritten signature in black ink, appearing to read 'Peter A. Gardner'.

Peter A. Gardner
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

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4. TITLE

Use of the Reactor Water Cleanup System to Lower Level without Declaring an Operation with a Potential to Drain the Reactor Vessel (OPDRV) with Secondary Containment Inoperable

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
05	14	2015	2015	003	00	07	13	2015	FACILITY NAME	DOCKET NUMBER 05000
									FACILITY NAME	DOCKET NUMBER 05000
9. OPERATING MODE			11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)							
5			<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 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 0 %			<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 checked="" type="checkbox"/> 50.73(a)(2)(i)(B)		<input 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

Stephen Sollom, Licensing Engineer

TELEPHONE NUMBER (Include Area Code)

(763) 295-1611

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
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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

MONTH	DAY	YEAR
09	15	2015

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

On May 13, 2015, and on April 13 and April 14, 2015 (identified during an extent of condition review), the Reactor Water Cleanup (RWCU) System was used to perform reactor cavity and dryer-separator storage pool inventory reductions. Use of RWCU System constituted an Operation with a Potential to Drain the Reactor Vessel (OPDRV). However, the plant OPDRV procedural guidance did not identify this as an OPDRV. These occurrences are being reported in accordance with 10 CFR 50.73(a)(2)(i)(B) as an operation or condition prohibited by the Technical Specifications. A causal analysis is in progress for how the plant OPDRV procedure specified that use of the RWCU System for cleanup and inventory control activities was not considered an OPDRV. A supplement to this Licensee Event Report will be provided after completion. A corrective action is to revise the plant OPDRV procedure to correctly reflect the use of the RWCU System for draining evolutions as an OPDRV.

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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.

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NARRATIVE**EVENT DESCRIPTION**

On May 13, 2015, the Reactor Water Cleanup (RWCU) [CE] System was used as one of the systems to perform the reactor cavity and dryer-separator storage pool draindown. Plant procedure, "Operation with Potential to Drain the Reactor," provides guidance on activities related to Operations with a Potential to Drain the Reactor Vessel (OPDRV), including specific requirements to implement the interim actions specified in NRC Enforcement Guidance Memorandum (EGM) 11-003 Revision 2. The plant OPDRV procedure indicated that use of the RWCU System in this manner was not an OPDRV. On May 14, 2015, the NRC informed Monticello personnel that they disagreed with this position, and that use of the RWCU System for this draindown evolution was considered to be an OPDRV.

In accordance with Technical Specification (TS) Specification 3.6.4.3, "Standby Gas Treatment (SGT) System," [BH] and TS 3.6.4.1, "Secondary Containment," [NH] the SGT System and Secondary Containment (SCT) are required to be operable during OPDRVs. During the reactor cavity draindown that occurred on May 13, 2015, the SGT System and SCT were inoperable (but available). Based on this, on May 14, 2015, Monticello Nuclear Generating Plant (MNGP) was in mode 5, at 0% power level, it was determined that an operation or condition prohibited by the TS had occurred, which is reportable under 10 CFR 50.73(a)(2)(i)(B).

As part of a review of the extent of the condition, it was subsequently identified that on two occasions between April 13 and April 14, 2015, unrecognized OPDRVs occurred when the RWCU System was used for water level control during reactor vessel disassembly, to maintain level at approximately the reactor flange and some small level reductions occurred as part of this evolution. A review of system status indicates that both SCT and the B SGT subsystem were inoperable (but available) at this time.

EGM 11-003, entitled, "Enforcement Guidance Memorandum 11-003, Revision 2, Dispositioning Boiling Water Reactor Licensee Noncompliance with Technical Specification Containment Requirements During Operations with a Potential for Draining the Reactor Vessel," provides guidance on what type of conditions constitute an OPDRV. It states:

[An] activity that could potentially result in draining or siphoning the RPV [reactor pressure vessel] water level below the top of the fuel, including operations involving aligning and realigning plant systems prior to achieving steady-state water level control, without taking credit for mitigating measures, to be an OPDRV activity. The addition and removal of small volumes of water inventory from the RPV, for example control rod drive cooling water, is considered steady-state water level control and not an OPDRV provided the instrumentation and valves for automatic isolation of the drain down path remain available.

The RWCU System takes suction from below the reactor vessel on the reactor recirculation loops. Therefore, use of the system to reduce reactor water level is considered an OPDRV. As stated previously, the plant OPDRV procedure did not identify this operation to be an OPDRV activity. Consequently, SCT and the SGT System should have been restored to operable status prior to use of the RWCU System for these OPDRV evolutions. The specifics of each reportable condition are described below.

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RWCU Used During the Second Reactor Cavity and Dryer-Separator Storage Pool Draindown Evolution

On May 13, 2015, at 0031, RWCU System letdown flow to the hotwell was increased from steady-state conditions to 100 gallons per minute (gpm) in preparation for the reactor cavity and dryer-separator storage pool draindown evolution. On May 13, 2015, at 1011, the RWCU System letdown flowrate was reduced below the previous steady-state flow and the OPDRV condition was exited. Both SGT subsystems were inoperable (but available) during the timeframe of the draindown evolution using RWCU. The A SGT subsystem was restored to operable status on May 13, 2015, at 0916. The B SGT subsystem was restored to operable status on May 14, 2015, at 0600 (after the RWCU draindown evolution had ended). SCT was inoperable (but available) during the entire duration that the RWCU System was used for draining down the reactor cavity and dryer-separator storage pool. SCT was restored to operable status on May 16, 2015 at 1939. SCT and both SGT subsystems are required to be operable in accordance with the TS during OPDRVs. Therefore, use of the RWCU System for the draindown evolution, while SCT and the SGT System were inoperable constituted an operation or condition prohibited by the TS.

RWCU Used During the Initial Reactor Dissassembly

As part of an extent of the condition review, it was identified that on April 13, 2015, from 2104 to 2231, and on April 14, 2015, from 0205 to 0303, that reactor vessel water level reductions occurred while the RWCU System was used to adjust level in accordance with the reactor disassembly procedure. On April 13, 2015, level was lowered from approximately 675 to 643 inches. On April 14, 2015, level was lowered from approximately 667 to 646 inches.

On April 12, 2015, at 1713, the isolation valve, Primary Containment Exhaust Isolation to Plenum [ISV], was opened as part of de-inerting primary containment and maintained open to ventilate the torus and drywell during the refueling outage. The isolation valve is a single active component with a safety function to close upon SCT isolation. If the isolation valve failed to close, the intake of both SGT subsystem fans [FAN] could be open to the Main Exhaust Plenum Room, which could prevent either SGT subsystem from exhausting sufficient flow to meet the minimum required vacuum (0.25 inches water-gage (wg)) in accordance with Surveillance Requirement (SR) 3.6.4.1.4. Consequently, when the isolation valve is opened, SCT is declared inoperable (an NRC commitment), as well as the B SGT subsystem. On April 15, 2015, at 2029, the isolation valve was closed, restoring SCT and the SGT System to operable status. Consequently, during the time periods on April 13 and April 14, 2015, when the RWCU System was used for lowering reactor water level, with SCT and one subsystem of SGT inoperable, an operation or condition prohibited by the TS occurred.

EVENT ANALYSIS

These occurrences are being reported in accordance with 10 CFR 50.73(a)(2)(i)(B) as an operation or condition prohibited by the TS.

The plant OPDRV procedure did not identify that the use of the RWCU System for performing inventory control activities involving reductions in level, which includes these draining evolutions, was an OPDRV. This discrepancy resulted in unrecognized entries into OPDRVs when the RWCU System was used

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during performance of these draining evolutions. Consequently, since SCT and the SGT System were inoperable during these occurrences, an operation or condition prohibited by the TS occurred.

SAFETY SIGNIFICANCE

The safety significance of these occurrences is minimal. Use of the RWCU System for draining operations is an operational function of the system. These types of evolutions are under the direct control of operations personnel. In accordance with TS 3.3.6.2, "Secondary Containment Isolation Instrumentation," [JM] the Reactor Vessel Water Level – Low, Low isolation signal, is required to be operable when OPDRVs are being performed. If a reactor vessel draindown event through the RWCU System were to occur, this function automatically closes the appropriate valves terminating the event above the top of active fuel.

An Infrequently Performed Test or Evolution briefing was conducted with all participants for the reactor cavity and dryer-separator storage pool draindown evolution, which included requirements for monitoring water levels. Additionally, both the SGT System and SCT were available as mitigating systems.

During the periods on April 14 and 15, 2015, when water level was reduced using the RWCU System and the isolation valve was open, SCT and the B SGT subsystem were inoperable, and the valve would have closed, so the SGT subsystem fans would have exhausted sufficient flow to meet SR 3.6.4.1.4. Therefore, while SCT and the B SGT subsystem were inoperable during this period, they were available.

CAUSE

A causal analysis is in progress for how the plant OPDRV procedure specified that use of the RWCU System for cleanup and inventory control activities was not considered an OPDRV. The cause will be provided in a supplement to this Licensee Event Report (LER).

CORRECTIVE ACTION

A corrective action is to revise the plant OPDRV procedure to correctly reflect the use of the RWCU System for draining evolutions as an OPDRV. This action is being tracked in the MNGP corrective action program.

PREVIOUS SIMILAR EVENTS

A review of MNGP LERs from the last three years was performed. During the 2015 Refueling Outage (RFO) several OPDRVs were performed that invoked the guidance of EGM 11-003, Revision 2, and were reported in LER 2015-001. This LER involves several additional OPDRVs for different situations where the guidance of EGM 11-003, Revision 2, was not invoked, and hence this LER is being submitted separately.

ADDITIONAL INFORMATION

The Institute of Electrical and Electronics Engineer codes for equipment are denoted by [XX].