



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

September 11, 2015

L-MT-15-052
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 2015-003-01 "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 a supplement to the Licensee Event Report 2015-003 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.

Summary of Commitments

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

A handwritten signature in black ink that reads '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.

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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	01	9	11	2015		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
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13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	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 <input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO	15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR

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. The cause was determined to be that the plant OPDRV procedure failed to provide adequate guidance to determine OPDRV activities which resulted in actions taken that were not in accordance with NRC Enforcement Guidance Memorandum (EGM) 11-003, Revision 2. The plant OPDRV procedure has been revised to reflect the guidance of the EGM.



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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 Disassembly

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

The plant OPDRV procedure failed to provide adequate guidance to identify specific OPDRV activities which resulted in actions taken that were not in accordance with NRC EGM 11-003, Revision 2.

CORRECTIVE ACTION

For systems having a potential to drain the reactor vessel, the OPDRV procedure has been revised to clarify steady state water level control, and clearly indicate the following are OPDRV activities: use of RWCU for reactor draindown; and the use of a system, even with automatic isolation operable, to lower reactor water level.

PREVIOUS SIMILAR EVENTS

A review of MNGP LERs from the last three years was performed. As part of the extent of condition review for this LER previous occurrences were identified which will be reported separately. Also, during the 2015 Refueling Outage several OPDRVs were performed that invoked the guidance of EGM 11-003, Revision 2, and were reported in LER 2015-001.

ADDITIONAL INFORMATION

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