



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

REGION III  
2443 WARRENVILLE RD. SUITE 210  
LISLE, IL 60532-4352

September 1, 2015

Mr. Peter A. Gardner  
Site Vice President  
Monticello Nuclear Generating Plant  
Northern States Power Company, Minnesota  
2807 West County Road 75  
Monticello, MN 55362-9637

**SUBJECT: MID-CYCLE ASSESSMENT LETTER FOR MONTICELLO NUCLEAR  
GENERATING PLANT (REPORT 05000263/2015005)**

Dear Mr. Gardner:

On August 13, 2015, the U. S. Nuclear Regulatory Commission (NRC) completed its mid-cycle performance review of Monticello Nuclear Generating Plant (MNGP). The NRC reviewed the most recent quarterly performance indicators (PIs) in addition to inspection results and enforcement actions from July 1, 2014 through June 30, 2015. This letter informs you of the NRC's assessment of your facility during this period and its plans for future inspections at your facility.

The NRC determined the performance at MNGP during the most recent quarter was within the Regulatory Response Column of the NRC's Reactor Oversight Process (ROP) Action Matrix because of one or more greater-than-green Security Cornerstone inputs as described in Inspection Report 05000263/2015403 (ML15057A401) sent on February 26, 2015.

This letter stated the greater-than-green finding was effective starting in the fourth quarter of 2014. With both an existing Yellow finding associated with flood mitigation strategy and the greater-than-green security finding, MNGP met the definition of a Repetitive Degraded Cornerstone. Specifically, a Repetitive Degraded Cornerstone is one that is degraded for more than four consecutive quarters with at least one of the quarters having: (1) three or more white inputs (the additional white input(s) can be from any cornerstone), or (2) one yellow and one white input (the additional white input can be from any cornerstone). With the Yellow inspection finding in the Mitigating Systems Cornerstone open for seven consecutive quarters and the greater-than-green inspection finding in the Security Cornerstone, Inspection Manual Chapter (IMC) 0305, "Operating Reactor Assessment Program," specifies that MNGP should be moved from Column 3 to Column 4 of the Action Matrix in the fourth quarter of 2014. However, by letter dated February 27, 2015, (ML15049A132), you were notified that the NRC's Executive Director for Operations had approved a deviation from the NRC's ROP Action Matrix for MNGP. Therefore, MNGP was placed in the Regulatory Response Column, Column 2 of the ROP Action Matrix.

As stated in the deviation letter, you agreed to perform an independent safety culture assessment with a focus on human performance. The deviation will remain open until MNGP has successfully completed the actions prescribed by Column 2 of the NRC Action Matrix and

upon completion of the NRC assessment of your safety culture evaluation. Should these criteria not be met and/or another greater-than-green finding occurs while this deviation is open, the NRC will reassess the licensee's placement in the Action Matrix consistent with the criteria contained in IMC 0305.

In the mid-cycle assessment letter dated September 2, 2014, (ML14245A144), the NRC opened a substantive cross-cutting issue (SCCI) associated with Human Performance, Conservative Bias aspect (H.14). The closure criteria were: (1) a reduction in the number of findings assigned the H.14 aspect such that the total no longer met the definition of cross-cutting theme as described in IMC 0305, "Operating Reactor Assessment Program," dated November 20, 2014; (2) the corrective actions taken to mitigate the cross cutting theme prove effective; and (3) sustained performance improvement is observed in the H.14 aspect of the human performance area. During the 2014 End of Cycle (EOC) assessment, the SCCI was sustained, as the NRC had not had sufficient time to evaluate the effectiveness of your recently implemented corrective actions.

Since the 2014 EOC assessment, there has been sustained improvement noted in this aspect. In particular, only one finding associated with the H.14 aspect has been identified since the third quarter of 2014. The other findings associated with H.14 have rolled off and are no longer included in the current assessment period. As a result, the number of findings associated with this aspect is below the threshold required for a SCCI. Further, your staff has implemented measures to trend corrective action program issues related to conservative bias since the issuance of the SCCI. Inspectors have been engaged in monitoring these trends and the trends in conservative bias issues have consistently been decreasing. We understand you intend to continue monitoring performance in this area. Therefore, the closure criteria were met for this issue and SCCI is closed.

The enclosed inspection plan lists the inspections scheduled through December 31, 2017. Routine inspections performed by resident inspectors are not included in the inspection plan. The inspections listed during the second half of the inspection plan are tentative and may be revised at the end-of-cycle performance review. The NRC provides the inspection plan to allow for the resolution of any scheduling conflicts and personnel availability issues. The NRC will contact you as soon as possible to discuss changes to the inspection plan should circumstances warrant any changes. This inspection plan does not include security related inspections, which will be sent via separate, non-publicly available correspondence.

In response to the accident at Fukushima, the Commission issued Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," which requires licensees to develop, implement, and maintain guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities following a beyond-design-basis external event. Additionally, the Commission issued Order EA-12-051, "Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation," which requires licensees to have a reliable means of remotely monitoring wide-range Spent Fuel Pool levels to support effective prioritization of event mitigation and recovery actions in the event of a beyond-design-basis external event. The NRC is conducting audits of licensee efforts towards compliance with these Orders. The audit has been completed at Monticello, and the information gathered will aid staff in development of the ultimate Safety Evaluation for the site. After the NRC staff receives the Final Compliance letter for the site, the Final Safety Evaluation will be issued. Then, the NRC staff will confirm through inspections the full implementation of the orders mentioned above performing Temporary Instruction 191, "Inspection of the Implementation of Mitigation Strategies and Spent Fuel Pool

Instrumentation Orders and Emergency Preparedness Communication/Staffing/Multi-Unit Dose Assessment Plans.”

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390 of the NRC’s “Rules of Practice,” a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC’s Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Please contact Kenneth Riemer at 630–829–9628 with any questions you have regarding this letter.

Sincerely,

*/RA/*

Cynthia D. Pederson  
Regional Administrator

Docket Nos. 50–263  
License Nos. DPR–22

Enclosure:  
Monticello Nuclear Generation Plant  
Inspection/Activity Plan

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Instrumentation Orders and Emergency Preparedness Communication/Staffing/Multi-Unit Dose Assessment Plans.”

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**Monticello**  
**Inspection / Activity Plan**  
**09/01/2015 - 12/31/2017**

Unit Number	Planned Dates		Inspection Activity	Title	No. of Staff on Site
	Start	End			
			<b>ISFSI - PROGRAM REVIEW</b>		<b>1</b>
1	09/01/2015	11/27/2015	IP 60855.1	Operation of an Independent Spent Fuel Storage Installation at Operating Plants	
			<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
1	09/28/2015	10/02/2015	IP 71124.02	Occupational ALARA Planning and Controls	
			<b>BI OLRQ - BIENNIAL REQUAL PROGRAM INSPECTION</b>		<b>2</b>
1	10/19/2015	10/23/2015	IP 7111111B	Licensed Operator Requalification Program	
			<b>STRIKE P - STRIKE PREPARATION</b>		<b>1</b>
1	12/01/2015	12/31/2015	IP 92709	Licensee Strike Contingency Plans	
			<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
1	01/25/2016	01/29/2016	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
			<b>ENG BI - TRIENNIAL MODS AND 50.59 INSPECTION</b>		<b>4</b>
1	02/29/2016	03/18/2016	IP 7111117T	Evaluations of Changes, Tests, and Experiments and Permanent Plant Modifications	
			<b>ENG BI - TRIENNIAL HEAT SINK INSPECTION</b>		<b>2</b>
1	04/18/2016	04/22/2016	IP 7111107T	Heat Sink Performance	
			<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
1	05/09/2016	05/13/2016	IP 71124.05	Radiation Monitoring Instrumentation	
			<b>BI EP - EP BASELINE INSPECTION/ PI VERIFICATION</b>		<b>1</b>
1	05/23/2016	05/27/2016	IP 7111402	Alert and Notification System Testing	
1	05/23/2016	05/27/2016	IP 7111403	Emergency Preparedness Organization Staffing and Augmentation System	
1	05/23/2016	05/27/2016	IP 7111405	Correction of Emergency Preparedness Weaknesses and Deficiencies	
1	05/23/2016	05/27/2016	IP 71151	Performance Indicator Verification	
			<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
1	07/25/2016	07/29/2016	IP 71124.06	Radioactive Gaseous and Liquid Effluent Treatment	
1	07/25/2016	07/29/2016	IP 71151	Performance Indicator Verification	
			<b>PI&amp;R - BIENNIAL PI&amp;R INSPECTION</b>		<b>4</b>
1	09/19/2016	10/07/2016	IP 71152B	Problem Identification and Resolution	
			<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
1	10/03/2016	10/07/2016	IP 71124.08	Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation	
			<b>OL PREP - INIT PREP/OCTOBER 2016</b>		<b>3</b>
1	10/17/2016	10/21/2016	W90348	OL - INITIAL EXAM - 2016 OCT-NOV - MONTICELLO	
			<b>OL EXAM - INIT EXAM/NOVEMBER 2016</b>		<b>3</b>
1	11/14/2016	11/18/2016	W90348	OL - INITIAL EXAM - 2016 OCT-NOV - MONTICELLO	

This report does not include INPO and OUTAGE activities.  
This report shows only on-site and announced inspection procedures.

**Monticello**  
**Inspection / Activity Plan**  
**09/01/2015 - 12/31/2017**

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	Start	End			
			<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
1	01/23/2017	01/27/2017	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
1	01/23/2017	01/27/2017	IP 71124.04	Occupational Dose Assessment	
			<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
1	03/06/2017	03/10/2017	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
			<b>ISI - IINSERVICE INSPECTION</b>		<b>1</b>
1	03/04/2017	04/08/2017	IP 7111108G	Inservice Inspection Activities - BWR	
			<b>BI FIRE - TRIENNIAL FIRE PROTECTION AND BAG TRIP</b>		<b>3</b>
1	06/12/2017	07/14/2017	IP 7111105T	Fire Protection [Triennial]	
			<b>BI EP - EP EXERCISE INSPECTION / PI VERIFICATION</b>		<b>5</b>
1	08/28/2017	09/01/2017	IP 7111401	Exercise Evaluation	
1	08/28/2017	09/01/2017	IP 7111406	Drill Evaluation	
1	08/28/2017	09/01/2017	IP 7111408	Exercise Evaluation – Scenario Review	
1	08/28/2017	09/01/2017	IP 71151	Performance Indicator Verification	
			<b>OL-RQ - BIENNIAL REQUAL PROGRAM INSPECTION</b>		<b>2</b>
1	10/16/2017	10/20/2017	IP 7111111B	Licensed Operator Requalification Program	

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