



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, ILLINOIS 60532-4352

May 7, 2019

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

SUBJECT: MONTICELLO NUCLEAR GENERATING PLANT, UNIT 1—NRC INTEGRATED
INSPECTION REPORT 05000263/2019001

Dear Mr. Church:

On March 31, 2019, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Monticello Nuclear Generating Plant, Unit 1. On April 2, 2019 the NRC inspectors discussed the results of this inspection with you and other members of your staff. The results of this inspection are documented in the enclosed report.

The NRC inspectors did not identify any finding or violation of more than minor significance.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

/RA/

Hironori Peterson, Chief
Branch 3
Division of Reactor Projects

Docket No.: 05000263
License No.: DPR-22

Enclosure:
Inspection Report 05000263/2019001

cc: Distribution via LISTSERV®

Letter to Christopher Church from Hironori Peterson dated May 7, 2019

SUBJECT: MONTICELLO NUCLEAR GENERATING PLANT, UNIT 1—NRC INTEGRATED INSPECTION REPORT 05000263/2019001

DISTRIBUTION:

Michael McCoppin
RidsNrrDorLpl3
RidsNrrPMMonticello
RidsNrrDirslrib Resource
Darrell Roberts
John Giessner
Jamnes Cameron
Allan Barker
DRPIII
DRSIII
ROPreports.Resource@nrc.gov

ADAMS ACCESSION NUMBER: ML19127A091

<input checked="" type="checkbox"/> SUNSI Review Complete By: Nick Shah		ADAMS <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Publicly Available <input type="checkbox"/> Non-Publicly Available	<input checked="" type="checkbox"/> Non- Sensitive <input type="checkbox"/> Sensitive	Keyword: NRC-002
OFFICE	RIII				
NAME	HPeterson:bw				
SIGNATURE	<i>/RA/</i>				
DATE	5/7/2019				

OFFICIAL RECORD COPY

**U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report**

Docket Numbers: 05000263

License Numbers: DPR-22

Report Numbers: 05000263/2019001

Enterprise Identifier: I-2019-001-0052

Licensee: Northern States Power Company - Minnesota

Facility: Monticello Nuclear Generating Plant, Unit 1

Location: Monticello, MN

Inspection Dates: January 01, 2019 to March 31, 2019

Inspectors: D. Krause, Senior Resident Inspector
T. Ospino, Reactor Engineer
P. Zurawski, Senior Resident Inspector

Approved By: Hironori Peterson, Chief
Branch 3
Division of Reactor Projects

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting a quarterly inspection at Monticello Nuclear Generating Plant, Unit 1 in accordance with the Reactor Oversight Process. The Reactor Oversight Process is the NRC's program for overseeing the safe operation of commercial nuclear power reactors. Refer to <https://www.nrc.gov/reactors/operating/oversight.html> for more information. Findings and violations being considered in the NRC's assessment are summarized in the table below.

List of Findings and Violations

No findings or violations were identified.

Additional Tracking Items

None.

PLANT STATUS

Monticello began the inspection period operating at approximately 100 percent power. On January 5, 2019 the unit was down powered to 75 percent for quarterly turbine and main steam isolation valve (MSIV) testing. The unit returned to a maximum achievable power of approximately 99 percent on January 5, 2019 where it entered end-of-fuel cycle coast-down for the remainder of the inspection period. On February 6, 2019 the unit was at 91 percent power and was down-powered to 83 percent for a rod pattern adjustment. The unit was returned to maximum achievable power of 93 percent on 6 February, 2019 and continued in coast-down. The unit ended the inspection period in coast-down at 76 percent power.

INSPECTION SCOPES

Inspections were conducted using the appropriate portions of the inspection procedures (IPs) in effect at the beginning of the inspection unless otherwise noted. Currently approved IPs with their attached revision histories are located on the public website at <http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html>. Samples were declared complete when the IP requirements most appropriate to the inspection activity were met consistent with Inspection Manual Chapter (IMC) 2515, "Light-Water Reactor Inspection Program - Operations Phase." The inspectors performed plant status activities described in IMC 2515 Appendix D, "Plant Status" and conducted routine reviews using IP 71152, "Problem Identification and Resolution." The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel to assess licensee performance and compliance with Commission rules and regulations, license conditions, site procedures, and standards.

REACTOR SAFETY

71111.01 - Adverse Weather Protection

Impending Severe Weather Sample (IP Section 03.03) (1 Sample)

The inspectors evaluated readiness for impending adverse weather conditions for extreme cold on January 25, 2019.

Seasonal Extreme Weather Sample (IP Section 03.02) (1 Sample)

The inspectors evaluated readiness for seasonal extreme weather conditions prior to the onset of winter cold weather for the following systems on January 7, 2019:

- Emergency Diesel Generator (EDG)
- Emergency Diesel Generator Fuel oil
- Emergency Service Water (ESW) Cooling Water

71111.04 - Equipment Alignment

Partial Walkdown (IP Section 02.01) (3 Samples)

The inspectors evaluated system configurations during partial walkdowns of the following systems/trains:

- (1) Division 1 Control Room Ventilation - Emergency Filtration Train (CRV-EFT) - protected on February 7, 2019
- (2) Division 1 EDG - protected on January 14, 2019
- (3) High Pressure Coolant Injection (HPCI) post maintenance alignment on March 28, 2019

71111.04S - Equipment Alignment

Complete Walkdown (IP Section 02.02) (1 Sample)

The inspectors evaluated system configurations during a complete walkdown of the Control Rod Drive (CRD) Pump/Hydraulic System - protected during 11 CRD Maintenance on February 25, 2019.

71111.05A - Fire Protection (Annual)

Annual Inspection (IP Section 03.02) (1 Sample)

The inspectors evaluated fire brigade performance for a 13.8 kilovolt (kV) switchgear fire drill on March 22, 2019

71111.05Q - Fire Protection

Quarterly Inspection (IP Section 03.01) (5 Samples)

The inspectors evaluated fire protection program implementation in the following selected areas:

- (1) FZ 01-C - Reactor Core Isolation Cooling (RCIC) on March 26, 2019
- (2) FZ 01-G - CRD Pump Room on March 26, 2019
- (3) FZ 12-A - Lower 4kV Switchgear Room on March 27, 2019
- (4) FZ 14-A - Upper 4kV Switchgear Room on March 27, 2019
- (5) FZ 33 - EFT 3rd Floor on March 28, 2019

71111.06 - Flood Protection Measures

Inspection Activities - Internal Flooding (IP Section 02.02a.) (1 Sample)

The inspectors evaluated internal flooding mitigation protections in the:

Lower 4kV Room, Flood Zone Turbine Building (TB) TB-I Internal Flooding on March 26, 2019

71111.11Q - Licensed Operator Requalification Program and Licensed Operator Performance

Licensed Operator Performance in the Actual Plant/Main Control Room (IP Section 03.01) (1 Sample)

The inspectors observed and evaluated licensed operator performance in the Control Room during a downpower to 83 percent and Control Rod withdrawal, multiple technical specification (TS) entries, and work order (WO) coordination on February 6, 2019.

Licensed Operator Requalification Training/Examinations (IP Section 03.02) (1 Sample)

The inspectors observed and evaluated Licensed Operator Requalification - Scenario MT-LOR-19B-0001V, RQ-SS-159 on March 11, 2019.

71111.12 - Maintenance Effectiveness

Routine Maintenance Effectiveness Inspection (IP Section 02.01) (2 Samples)

The inspectors evaluated the effectiveness of routine maintenance activities associated with the following equipment and/or safety significant functions:

- (1) Service Water (SW) Check valves SW-21-1 & SW-22-1 failed Inservice Testing (IST) testing on March 6, 2019
- (2) 11 EDG #2 Air Start Relief Valve Lifting on March 8, 2019

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management Sample (IP Section 03.01) (4 Samples)

The inspectors evaluated the risk assessments for the following planned and emergent work activities:

- (1) Degraded 115 kV Electrical Voltage (Loss of #10 Transformer) on January 24, 2019
- (2) V-AH-4B Reactor Building Ventilation (RBV) Outboard Supply Isolation Damper Failed to Close on February 19, 2019
- (3) Shutdown Cooling Supply Valve (MO-1988) Breaker (Bkr 3322) failed, on March 5, 2019
- (4) 11 EDG Coolant Leak on March 11, 2019

71111.15 - Operability Determinations and Functionality Assessments

Operability Determinations and Functionality Assessments (IP Section 02.01) (4 Samples)

The inspectors evaluated the following operability determinations and functionality assessments:

- (1) Discharge Canal Radiation Monitor non-functional
- (2) Improper grease used in RCIC & HPCI couplings
- (3) 11 EDG Coolant Leak
- (4) MO-2003, Residual Heat Removal (RHR) Heat-Exchanger (HX) By-pass Valve actuator, inadvertently stalled

71111.19 - Post Maintenance Testing

Post Maintenance Test Sample (IP Section 03.01) (5 Samples)

The inspectors evaluated the following post maintenance tests:

- (1) EFT, V-EAC-14B Compressor Post Maintenance Test (PMT) on February 11, 2019

- (2) Stack B, Effluent Noble Gas Monitor, RM-7858B "B" Stack Wide Range Gas Monitor (WRGM) Detector PMT on February 14, 2019
- (3) PM 4847 PMT, RCIC supply to MO-2078 on February 14, 2019
- (4) P-201A PMT, 11 CRD pump post maintenance on March 13, 2019
- (5) HPCI valve MO-2063, Condensate Storage Tank (CST) Suction Power Supply, D312-09 250 volts direct current (VDC), PMT on March 20, 2019

71111.22 - Surveillance Testing

The inspectors evaluated the following surveillance tests:

Containment Isolation Valve (ISO) (IP Section 03.01) (1 Sample)

0143, Drywell-Torus Monthly Vacuum Breaker Test on March 6, 2019

In Service Testing (IST) (IP Section 03.01) (1 Sample)

0255-03-III-1A Core Spray Loop B Comprehensive Pump and Valve Tests on February 19, 2019

Surveillance Testing (IP Section 03.01) (2 Samples)

- (1) "B" WRGM Source Check on February 14, 2019
- (2) 0255-08-IA-1, RCIC quarterly Pump & Valve Test on February 14, 2019

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

IE01: Unplanned Scrams per 7000 Critical Hours Sample (IP Section 02.01) (1 Sample)

Performance Indicator data (January 1, 2018 through December 31, 2018) on January 16, 2019

IE03: Unplanned Power Changes per 7000 Critical Hours Sample (IP Section 02.02) (1 Sample)

Performance Indicator data (January 1, 2018 through December 31, 2018) on January 16, 2019

IE04: Unplanned Scrams with Complications (USwC) Sample (IP Section 02.03) (1 Sample)

Performance Indicator data (January 1, 2018 through December 31, 2018) on January 16, 2019

71153 – Follow Up of Events and Notices of Enforcement Discretion

Event Follow Up (IP Section 03.01) (1 Sample)

The inspectors evaluated a sudden ice accumulation and loss of level in the circulating water intake basin and licensee's response on January 24, 2019.

Event Report (IP Section 03.02) (1 Sample)

The inspectors evaluated the following licensee event reports which can be accessed at <https://lsearch.inl.gov/LERSearchCriteria.aspx>. The inspectors reviewed the LER, associated licensee engineering evaluation, and letter dated February 7, 2019, noticing cancellation of the LER.

LER 2018-001-00, Non-Fully Closed Check Valves Resulted in a Potential Pathway Outside Secondary Containment; ML18313A256. The inspectors determined that it was not reasonable to foresee or correct the cause discussed in the LER therefore no performance deficiency was identified. The inspectors also concluded that no violation of NRC requirements occurred.

INSPECTION RESULTS

No findings were identified.

EXIT MEETINGS AND DEBRIEFS

The inspectors verified no proprietary information was retained or documented in this report.

- On March 31, 2019, the inspector presented the quarterly integrated inspection results to Mr. C. Church and other members of the licensee staff.

DOCUMENTS REVIEWED

71111.01—Adverse Weather

- 1444; Pre and Post Severe Weather Inspection Checklist; Revision 17
- A.6; Acts of Nature; Revision 60

71111.04—Equipment Alignment

- 2118; Plant Prestart Checklist, HPCI System; Revision 17
- 2124; Plant Prestart Checklist Diesel Generators and Fuel Oil System; Revision 11
- 2154-10; High Pressure Coolant Injection System Prestart Valve Checklist; Revision 39
- 2154-22; EDG Emergency Service Water System Prestart Valve Checklist; Revision 27
- 2206; Plant Prestart Checklist EDG, Emergency Service Water System; Revision 4
- B.01.03-05; System Operations, CRD Hydraulic System; Revision 51
- B.08.13-05; System Operations, Control Room H&V and EFT; Revision 35
- NH-36244; Control Rod Hydraulic System P&ID; Revision 88
- NH-36245; Control Rod Hydraulic System P&ID; Revision 79
- NH-36249; High Pressure Coolant Injection System P&ID; Revision 84
- NH-170037; Main Control Room CRV / EFT System; Revision 84

- NX-8292-1-2; HPCI System; Revision 77

71111.05—Fire Protection

- Strategy A.3-01-C, Fire Zone 01-C; 11 RCIC Pump Room; Revision 10
- Strategy A.3-01-G, Fire Zone 01-G; CRD Pump Room; Revision 4
- Strategy A.3-12-A, Fire Zone 12-A; Lower 4KV Bus Area No 13 & 15; Revision 18
- Strategy A.3-14-A, Fire Zone 14-A; Upper 4KV Bus Area No 14 & 16; Revision 17
- Strategy A.3-18-A, East 13.8 kV Switchgear Room (Bus 11); Revision 15
- Strategy A.3-33, Fire Zone 33; EFT Bldg – 3rd Floor; Revision 11
- Drill Guide A.3-18; 13.8 kV Switchgear Room Fire
- CAP 501000024743; NRC Identified Issue: Fire Map Update

71111.06—Flood Protection (Internal)

- B.09.06-05; System Operation, 4.16 kV Station Auxiliary; Revision 53
- 4 AWI-08.01.03; HELB Practices; Revision 28
- DBD-T.08; Internal Flooding; Revision 5
- Strategy A.3-12-A, Fire Zone 12-A; Lower 4KV Bus Area No 13 & 15; Revision 18
- CAP 501000024733; NRC Resident Housekeeping Question

71111.11—Licensed Operator Requalification

- RQ-SS-159; Simulator Exercise Guide, SRV Problems with a Subsequent Loss of Off-Site Power; Revision 0
- 2300; Reactivity Adjustment; February 6, 2019

71111.12—Maintenance Effectiveness

- CAP 501000023854: SW-21-1 & SW-22-1 Failed IST Testing
- CAP 501000023995; 11 EDG #2 Air Start Relief Valve Lifting
- WO 700040717; SW-21-1 & SW-22-1, 11/13 RHRSW MTR CV
- WO 700051424; 11 EDG #2 Air Start Compressor (K-8B) RV

71111.13—Maintenance Risk Assessment and Emergent Work

- CAP 501000023270; V-AH-4B Outboard Damper Failed to Close
- CAP 501000023808: B3322 Failed PMT
- CAP 501000024068; Coolant Leak on 11 EDG
- CAP 501000022351; Abnormal Voltage on 115kV Supply
- OSP-SCT-0550; Secondary Containment Isolation Damper Testing; Revision 9
- WO 700035960: B3322 Major PM
- WO 700049047; Monticello 10 345/115kV Transformer Emergency Work Request
- WO 700050572; V-AH-4B, Rx Bldg 1027' Supply Fan 480 VAC
- WO 700051397; 11 EDG Low Water Pressure Alarm
- B.08.01.02-05; System Operation, EDG Emergency Service Water Revision 23

71111.15—Operability Determinations and Functionality Assessments

- CAP 501000023753; Unexpected Annunciator I the Control Room
- CAP 501000023935: Discontinued Mobiltemp 78 Grease
- CAP 501000024068; Coolant Leak on 11 EDG

- CAP 501000024727; MO-2003 Actuator Inadvertently Stalled
- EC 608000000390; Engineering Evaluation, Evaluate Limits for MO-2003
- MRE 500000294415; Maintenance Rule Evaluation for Annunciator 4-A-27, Discharge Canal Downscale/Inoperable; March 12, 2019
- WO 700051397; 11 EDG Low Water Pressure Alarm
- WO 700039497; Rotork Motor Operated Valves, Maintenance and Inspection
- B.08.01.02-05; System Operation, EDG Emergency Service Water Revision 23

71111.19—Post Maintenance Testing

- WO 700048901; Air Conditioner V-EAC-14B Compressor Motor PMT
- WO 700049780; RM-7858B "B" Stack WRGM Detector PMT
- WO 700047682; RM-7858B "B" Stack WRGM Detector Final PMT
- WO 700016892; 4847, RCIC Supply to MO-2078 PMT
- WO 700016895; HPCI, MO-2063-CST Suction Supply D312-09 250VDC PMT

71111.22—Surveillance Test

- 0143, Drywell-Torus Monthly Vacuum Breaker Test; Revision 44
- Calibration Procedure Channel "B"; Revision 13
- 0255-03-III-1A; Core Spray Loop B Comprehensive Pump and Valve Tests; Revision 30
- 0255-08-IA-1; RCIC QTRLY Pump & Valve Test; Revision
- 0372-02; Stack Wide Range Gas Monitors Process and Sample Flow Instruments

71151—Performance Indicator Verification

- FP-PA-PI-01; Performance Indicator Control; Revision 12
- FP-PA-PI-02; NRC/INPO/WANO Performance Indicator Reporting; Revision 14
- FP-R-PI-01; Preparation of NRC Performance Indicators; Revision 7
- Monticello Station Log Entries; 01/01/2018–12/31/2018
- NEI 99-02; Regulatory Assessment PI Guideline; Revision 7
- QF-0445; NRC/INPO/WANO Data Collection and Submittal Forms - Monthly Operating Report; 01/01/2018–12/31/2018

71153—Follow Up of Events and Notices of Enforcement Discretion

- 500000291843; Engineering Evaluation 608000000317; January 22, 2019
- CAP 501000016705; CST-103-1/104-1 Failed Seat
- WO 700031258-0010; 0255-03-IA-1-1, CS Loop A Quarterly Pump & Valve Tests; Revision 60
- WO 700042331-0003; Repair/replace CST-103-1, "A" Core Spray Line Check Valve
- L-MT-19-012; Notice of Cancellation of LER 2018-001-00, Non-Fully Closed Check Valves Resulted in a Potential Pathway Outside of Secondary Containment and Follow-Up to Interim Report of a Deviation or Failure to Comply; February 07, 2019