

UNITED STATES NUCLEAR REGULATORY COMMISSION

REGION III 2443 WARRENVILLE ROAD, SUITE 210 LISLE, ILLINOIS 60532-4352

August 7, 2023

Shawn Hafen
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-INTEGRATED INSPECTION

REPORT 05000263/2023002

Dear Shawn Hafen:

On June 30, 2023, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Monticello Nuclear Generating Plant. On July 20, 2023, the NRC inspectors discussed the results of this inspection with G. Brown, Plant Manager, and other members of your staff. The results of this inspection are documented in the enclosed report.

No findings or violations of more than minor significance were identified during this inspection.

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 Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely.

Signed by Peterson, Hironori on 08/07/23

Hironori Peterson, Chief Reactor Projects Branch 3 Division of Operating Reactor Safety

Docket No. 05000263 License No. DPR-22

Enclosure: As stated

cc w/ encl: Distribution via LISTSERV

Letter to Shawn Hafen from Hironori Peterson dated August 7, 2023.

SUBJECT: MONTICELLO NUCLEAR GENERATING PLANT-INTEGRATED INSPECTION REPORT 05000263/2023002

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U.S. NUCLEAR REGULATORY COMMISSION Inspection Report

Docket Number: 05000263

License Number: DPR-22

Report Number: 05000263/2023002

Enterprise Identifier: I-2023-002-0056

Licensee: Northern States Power Company, Minnesota

Facility: Monticello Nuclear Generating Plant

Location: Monticello, MN

Inspection Dates: April 01, 2023 to June 30, 2023

Inspectors: S. Bell, Health Physicist

N. Bolling, Project Engineer

J. Cassidy, Senior Health Physicist
E. Fernandez, Senior Reactor Inspector
T. McGowan, Senior Resident Inspector
V. Myers, Senior Health Physicist
J. Nance, Operations Engineer

C. Norton, Senior Resident Inspector

J. Reed, Health Physicist

Approved By: Hironori Peterson, Chief

Reactor Projects Branch 3

Division of Operating Reactor Safety

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting an integrated inspection at Monticello Nuclear Generating Plant, 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.

List of Findings and Violations

No findings or violations of more than minor significance were identified.

Additional Tracking Items

| Type | Issue Number | Title | Report Section | Status |
|------|----------------------|---------------------------|----------------|--------|
| LER | 05000263/2022-001-00 | LER 2022-001-00 for | 71153 | Closed |
| | | Monticello Nuclear | | |
| | | Generating Plant, Loss of | | |
| | | Control Room Envelope | | |
| | | Operability | | |

PLANT STATUS

The unit began the inspection period at 80 percent rated thermal power in coast down. The licensee took the unit offline on April 15, 2023. The licensee commenced a reactor startup and brought the unit critical on May 13, 2023. The licensee increased reactor power and synchronized to the grid on May 14, 2023, to end refuel outage 31. The licensee continued to increase reactor power and reached rated thermal power on May 16, 2023. On May 26, 2023, the licensee lowered reactor power to 80 percent to perform a control rod pattern adjustment and returned to rated thermal power the same day. The unit remained at rated thermal power until the end of the inspection period.

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 activities described in IMC 2515, Appendix D, "Plant Status," observed risk significant activities, and completed onsite portions of IPs. 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

Seasonal Extreme Weather Sample (IP Section 03.01) (1 Sample)

(1) The inspectors evaluated readiness for seasonal extreme weather conditions prior to the onset of summer (extreme heat and potential drought) for the following systems:

cooling tower structures 11 and 12, division 1 and division 2 125-volt dc battery rooms, and intake structure traveling screens that are required to be protected from the seasonal extreme weather conditions on June 21, 2023

71111.04 - Equipment Alignment

Partial Walkdown Sample (IP Section 03.01) (4 Samples)

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

- (1) Protected reactor vent path, RV-2-71D (SRV D) on April 17, 2023
- (2) Protected make up source, condensate service pumps 11 and 12 on April 17, 2023
- (3) Uninterruptible power supply, Y81 after testing on May 9, 2023
- (4) Meteorological tower walkdown on May 16, 2022

71111.05 - Fire Protection

Fire Area Walkdown and Inspection Sample (IP Section 03.01) (5 Samples)

The inspectors evaluated the implementation of the fire protection program by conducting a walkdown and performing a review to verify program compliance, equipment functionality, material condition, and operational readiness of the following fire areas:

- (1) Fire zone (FZ) 2-B, east hydraulic control unit area on April 15, 2023
- (2) FZ 19-C, feedwater pipe chase on April 17, 2023
- (3) FZ 16, corridor, turbine building east and west, elevations 911' and 931' on April 18, 2023
- (4) FZ 17, turbine building north cable corridor 941' on April 19, 2023
- (5) FZ 9, main control room on April 27, 2023

Fire Brigade Drill Performance Sample (IP Section 03.02) (1 Sample)

(1) The inspectors evaluated the onsite fire brigade training and performance during an announced fire drill on June 17, 2023

71111.08G - Inservice Inspection Activities (BWR)

BWR Inservice Inspection Activities Sample - Nondestructive Examination and Welding Activities (IP Section 03.01) (1 Sample)

The inspectors verified that the following nondestructive examination and welding activities were performed appropriately:

- Ultrasonic examination (UT) residual heat removal (RHR) pipe-to penetration weld component ID: W1
 - 2. Ultrasonic examination (UT) RHR pipe-to penetration weld component ID: W2
 - 3. Magnetic particle examination (MT) carbon steel variable spring /slide component ID: H-1-WA
 - 4. Visual examination (VT-3) RHR seismic restraint component ID: SR-79
 - 5. Visual examination (VT-3) RHR box restraint component ID: H-4

71111.11Q - Licensed Operator Requalification Program and Licensed Operator Performance

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

(1) The inspectors observed and evaluated licensed operator performance in the control room during shutdown operations including taking the generator offline, and a transition from Mode 1 to Mode 3 using a planned scram of the mode switch for refuel outage 31 on April 14, 2023

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

(1) The inspectors observed and evaluated operations crew 1 just in time training for reactor startup, turbine overspeed test, and reactor vessel pressure test in support of refuel outage (RFO) 31 on April 12, 2023

71111.12 - Maintenance Effectiveness

Aging Management (IP Section 03.03) (1 Sample)

The inspectors evaluated the effectiveness of the aging management program for the following SSCs that did not meet their inspection or test acceptance criteria:

(1) Physical inspection of pipe penetration RWN5-3-HC, condensate drip tank to waste collector tank, extent of condition for November 22, 2022, failure of control rod drive suction pipe failure on April 26, 2023

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management Sample (IP Section 03.01) (5 Samples)

The inspectors evaluated the accuracy and completeness of risk assessments for the following planned and emergent work activities to ensure configuration changes and appropriate work controls were addressed:

- (1) Observed and validated risk mitigating actions were used during reactor pressure vessel head detention and lift on April 17, 2023
- (2) Contingency to refill of emergency diesel generator day tanks on April 18, 2023
- (3) Reviewed the planning for, and observed, the risk mitigation strategies implemented for de-energizing and isolating Bus 16, division 2 4.16 KV safety-related Bus, on April 17 and 18, 2023
- (4) Observed and evaluated risk management actions associated with recirculation pump 11 speed control issues on May 15 and 16, 2023
- (5) Observed and evaluated risk management actions associated with Y81 UPS inverter unexpected static switch transfer (partial group II isolation) on May 04, 2023

71111.15 - Operability Determinations and Functionality Assessments

Operability Determination or Functionality Assessment (IP Section 03.01) (4 Samples)

The inspectors evaluated the licensee's justifications and actions associated with the following operability determinations and functionality assessments:

- 501000072718, Failure to complete as-found diagnostic on MO-2397 reactor water cleanup isolation valve within American Society of Mechanical Engineers (ASME) required interval
- (2) 501000073646 Jet pump flow discrepancy
- (3) 501000072235, RHR 11 pump failed to start manually
- (4) 501000072261, Fuse 10A–F19A (panel C-32) found open

71111.20 - Refueling and Other Outage Activities

Refueling/Other Outage Sample (IP Section 03.01) (1 Sample)

(1) The inspectors evaluated refueling outage 31 activities from April 14,2023 to May 14, 2023

71111.24 - Testing and Maintenance of Equipment Important to Risk

The inspectors evaluated the following testing and maintenance activities to verify system operability and/or functionality:

Post-Maintenance Testing (PMT) (IP Section 03.01) (10 Samples)

- (1) 162-4 Relay, PMT/ return to service, time delay tripping relay, work orders 700085632-0010 and 700085632-0030
- (2) Bus 16 relay testing following relay preventative maintenance on April 24, 2023
- (3) 0113-02, automatic depression system bypass timer test following maintenance on May 2, 2023
- (4) 1386-05, 'B' loop RHR service water system external pipe inspection following maintenance window on May 2, 2023
- (5) 1386-01, 'B' loop emergency diesel generator emergency service water external pipe inspection following maintenance on May 2, 2023
- (6) 0456, Testing following drywell and suppression chamber valve seal replacement on May 2, 2023
- (7) 0255-04-IA-2, 'B' loop RHR system cold shutdown valve operability tests following maintenance window on May 2, 2023
- (8) 0255-04-1A-1-2, 'B' loop RHR system quarterly pump and valve tests following maintenance window on May 2, 2023
- (9) 0127, Drywell-torus vacuum breaker functional test following maintenance on May 5, 2023
- (10) HPCI torus suction check valve operability test following inspection and maintenance on May 5, 2023

Surveillance Testing (IP Section 03.01) (6 Samples)

- (1) Source range monitor and Intermediate range monitor functional and logic system functional test, on April 14, 2023
- (2) Core spray, shutdown pump and valve operability testing during cavity flood up on April 18, 2023
- (3) Alternate shut down system functional test for diesel generator 12, on April 25, 2023
- (4) Low pressure emergency core cooling system (ECCS) automatic initiation and loss of auxiliary power test, division 2 on May 04, 2023
- (5) Control rod drive scram insertion time test on May 08, 2023
- (6) HPCI pump flow and valve tests with reactor pressure less than or equal to 165 psig on May 14, 2023

Inservice Testing (IST) (IP Section 03.01) (2 Samples)

- (1) Reactor coolant pressure boundary leakage test on May 8, 2023
- (2) Control rod drive scram insertion time test on May 8, 2023

Diverse and Flexible Coping Strategies (FLEX) Testing (IP Section 03.02) (1 Sample)

(1) P-506 (FLEX) portable diesel fire pump testing, on June 21, 2023

RADIATION SAFETY

71124.01 - Radiological Hazard Assessment and Exposure Controls

Radiological Hazard Assessment (IP Section 03.01) (1 Sample)

(1) The inspectors evaluated how the licensee identifies the magnitude and extent of radiation levels and the concentrations and quantities of radioactive materials and how the licensee assesses radiological hazards.

<u>Instructions to Workers (IP Section 03.02) (1 Sample)</u>

(1) The inspectors evaluated how the licensee instructs workers on plant-related radiological hazards and the radiation protection requirements intended to protect workers from those hazards.

Contamination and Radioactive Material Control (IP Section 03.03) (2 Samples)

The inspectors observed/evaluated the following licensee processes for monitoring and controlling contamination and radioactive material:

- (1) Workers exiting the radiologically controlled area (RCA) at Unit 1 during a refueling outage
- (2) Radioactive material inventory of the spent fuel pool, 1027' reactor building

Radiological Hazards Control and Work Coverage (IP Section 03.04) (4 Samples)

The inspectors evaluated the licensee's control of radiological hazards for the following radiological work:

- (1) 1R31 Turbine building stop valves/control valves/bypass valves; radiological work permits (RWP) 235211 and associated radiation protection job plan
- (2) 1R31 Refuel floor activities; RWP 235700 and associated radiation protection job plan
- (3) 1R31 Control rod drive change out; RWP 235509 and associated radiation protection job plan
- (4) 1R31 Drywell checklist activities and associated radiation protection job plan

High Radiation Area and Very High Radiation Area Controls (IP Section 03.05) (4 Samples)

The inspectors evaluated licensee controls of the following high radiation areas and very high radiation areas:

- (1) Reactor building 935' drywell access area
- (2) Reactor building 935' 'A' RHR
- (3) Reactor building 1027' reactor head stand area
- (4) Radioactive waste building 935' barrel storage aisle

Radiation Worker Performance and Radiation Protection Technician Proficiency (IP Section 03.06) (1 Sample)

(1) The inspectors evaluated radiation worker and radiation protection technician performance as it pertains to radiation protection requirements.

71124.03 - In-Plant Airborne Radioactivity Control and Mitigation

Temporary Ventilation Systems (IP Section 03.02) (1 Sample)

The inspectors evaluated the configuration of the following temporary ventilation systems:

(1) Reactor building 1027' reactor head stand

71124.05 - Radiation Monitoring Instrumentation

Walkdowns and Observations (IP Section 03.01) (8 Samples)

The inspectors evaluated the following radiation detection instrumentation during plant walkdowns:

- (1) Portable ion chambers in the radiation protection instrument calibration facility
- (2) Portable neutron radiation instruments ready for use
- (3) Portable friskers in the radiation protection instrument calibration facility
- (4) Tool and equipment monitor at the primary RCA exit
- (5) Whole-body contamination monitors at the primary RCA exit
- (6) Portal monitors at the guardhouse exit
- (7) High range dose rate meters in the radiation protection instrument calibration facility
- (8) Wide range gaseous monitor in the reactor building

Calibration and Testing Program (IP Section 03.02) (13 Samples)

The inspectors evaluated the calibration and testing of the following radiation detection instruments:

- (1) AFC- 90L air sample calibrator 13116
- (2) AMP-100 A100-03
- (3) ARGOS 5-AB Zeus AZ-14
- (4) ISolo 532278
- (5) DMC 2000 EDMG3-0047
- (6) FastScan 1 whole-body counter
- (7) HPGe (A) detector 1
- (8) Model 93 93-16 dose rate meter
- (9) AMS-4 8 serial number: 02657
- (10) H-809 air sampler R-2
- (11) Gem-5 portal monitor PM-1
- (12) RO-7 dose rate meter RO-79
- (13) SAM-11 SAM-4

Effluent Monitoring Calibration and Testing Program Sample (IP Section 03.03) (2 Samples)

The inspectors evaluated the calibration and maintenance of the following radioactive effluent monitoring and measurement instrumentation:

- (1) Wide range gas monitor for the site stack release
- (2) Containment area high range radiation monitor in the drywell

OTHER ACTIVITIES-BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

MS05: Safety System Functional Failures (SSFFs) Sample (IP Section 02.04) (1 Sample)

(1) April 01, 2022 through March 31, 2023

BI01: Reactor Coolant System (RCS) Specific Activity Sample (IP Section 02.10) (1 Sample)

(1) October 1, 2022 through April 30, 2023

BI02: RCS Leak Rate Sample (IP Section 02.11) (1 Sample)

(1) April 01, 2022 through March 31, 2023

OR01: Occupational Exposure Control Effectiveness Sample (IP Section 02.15) (1 Sample)

(1) October 1, 2022 through April 30, 2023

PR01: Radiological Effluent Technical Specifications/Offsite Dose Calculation Manual Radiological Effluent Occurrences (RETS/ODCM) Radiological Effluent Occurrences Sample (IP Section 02.16) (1 Sample)

(1) October 1, 2022 through April 30, 2023

71152A - Annual Follow-up Problem Identification and Resolution

Annual Follow-up of Selected Issues (Section 03.03) (3 Samples)

The inspectors reviewed the licensee's implementation of its corrective action program related to the following issues:

- (1) Reviewed and evaluated licensee corrective actions for 501000052353, Startup delay-deviation in predictors experienced during RFO 30
- (2) The inspectors reviewed the licensee's corrective actions related to the onsite monitoring well that indicated tritium activity above the Offsite Dose Calculation Manual and Nuclear Energy Institute Groundwater Protection Initiative reporting levels. Specifically, the inspectors –
 - reviewed the methodology used to quantify the amount of radioactive material leaked to groundwater

- reviewed the methodology used to characterize the plume of contaminated groundwater onsite, including observation of collection and analysis of contaminated groundwater.
- assessed whether contaminated groundwater migrated offsite.
- walked down the recovery system, including the temporary above ground storage locations and processing using temporary hoses to move the contaminated groundwater around the site.
- reviewed incidental spills that occurred as a result of handling more than one million gallons of contaminated groundwater.
- discussed future plans for longer term treatment of the collected contaminated groundwater.
- reviewed the criteria, methodology, and requirements for reporting leaks and spills that contain licensed radioactive materials.
- (3) The inspectors reviewed the safety culture work environment at Monticello to ensure that an environment exists where individuals can raise safety concerns without fear of retaliation

71153 - Follow-Up of Events and Notices of Enforcement Discretion

Event Follow-up (IP Section 03.01) (1 Sample)

(1) The inspectors evaluated dropped blade guide over reactor core and recovery on April 23, 2023.

Event Report (IP Section 03.02) (1 Sample)

The inspectors evaluated the following licensee event reports (LERs):

(1) LER 2022-001-00, Monticello Nuclear Generating Plant, Loss of Control Room Envelope Operability (ADAMS Accession No. ML22189A111). On May 13, 2022, the licensee identified an unplanned loss of control room operability, TS limiting condition of operation (LCO) 3.7.4.B, due to excessive through wall steam leakage from an air ejector that exceeded alternate source term limits. The inspectors determined that the licensee took timely corrective actions to mitigate the steam leakage and exit LCO. 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 did not identify a violation of NRC requirements. This LER is closed.

Reporting (IP Section 03.05) (1 Sample)

(1) The inspectors reviewed and evaluated the following licensee event notification (EN) made by the station to the NRC Headquarters Operations Center:

Review and assessment of the licensee's non-emergency report made under 10 CFR 50.73(a)(1) and 10 CFR 50.73 (a)(2)(iv)(A) for an invalid actuations of Division 2 primary containment isolation logic that occurred while in a refueling outage on April 28, 2023, and May 4, 2023, as documented in NRC EN 56584.

INSPECTION RESULTS

Assessment 71152A

During the refuel outage April 15 through May 14, 2023, the inspectors conducted a baseline problem identification and resolution sample to evaluate safety-conscious work environment (SCWE) in accordance with Inspection Procedure (IP) 71152, Problem Identification and Resolution, Section 3.04 using guidance provided in IP 93100, Safety-Conscious Work Environment Issue of Concern Follow-up, as applicable to determine whether a chilled work environment existed at the site. Inspection activities included, daily corrective action document reviews, individual worker interviews, work activity observations, an interview with the Employee Concerns Program representative, and review of independent safety culture assessment. The inspectors assessed that individuals exhibited a readiness to raise safety concerns and admit to errors without of a fear of retaliation. No SCWE issues were identified.

Observation: Onsite Monitoring Well with Tritium Activity Above Reporting Levels 71152A

On November 22, 2022, the licensee reported an onsite monitoring well that indicated tritium activity above the Offsite Dose Calculation Manual and Nuclear Energy Institute Groundwater Protection Initiative reporting levels. Since that date, the licensee identified the location of the underground leak, repaired the leak, and implemented a recovery system to remove contaminated groundwater from the beneath the plant.

The inspectors determined –

- the methodology used to quantify the amount of radioactive material leaked to groundwater was adequate.
- the methodology used to characterize the plume of contamination onsite, including observation of collection and analysis of contaminated groundwater was adequate.
- contaminated groundwater did not migrate offsite.
- the recovery system, including the temporary above ground storage locations and processing using temporary hoses to move the contaminated groundwater around the site, was adequate.
- incidental spills that occurred as a result of handling more than one million gallons of contaminated groundwater did not require new strategies to mitigate groundwater contamination.
- future plans for longer term treatment of the collected contaminated groundwater would likely be able to meet NRC requirements.
- the criteria, methodology, and requirements for reporting leaks and spills that contain licensed radioactive materials were consistent with the industry initiative and were performed in accordance with NRC requirements.

The inspectors concluded the licensee developed a holistic plan with significant input from contracted vendor with expertise in groundwater management and cleanup. The inspectors noted a high level of support (time and resources) from all levels of the organization to recover and store the contaminated groundwater onsite and prevent any uncontrolled release from the site.

| Observation: Assessment of Corrective Actions for Deviation in Core Thermal | 71152A |
|---|--------|
| Predictors during Startup form RFO 30 | |

In 2021, during the startup from refuel outage (RFO) 30, the licensee loaded the control rod sequence from RFO 29 into the rod worth minimizer. This resulted in two core thermal predictors exceeding thermal limits. The licensee was forced to hold power below 100

megawatts with the turbine online while a correction to the sequence was developed and implemented. Holding at this power threatened turbine integrity and placed the unit at risk for transient initiation. The licensee documented this issue in corrective action program item 501000052353. Corrective actions included a requirement to develop sequences for the new core designs when starting up after an RFO. The inspectors reviewed the startup sequence after RFO 31 to verify that the sequence was prepared and verified for the new core design. The inspectors observed start up activities in the control room. No issues were identified.

Minor Performance Deficiency

71153

Minor Performance Deficiency: On April 23, 2023, during Monticello's refuel outage 31 core component movement activities, cell 14-07 (containing a control blade, fuel support piece and two half blade guides (HBG)), was lifted using a Westinghouse multi-lift tool. During this activity, the two HBGs dropped from the lift tool. This resulted in one HBG coming to rest on the drywell radiation shield and the other on the shroud steam dam and a Westinghouse inspection tool. The blade guides did not contact nuclear fuel. The Westinghouse multi-lift tool is designed to lift a fuel support piece containing a control blade, fuel support piece, and a full blade guide. The performance deficiency was the licensee's use of the Westinghouse multi-lift tool to lift the two HBGs, for which it was not designed.

Screening: The inspectors determined the performance deficiency was minor. HBGs do not have sufficient mass to damage fuel when dropped in water from any height at any location over the core. The performance deficiency could not reasonably be viewed as a precursor to a significant event; if left uncorrected, it would not have the potential to lead to a more significant event; and it did not adversely affect a cornerstone objective.

EXIT MEETINGS AND DEBRIEFS

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

- On July 20, 2023, the inspectors presented the integrated inspection results to G. Brown, Plant Manager, and other members of the licensee staff.
- On April 20, 2023, the inspectors presented the radiation protection baseline inspection results to K. Nyberg, Director Site Performance & Operations Support, and other members of the licensee staff.
- On April 28, 2023, the inspectors presented the Inservice Inspection Activities for Monticello M1R31 Outage inspection results to J. Ohotto, General Manager Fleet Operations, and other members of the licensee staff.
- On May 25, 2023, the inspectors presented the groundwater protection inspection results to C. Domingos, Site Vice President, and other members of the licensee staff.
- On June 8, 2023, the inspectors presented the Radiation Protection inspection results to S. Hafen, Plant Manager, and other members of the licensee staff.

DOCUMENTS REVIEWED

| Inspection Procedure | Туре | Designation | Description or Title | Revision or Date |
|-------------------------|--|-----------------------|---|---------------------|
| 71111.01 | Procedures | 1150 | Summer Readiness | |
| 71111.04 | Corrective Action Documents | 501000071357 | Old MEET Tower Booms Still Up | 03/14/2023 |
| | Drawings | NH-36241-1 | Reactor Pressure Relief | 78 |
| | Procedures | 1292-01 | Operability Testing of the Uninterruptible Power Supply | 17 |
| | | 1308 | MET Tower Inspection Procedure | 21 |
| | | B.08.09-05 | Condensate Storage System | 37 |
| | | Ops Man B 09.13-05 | 120 Volt Uninterruptible AC Power Supply Startup | 34 |
| | | Ops Man B.05.16-04 | Meteorological Monitoring | 13 |
| 71111.05 | Fire Plans | STRATEGY A.3-02-B | East HCU Area | 15 |
| | | STRATEGY A.3-09 | Control Room | 11 |
| | | STRATEGY A.3-16 | Corridor, Turbine Building East and West (Elevations 911' and 931') | 20 |
| | | STRATEGY A.3-17 | Turbine Building North Cable Corridor 941' | 7 |
| | | STRATEGY A.3-19-C | Feedwater Pipe Chase | 8 |
| | Miscellaneous | A.3-41 | Fire Brigade Drill Guide, Biocide Pump Fire (Drill Guide "41.01") | 06/17/2023 |
| | Procedures | 2176 | Fire Drill Procedure | 32 |
| | | STRATEGY A3-41 | Sodium Hypochlorite Building (Bleach House) | 9 |
| 71111.08G | Corrective Action | 501000071050 | SW-MIC Pitting Detected Line SW10-18-GF | 03/01/2023 |
| | Documents | 501000071164 | CV-1728, Evidence of Erosion and Pitting | 03/07/2023 |
| | Corrective Action Documents Resulting from | 501000072311 | Torus External General Visual Examination Where Various Locations of Coating Degradation was Noted Such that the Base Metal was Exposed | 04/13/2023 |

| Inspection Procedure | Туре | Designation | Description or Title | Revision or Date |
|-------------------------|-------------|----------------|--|---------------------|
| | Inspection | 501000072468 | Thread Damage Observed while Performing IWE Program Required VT-1 Exams on the Bolted Connections for the Drywell Equipment Hatch | 04/19/2023 |
| | | 501000072621 | Examinations Performed per ASME XI Inservice Inspection (ISI) Program. Visual Exam (VT-3) of SR-79 (Seismic Restraint for RHRSW piping) Found Relevant Crack Like Indications in the Weld Area | 04/18/2023 |
| | NDE Reports | 201UT022 | UT Report of Past Relevant Indication on T.H. Meridional Weld Component ID: W-7 | 05/03/2021 |
| | | 2021UT050 | UT Report of Past Relevant Indication on Pipe-to-Pipe Weld Component ID: W2 | 05/05/2021 |
| | | MN-23-MT-002 | Magnetic Particle Examination (MT) of CS Variable Spring /Slide Component ID: H-1-WA | 04/25/2023 |
| | | MN-23-UT-001 | Ultrasonic Examination (UT) of RHR Pipe-to Penetration weld Component ID: W2 | 04/20/2023 |
| | | MN-23-VT-006 | Visual Examination (VT-3) of RHR Seismic Restraint Component ID: SR-79 | 04/21/2023 |
| | | MN-UT-002 | Ultrasonic Examination (UT) of RHR Pipe-to Penetration weld Component ID: W1 | 4/20/2023 |
| | | MN-VT-007 | Visual Examination (VT-3) of RHR Box Restraint Component ID: H-4 | 04/20/2023 |
| | Procedures | FP-PE-NDE-300 | Dry Magnetic Particle Examination - Yoke/Coil | 3 |
| | | FP-PE-NDE-4001 | Ultrasonic Examination of Ferritic Pipe Welds - Supplement 3 | 9 |
| | | FP-PE-NDE-420 | Ultrasonic Thickness Examination | 3 |
| | | FP-PE-NDE-530 | Visual Examination, VT-3 | 10 |
| | | PDI-UT-1 | PDI Generic Procedure for the Ultrasonic Examination of Ferritic Pipe Welds | G |
| | | PEI-01.02.05 | Monticello Nuclear Generating Plant 5th Interval ISI Detailed Schedule | 1 |

| Inspection Procedure | Туре | Designation | Description or Title | Revision or Date |
|-------------------------|-------------------|------------------------------|---|------------------|
| 71111.11Q | Miscellaneous | LP MT-LOR-JIT- 020S | Turbine Overspeed Test JIT | 1 |
| | | SEG MT-LOR- JIT-011S | Reactor Vessel Pressure Test Simulator Exercise Guide | 6 |
| | | SEG MT-LOR- JIT-2023-002S | Startup JIT | 0 |
| | Procedures | 2167 | Plant Startup | 108 |
| | | 2204 | Plant Shutdown | 80 |
| 71111.12 | Work Orders | 700121743-30 | RWN5-3-HC Perform Inspection | 04/22/2023 |
| | Corrective Action | 501000072461 | 52-401 Breaker Cubicle FME | 04/18/2023 |
| | Documents | 501000072462 | Racking Shutter Stuck Mid-Position | 04/18/2023 |
| | | 501000073154 | Y-81 Failure Caused Plant Transient | 05/04/2023 |
| | | 501000073594 | 11 Recirc Speed Adjust Not Raising | 05/15/2023 |
| | Miscellaneous | 602000005747 | Operational Decision-Making Evaluation Checklist/11 Reactor Recirculation Pump | 05/15/2023 |
| | | 602000005747 | Operational Decision-Making Evaluation Checklist/Y-81, UPS Inverter | 05/11/2023 |
| | | QF2007 FP-WM1RM-01 | Planning and Approval of High Risk or Scheduled Risk Work | 6 |
| | Procedures | 4858-14-OCD | 4KV Bus 14 Maintenance | 13 |
| | | 4858-16-OCD | 4KV Bus 16 Maintenance | 16 |
| | | 9210 | Master RPV Disassembly Procedure | 33 |
| | | 9220 | Remove RPV Head | 27 |
| | | Ops Man B.09.06-05 | Operations Manual Section: 4.16 kV Station Auxiliary System Operation | 60 |
| | | Tagout 1-4KV 4858-14-OCD | 14 Bus Isolated Per 4858-14-OCD (This Tag does NOT Ground Bus 14, and does NOT Isolate Power to Breaker Secondary Contacts) | 04/18/2023 |
| | | Tagout 1-4KV 4858-16-OCD | 16 Bus Isolated Per 4858-16-OCD (This Tag Section does NOT Ground Bus 16, and does NOT Isolate Power to Breaker Secondary Contacts) | 04/19/2023 |
| | Work Orders | 700110917-0055 | Contingency Refuel Day Tanks | 0 |
| 71111.15 | Corrective Action | 501000072235 | 11 RHR Pump Failed to Start Manually | 04/12/2023 |

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| | Documents | 501000072261 | Fuse 10A-F 19 (Panel C-32) Found Open | 04/12/2023 |
| | | 501000072718 | Mech PM Done Prior to As-Found Diagnostic | 04/24/2023 |
| | | 501000073646 | Jet Pump Flow Discrepancy | 05/17/2023 |
| | Drawings | NX-7905-46-3 | S/D RHR System | 79 |
| | | NX-7905046-4 | RHR S/D System | 78 |
| 71111.24 | Corrective Action | 501000073372 | CRD 30-23 Position Indication Faulty | 05/09/2023 |
| | Documents | 501000073404 | CRD 30-23 Bad Reed Switches | 05/09/2023 |
| | | 501000073405 | SCRAM Time App Errors During 0081 | 05/09/2023 |
| | Drawings | NH-36248 | P&ID Core Spray System | 91 |
| | | (M-122) | | |
| | Miscellaneous | Relay Field Test - | Monticello, 4.16 kV - Card H-MN1 26-15A; Switch BKR 408; | 04/20/2023 |
| | | Test Values | CT Ratio 1200/5; Breaker Ser. No. 14-16 BT | |
| | | Record CT Ratio | | |
| | | 1200/5; Switch | | |
| | | BKR 408 | | |
| | Procedures | 0081 | Control Rod Drive SCRAM Insertion Time Test | 80 |
| | | 0108 | HPCI Pump Flow and Valve Tests with Reactor Pressure | 71 |
| | | | Less Than or Equal to 165 PSIG | |
| | | 0113-02 | ADS System Bypass Timer Test | 02 |
| | | 0127 | Drywell-Torus Vacuum Breaker Inspection, Functional Tests and Calibration of Position Indication Alarm Systems | 27 |
| | | 0255-04-IA-1-2 | RHR Quarterly Pump and Valve Tests | 105 |
| | | 0255-04-IA-2 | RHR System Cold Shutdown Valve Operability Tests | 34 |
| | | 0255-06-IA-4 | HPCI 31 Torus Suction Check Valve Operability Test | 11 |
| | | 0255-20-II C-1 | Reactor Coolant Pressure Boundary Leakage Test | 52 |
| | | 0419-01 | ASDS Cycle Functional Test for Diesel Generator 12 | 39 |
| | | | Switches | |
| | | 0456 | Drywell and Suppression Chamber Valve Seal Replacement | 8 |
| | | 1386-01 | EDG-ESW External Pipe Inspection Loop A and B | 9 |
| | | 1386-05 | RHRSW External Pipe Inspection Loop A and B | 13 |
| | | OSP-ECC- | Low Pressure ECCS Automatic Initiation and Loss of | 0 |
| | | 0566-02 | Auxiliary Power Test - Division 2 Outage | |

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| | | OSP-FIR-0608 | P-506 Portable Diesel Pump Testing | 8 |
| | | OSP-NIS-0013 | SRM and IRM Functional and Logic System Functional Test | 8 |
| | Work Orders | 0255-03-IA-2A | Core Spray - Shutdown Pump and Valve Operability Test | 31 |
| | | 4850-408-PM | 152-408, Bus 14/16 Tie Breaker Relay Calibration, | 04/20/2023 |
| | | | Maintenance, and Test Tripping | |
| | | 700085460-0010 | Bus 16 Outage Relay Maintenance | 7 |
| | | 700085632-0030 | 162-4 RLY, PMT (Post-Maintenance Test) / RTS (Return to Service) | 04/21/2023 |
| 71124.01 | ALARA Plans | | RWP 235506, 1R31 Drywell Checklist Activities, Work in Progress Review and Associated Station ALARA Committee Notes | 04/19/2023 |
| | Corrective Action | 501000056045 | 50 Percent of Current PCE's from Uncontaminated Areas | 09/15/2021 |
| | Documents | 501000060298 | Dose Rate Increase Following RWCU 'B' Backwash | 02/10/2022 |
| | | 501000060815 | Potential Trend in Airborne Radiation Levels | 02/24/2022 |
| | | 501000060850 | Radiological Condition Not as Expected | 02/24/2022 |
| | | 501000063752 | Irradiated Material in the Spent Fuel Pool | 06/13/2022 |
| | | 501000064920 | Equipment Reliability is Negatively Affecting Station Collective Radiation Exposure | 07/21/2022 |
| | | 501000066983 | Contamination Found in RCA Clean Area | 10/06/2022 |
| | | 501000068896 | 1001' RWCU Vault Air Sample >1.0 DAC | 12/01/2022 |
| | | 501000069147 | Gap in Radiation Protection Survey Documentation | 12/12/2022 |
| | Corrective Action Documents Resulting from Inspection | 501000072454 | Ram Tags Not Per FP-RP-NISP-04 | 04/18/2023 |
| | Miscellaneous | | Radioactive Material Unconditional Release Log | 04/15/2023 |
| | | | General Area Alpha Characterization | Undated |
| | | | 2021 Annual Dose Report | Undated |
| | | | 2021 1R30 Outage ALARA Report | Undated |
| | | | High Radiation Area/Locked High Radiation Area Posting and Boundary Checklist | 04/16/2023 |
| | Procedures | 4 AWI04.05.13 | Control of Items in the Spent Fuel Pool | 13 |
| | 1.100044100 | FP-RP-NISP-02 | Radiation and Contamination Surveys | 3 |

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| Tioccaute | | FP-RP-NISP-05 | Access Controls for High Radiation Areas | 5 |
| | | FP-RP-SAC-01 | Station ALARA Committees | 11 |
| | | FP-RP-SEN-02 | Radiological Work Planning and Controls | 14 |
| | | R.06.02 | Unconditional Release of Equipment or Material | 34 |
| | | R.06.09 | Storage and Inventory of Radioactive Material Outside the | 26 |
| | | | Power Block | |
| | Radiation | | 1R31 Refueling Outage Posting Change Matrix | 04/15/2023 |
| | Surveys | | 1R30 Refueling Outage Initial Shutdown Surveys for the Drywell | Various |
| | | | 1R31 Refueling Outage Shutdown Surveys for the Drywell | Various |
| | | | Reactor Building 962' General Area Surveys (09/25/2021, 09/22/2022, 03/26/2022, and 04/01/2023) | Various |
| | | VSDS- M-20230419-17 | Turbine Control Valves | 04/19/2023 |
| | Radiation Work Permits (RWPs) | 235211 | 1R31 Turbine Building Stop Valves/Control Valves/Bypass Valves RWP and Associated Radiation Protection Job Plan | 0 |
| | remits (IXVVF3) | 235506 | 1R31 Drywell Checklist Activities RWP and Associated Radiation Protection Job Plan | 0 |
| | | 235509 | 1R31 Control Rod Drive Changeout RWP and associated Radiation Protection Job Plan | 0 |
| | | 235700 | 1R31 Refuel Floor Activities RWP and associated Radiation Protection Job Plan | 1 |
| | Self-Assessments | 606000001645 | Radiological Hazard Assessment and Exposure Controls | 12/10/2022 |
| | | 606000001645 | In-Plant Airborne Control and Mitigation | 12/10/2022 |
| 71124.03 | Procedures | FP-RP-AM-01 | Alpha Monitoring Program | 8 |
| | | FP-RP-RPP-01 | Respiratory Protection Program | 3 |
| | Radiation Surveys | | Air Sample Analysis for Turbine Stop/Control Valve Replacement | 04/19/2023 |
| 71124.05 | Calibration | 02657 | AMS-4 8 | 01/06/2022 |
| | Records | 13116 | Air Sampler Calibrator AFC -90L | 03/18/2021 |
| | | 310280 / R-2 | H-809 Air Sampler | 02/26/2023 |
| | | 532278 | ISolo Calibration | 02/06/2022 |
| | | 93-16 | Model 93 Dose Rate Meter | 01/04/2022 |

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| 110004410 | | A100-03 | AMP-100 | 01/28/2022 |
| | | AZ-14 | ARGOS 5AB Zeus | 02/09/2023 |
| | | EDMG3-0040 | DMC-2000GN | 02/16/2023 |
| | | FastScan 1 | Whole-Body Counter | 10/21/2022 |
| | | HPGE 'A' | High Purity Germanium Detector | 05/03/2023 |
| | | Detector 1 | | |
| | | PM-1 | Gem-5 Portal Monitor | 03/29/2023 |
| | | RO-79 | RO-7 Dose Rate Meter | 01/09/2023 |
| | | SAM-4 | SAM-11 Tool and Equipment Monitor | 04/15/2023 |
| | Corrective Action | 501000062766 | Smear Counter Efficiency Calculation Error | 05/04/2022 |
| | Documents | 501000063790 | RP Instrument Failure | 06/11/2022 |
| | | 501000070730 | HPGe Report Software Mislabeling Co-60 | 02/16/2023 |
| | Corrective Action | 501000074267 | Beta Correction Factors Not Posted | 06/07/2023 |
| | Documents | 501000074272 | Ni-63 Sealed Source Leak Tests | 06/07/2023 |
| | Resulting from Inspection | 501000074307 | Frisker Source Checks Lowest Range Only | 06/07/2023 |
| | Engineering Evaluations | 5XLB Analysis of Ni-63 Leak Test Calculation | Technical White Paper | 01 |
| | | Technical Basis Document 12-002 | Ni-63 Detection Capability of the Tennelec 5XLB | 00 |
| | | Technical Basis Document 19-002 | Sensitivity Study of ARGOS 4/5, PM7, and GEM-5 Monitors for Passive Whole-Body Counting | 00 |
| | | Technical Basis Document 19-003 | Neutron DLR, SRD, and Rem Ball Characterization | 00 |
| | | Technical Basis Document 22-001 | Neutron Factor for Drywell Startup/Power Entries | 00 |
| | Procedures | 0163 | Stack Wide Range Gas Monitor Calibration | 52 |
| | | 0248 | Reactor Building Vent Wide Range Gas Monitor Calibration | 49 |
| | | 0428-02 | Containment High Range Radiation Detectors Calibration Procedure | 11 |
| | | FP-RP-ICC-01 | Instrument Control and Calibration/Function Check Frequencies of RP Instruments | 13 |

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| | | R.09.61 | Sam-11/LAM Operation and Calibration | 13 |
| | | R.09.62 | ARGOS Contamination Monitors: Function Check and Calibration | 16 |
| | | R.09.72 | Model 3030P Alpha-Beta Smear Counter Operation | 4 |
| 71151 | Miscellaneous | QF0445 | NRC and Data Collection and Submittal - SSFFs (April 2022 through March 2023) | 18 |
| | | QF0445 | NRC Data Collection and Submittal - RCS Total Leakage (April 2022 through March 2023) | 18 |
| | Procedures | FP-PA-PI-02 | NRC and MOR Performance Indicator Reporting | 16 |
| 71152A | Corrective Action | 0501000073805 | FRAC Tank Notifications Missing the Mark | 0501000073805 |
| | Documents | 501000052353 | Startup Delay-Deviation in Predictors | 05/20/2021 |
| | | 501000073752 | Pump in T-GW-13 Found Tripped | 05/21/2023 |
| | | 501000073770 | Pump in T-GW-16 Found Tripped | 05/21/2023 |
| | | 501000073788 | FRAC Tank Overflow Due to Gauge Issue | 05/22/2023 |
| | | 501000073795 | FRAC Tank Farm in ISFSI Parking | 05/22/2023 |
| | | 501000073804 | FRAC Tank Overflowed While Filling | 05/22/2023 |
| | | 501000073826 | [Four] 4 Hour Non-Emergency Event Notification | 05/23/2023 |
| | | 501000073833 | Groundwater Transfer - Incorrect Risk | 05/23/2023 |
| | | 501000073852 | State Report Recorded Incident Date | 05/23/2023 |
| | | 501000073870 | Elevation - GW Mitigation Efforts | 05/23/2023 |
| | | 501000073892 | FRAC Tank #20 Level Gauge Removed | 05/24/2023 |
| | Corrective Action | 501000073778 | RAM Labels Not Filled Out on FRAC Tanks | 05/22/2023 |
| | Documents | 501000073787 | FRAC Tack Overflowing from Weather | 05/22/2023 |
| | Resulting from | 501000073791 | Berms at MW-12 and FRAC Tanks Folded | 05/22/2023 |
| | Inspection | 501000073807 | NRC Request for Observation - Construction of Retention Ponds | 05/22/2023 |
| | | 501000073809 | Unable to Locate Level Gauge Calibration | 05/23/2023 |
| | | 501000073823 | No Definition of "Abnormal Discharge" | 05/23/2023 |
| | | 501000073824 | ODCM-02.01 2.4.1 Incorrect Reference | 05/23/2023 |
| | | 501000073843 | Procedure 0369 Incorrect ODCM Reference in A.1 | 05/23/2023 |
| | | 501000073859 | Basis for Monitoring Well Purge Volume | 05/24/2023 |
| | | 501000073860 | Shift Manager Not Properly Notified | 05/23/2023 |
| | | 501000073875 | NRC Question on Lake Tank Level Monitor | 05/24/2023 |

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| | | 501000073876 | NEI 07-07 Periodic Briefings | 05/24/2023 |
| | | 501000073885 | Minimum Dilution Flow | 05/25/2023 |
| | | 501000073902 | Monitoring Well Label Degraded | 05/24/2023 |
| | | 501000073905 | RP Notification for FRAC Tank Filling | 05/25/2023 |
| | | 501000073911 | Evaluate Installation of Anti-Siphon | 05/25/2023 |
| | | 501000073917 | Question on NEI 07-07 | 05/26/2023 |
| | Engineering Evaluations | 601000004237 | Intermediate Groundwater Storage | 0 |
| | Miscellaneous | ODCM-08.01 | Reporting Requirements | 9 |
| | Procedures | 0369 | Temporary Outdoor Radioactive Liquid Tanks Level Instrumentation Functional Test | 10 |
| | | 2300 | Reactivity Adjustment | 27 |
| | | 5148 | Monitoring Well Sample Log | 7 |
| | | FP-OP-REP-01 | Event Reporting and Notification Process | 11 |
| | | 1.05.50 | Sampling Groundwater Monitoring Wells | 15 |
| | Work Orders | 700116710 | Water Removal | 2 |
| | | 700117970 | Groundwater Processing - Water Demand Demineralizer Skid and Transfer | 6 |
| | | 700117970 | Groundwater Processing | 6 |
| | | 700166710 | Sample at Lake Tank | 0 |
| 71153 | Corrective Action Documents | 501000072688 | Two Half Blade Guides, HBGs, Released | 04/23/2023 |
| | Work Orders | 602000014849 | Foreign Material Recovery Plan | 04/23/2023 |