



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

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

February 11, 2022

Mr. Christopher P. Domingos
Site Vice President
Prairie Island Nuclear Generating Plant
Northern States Power Company, Minnesota
1717 Wakonade Drive East
Welch, MN 55089-9642

SUBJECT: PRAIRIE ISLAND NUCLEAR GENERATING PLANT – INTEGRATED
INSPECTION REPORT 05000282/2021004 AND 05000306/2021004

Dear Mr. Domingos:

On December 31, 2021, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Prairie Island Nuclear Generating Plant. On January 12, 2022, 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.

Two findings of very low safety significance (Green) are documented in this report. Two of these findings involved violations of NRC requirements. We are treating these violations as non-cited violations (NCVs) consistent with Section 2.3.2 of the Enforcement Policy.

If you contest the violations or the significance or severity of the violations documented in this inspection report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region III; the Director, Office of Enforcement; and the NRC Resident Inspector at Prairie Island Nuclear Generating Plant.

If you disagree with a cross-cutting aspect assignment in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region III; and the NRC Resident Inspector at Prairie Island Nuclear Generating Plant.

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 02/11/22

Hironori Peterson, Chief
Branch 3
Division of Reactor Projects

Docket Nos. 05000282 and 05000306
License Nos. DPR-42 and DPR-60

Enclosure:
As stated

cc w/ encl: Distribution via LISTSERV®

Letter to Christopher Domingos from Hironori Peterson dated February 11, 2022.

SUBJECT: PRAIRIE ISLAND NUCLEAR GENERATING PLANT – INTEGRATED
INSPECTION REPORT 05000282/2021004 AND 05000306/2021004

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U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Numbers: 05000282 and 05000306

License Numbers: DPR-42 and DPR-60

Report Numbers: 05000282/2021004 and 05000306/2021004

Enterprise Identifier: I-2021-004-0112

Licensee: Northern States Power Company

Facility: Prairie Island Nuclear Generating Plant

Location: Welch, Minnesota

Inspection Dates: October 1, 2021 to December 31, 2021

Inspectors: S. Bell, Health Physicist
M. Garza, Emergency Preparedness Inspector
M. Holmberg, Senior Reactor Inspector
T. McGowan, Resident Inspector
C. Norton, Senior Resident Inspector
K. Pusateri, Resident Inspector
E. Sanchez Santiago, Senior Reactor Inspector
D. Tesar, Senior Resident Inspector

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

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting an integrated inspection at Prairie Island 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

Failure to Meet ASME OM Code requirements for Accumulator Check Valve			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Initiating Events	Green NCV 05000306/2021004-02 Open/Closed	[H.14] - Conservative Bias	71111.15
The inspectors identified a green finding and associated non-cited violation of Title 10 of the Code of Federal Regulations (10 CFR) Part 50.55a(f)(4) for the failure to meet the in-service testing requirements set forth in the American Society of Mechanical Engineers (ASME) Operations and Maintenance Code and Addenda after Check Valve 2SI-6-4 exceeded its ASME Code leakage acceptance criteria. Specifically, the licensee failed to repair or replace the check valve prior to returning the valve to service. The licensee entered this issue into their corrective action program and plan on repairing or replacing the valve during the next refueling outage.			

LER 2021-002-00 Inadvertent Operation of Switchyard Disconnect Resulting in Loss of Electrical Buses and Actuation of a Safety System			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Initiating Events	Green NCV 05000282,05000306/2021004-03 Open/Closed	[H.8] - Procedure Adherence	71153
On October 17, 2021, licensee personnel failed to implement Human Performance (HU) tools during the implementation of a switching procedure leading to procedural non-compliance resulting in a loss of non-vital loads, loss of redundancy to vital buses, actuation of a safety system, and a downpower of the online unit.			

Additional Tracking Items

Type	Issue Number	Title	Report Section	Status
URI	05000282,05000306/2021004-01	Unresolved Issue Associated with 10 CFR 50.9, "Completeness and Accuracy of Information"	71111.13	Open
LER	05000282,05000306/2021002-00	LER 2021-002-00 for Prairie Island Nuclear Generating Plant, Units 1 and 2, Loss of Electrical Bus Results in 121 Motor Driven Cooling Water Pump Auto Start	71153	Closed
LER	05000306/2021001-00	LER 2021-001-00 for Prairie Island Nuclear Generating Plant, Unit 2, 22 Turbine Driven Auxiliary Feedwater Pump Actuation Signal Due to Procedure Error	71153	Closed

PLANT STATUS

Unit 1 began the inspection period at full rated thermal power. On October 17, 2021, at 1721, Unit 1 performed a rapid downpower to approximately 95 percent RTP due to a loss of the 2RY transformer. The Unit was returned to full power on October 18th, 2021, at 1206. Unit 1 remained at or near full power for the remainder of the inspection period, with the exception of brief power reductions to perform surveillance testing or flexible power operations. Unit 2 began the inspection period at 75 percent power in coast-down. Unit 2 was shutdown for refueling outage 2R32 on October 1, 2021, at 1314. Unit 2 was taken critical at 0636 on October 28, 2021. Unit 2 reached Mode 1 at 1234 on October 29, 2021 and achieved full power at 0517 on November 2, 2021. Unit 2 operated at or near rated thermal power for the remainder 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," conducted routine reviews using IP 71152, "Problem Identification and Resolution," observed risk significant activities, and completed on-site 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

71111.04 - 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) A and B Residual Heat Removal (RHR) System Walkdown in Shutdown Cooling Mode on October 5, 2021
- (2) D5 and D6 Diesel System Walkdowns during shutdown on October 5, 2021
- (3) Spent Fuel Pooling (SFP) Cooling System Partial Walkdown on October 12, 2021
- (4) Component Cooling (CC) Heat Exchanger to 121 SFP Heat Exchanger on October 15, 2021

Complete Walkdown Sample (IP Section 03.02) (1 Sample)

- (1) Unit 2 Electrical Distribution Walkdown w/Bus 25 out-of-service on October 6, 2021

71111.05 - Fire Protection

Fire Area Walkdown and Inspection Sample (IP Section 03.01) (4 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 58 GRP, auxiliary building ground floor, CC pumps and CC heat exchanger room on October 13, 2021
- (2) Fire Zone 35, location (695' El.), battery room 21 and 22 on October 14, 2021
- (3) Fire Zone 43, location (715'10" El.), Bus 111 and 121 switchgear rooms on October 14, 2021
- (4) Fire Zone 57, location (735' El.), control room on October 15, 2021

71111.06 - Flood Protection Measures

Inspection Activities - Internal Flooding (IP Section 03.01) (1 Sample)

The inspectors evaluated internal flooding mitigation protections in the:

- (1) Internal flooding sample w/Unit 2 condenser Open on October 12, 2021

71111.07A - Heat Sink Performance

Annual Review (IP Section 03.01) (1 Sample)

The inspectors evaluated readiness and performance of:

- (1) SP 2304 Unit 2 component cooling water heat exchanger performance surveillance on October 7, 2021

71111.08P - Inservice Inspection Activities (PWR)

PWR Inservice Inspection Activities Sample (IP Section 03.01) (1 Sample)

- (1) The inspectors verified that the reactor coolant system boundary, steam generator tubes, reactor vessel internals, risk-significant piping system boundaries, and containment boundary are appropriately monitored for degradation and that repairs and replacements were appropriately fabricated, examined, and accepted by reviewing the following activities from October 4, 2021 to October 19, 2021:

03.01.a – Non-destructive Examination and Welding Activities.

- Visual VT- 1 Examination Integral Attachment/Struts CWH-36/IA for Cooling Water (CL) System
- Visual VT-3 Examination, Pipe Supports H-2 and H-2/IA for Safety Injection (SI) System
- Liquid Penetrant (PT) Examination, Integral Attachment H-2/IA for SI System
- Ultrasonic (UT) Examination of Control Rod Drive Latch Housing and Head Adapter Welds CRD22-4 and CRD26-4

- Weld 1 - Disassemble and Inspect Spare Check Valve - Chemical and Volume Control (VC) System (Work Order 700054376-0030)
- Weld 1 - Install flush Patch to Restore CL System Pipe (Work Order 700010019-0010)

03.01.b - Pressurized-Water Reactor Vessel Upper Head Penetration Examination Activities.

- Bare Metal Visual Examination (VE) of the Unit 2 Reactor Vessel Upper Head Penetrations Nozzles 22, 24, and 26

03.01.c – Pressurized-Water Reactor Boric Acid Corrosion Control Activities.

- Boric Acid Leakage Evaluation – Valve CV-31462 on the SI System has an active, excessive packing leak
- Boric Acid Leakage Evaluation – Valve 2VC-15-40 has an Active Body-to-Bonnet Boric Acid Leak
- QIM 501000036213 Active Boric Acid leak on 2VC-15-40
- QIM 501000042915 Packing leak on CV-31462
- QIM 501000034434 Active Leaks from 2FT-924

03.01.d – Pressurized-Water Reactor Steam Generator Tube Examination Activities.

- Acquisition of Eddy Current Testing (ECT) Data, ECT Data Analysis, and Installation of Tube Plugs in the Unit 2 Steam Generators 21 and 22

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)

- (1) Reactor startup and low power physics testing on October 28, 2021

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

- (1) LOR training on December 3, 2021

71111.12 - Maintenance Effectiveness

Maintenance Effectiveness (IP Section 03.01) (3 Samples)

The inspectors evaluated the effectiveness of maintenance to ensure the following structures, systems, and components (SSCs) remain capable of performing their intended function:

- (1) Main Steam Isolation Valve (MSIV) CV-31116 Failure to Operate (AR 501000057482) on October 27, 2021
- (2) D6 Emergency Diesel Generator (EDG) work window on November 15, 2021
- (3) Pipe support 2-RHRRH-36, RH SYS HANGER (AR 501000056902) ASME Section XI Evaluation on October 8, 2021

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management Sample (IP Section 03.01) (6 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) Unit 2 lowered inventory risk and protected equipment on October 19, 2021
- (2) Transition from SSA to PRA at Mode 3 on October 26, 2021
- (3) Walkdowns D2 EDG 21 auxiliary feed water run on October 28, 2021
- (4) Error identified in Westinghouse calculation and impacts on October 12, 2021
- (5) Inadvertent loss of 2RY transformer on October 18, 2021
- (6) 2SI-6-4 failed surveillance on October 13, 2021

71111.15 - Operability Determinations and Functionality Assessments

Operability Determination or Functionality Assessment (IP Section 03.01) (7 Samples)

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

- (1) Framatome steam generator welding issues (prompt operability determination No. 500000301195, AR 501000031647) on October 20, 2021
- (2) 21 SI PMP cracked OB radial bearing (AR 501000056868) on October 8, 2021
- (3) SP 2248, SV-37092 reactor coolant gas vent system (RCGVS) test outside reference range (POR) on October 8, 2021
- (4) CV-31116 POR (AR 5001000056617) on October 4, 2021
- (5) Calculation error (CN-REA-07-28) for EOLE fluence value at W-2 weld in reactor vessel (AR 51000056729) on October 6, 2021
- (6) Breakers found to be in wrong cubicle (AR 501000056917) 212E-5 vs 211J-2 on October 8, 2021
- (7) 2SI-6-4 operability evaluation (IOD/POD) on October 27, 2021

71111.18 - Plant Modifications

Temporary Modifications and/or Permanent Modifications (IP Section 03.01 and/or 03.02) (3 Samples)

The inspectors evaluated the following temporary or permanent modifications:

- (1) Breaker 25-1 (Bus 27 feed), replace wiring to charging motor per ECR 6MOD00028667 on October 8, 2021
- (2) NI bypass MOD on October 8, 2021
- (3) Cooling water chemical treatment Mod (EC 601000002171) on September 20, 2021

71111.19 - Post-Maintenance Testing

Post-Maintenance Test Sample (IP Section 03.01) (7 Samples)

The inspectors evaluated the following post-maintenance test activities to verify system operability and functionality:

- (1) Post-maintenance testing of 25-2 D5 EDG supply breaker on October 13, 2021
- (2) SP 2072 31 N2 supply valve to accumulator (WO 700037340) for CV-31244 on October 14, 2021
- (3) SP 2099 post-maintenance testing of 21 MSIV on October 20, 2021
- (4) SP 2070 reactor coolant system (RCS) integrity test on November 24, 2021
- (5) SP 2406 MSIV Testing on October 2, 2021
- (6) Post-maintenance testing for breaker 212L-32 (MV-32176) (WO 700037404-0010) on October 7, 2021
- (7) SP 2168.1 RCS pressure test (NOP/NOT-ASME Section XI) on October 26, 2021

71111.20 - Refueling and Other Outage Activities

Refueling/Other Outage Sample (IP Section 03.01) (3 Samples)

- (1) 2R32 Unit 2 Refueling Outage on October 1, 2021
- (2) 2R32 Unit 2 Refueling Outage on October 1, 2021
- (3) 2R32 Unit 2 Refueling Outage on October 14, 2021

71111.22 - Surveillance Testing

The inspectors evaluated the following surveillance tests:

Surveillance Tests (other) (IP Section 03.01) (5 Samples)

- (1) SP 2236 SI accumulator check valve leak test on October 26, 2021
- (2) SP 2750 containment closeout part C on October 27, 2021
- (3) SP 2070 reactor coolant system (RCS) integrity test on November 24, 2021
- (4) Penetration 2 local leak rate test (LLRT) on October 13, 2021
- (5) SP 2001AA RCS leakage test on December 9, 2021

71114.04 - Emergency Action Level and Emergency Plan Changes

Inspection Review (IP Section 02.01-02.03) (1 Sample)

- (1) The inspectors evaluated the following submitted Emergency Action Level and Emergency Plan changes.
 - PI-2020-724, 10 CFR 50.54(q) Review Form, 11/20/2020
 - PI-2020-731, 10 CFR 50.54(q) Review Form, 11/25/2020
 - PI-2020-732, 10 CFR 50.54(q) Review Form, 11/24/2020
 - PI-2020-733, 10 CFR 50.54(q) Review Form, 02/16/2021
 - PI-2021-736, 10 CFR 50.54(q) Review Form, 03/10/2021
 - PI-2021-742, 10 CFR 50.54(q) Review Form, 05/20/2021
 - PI-2021-748, 10 CFR 50.54(q) Review Form, 06/03/2021

This evaluation does not constitute NRC approval.

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.

Instructions to Workers (IP Section 03.02) (1 Sample)

- (1) The inspectors reviewed the following:

Radiation Work Packages

- Radiation Work Permit (RWP) 212071, Steam Generator Primary Side Maintenance
- RWP 212020, Reactor Coolant Pump Maintenance
- RWP 212042, Reactor Dis-assembly/Re-Assembly

Electronic Alarming Dosimeter Alarms

- 10/01/2021 at 2149 hours (2 cases)
- 11/24/2021 at 0851 hours
- 11/24/2021 at 0902 hours

Labeling of Containers

- Equipment Containers and Sealand Containers located in the Replacement Steam Generator (RSG) Building

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) Observed workers exiting the Radiologically Controlled Area (RCA) at Unit 1 (el. 715' Turbine Building) during the refueling outage.
- (2) Evaluated the release of bulk materials released from the RCA.

Radiological Hazards Control and Work Coverage (IP Section 03.04) (3 Samples)

The inspectors evaluated in-plant radiological conditions during facility walkdowns and observation of radiological work activities. The inspectors also reviewed the following radiological work package for areas with potential for airborne radioactivity:

- (1) RWP 212042, Reactor Dis-assembly/Re-assembly
- (2) RWP 212020, Reactor Coolant Pump Maintenance
- (3) RWP 212071, Steam Generator Primary Side Maintenance

High Radiation Area and Very High Radiation Area Controls (IP Section 03.05) (3 Samples)

The inspectors evaluated licensee controls of the following High Radiation Areas and Very High Radiation Areas:

- (1) Unit 2 Containment (el. 695') Regeneration Heat Exchanger
- (2) Barrell Yard Radioactive Waste Vaults (el. 715')
- (3) Unit 2 Containment (el. 715') Residual Heat Removal Piping

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.

71124.02 - Occupational ALARA Planning and Controls

Radiological Work Planning (IP Section 03.01) (4 Samples)

The inspectors evaluated the licensee's radiological work planning. The inspectors reviewed the following activities:

- (1) RWP 212071, Steam Generator Primary Side Maintenance
- (2) RWP 212072, Steam Generator Secondary Side Maintenance
- (3) RWP 212020, Reactor Coolant Pump Maintenance
- (4) RWP 212042, Reactor Dis-assembly/Re-assembly

Verification of Dose Estimates and Exposure Tracking Systems (IP Section 03.02) (4 Samples)

The inspectors evaluated dose estimates and exposure tracking. The inspectors reviewed the following as low as reasonably achievable planning documents:

- (1) RWP 212071, Steam Generator Primary Side Maintenance
- (2) RWP 212072, Steam Generator Secondary Side Maintenance
- (3) RWP 212020, Reactor Coolant Pump Maintenance
- (4) RWP 212042, Reactor Dis-assembly/Re-assembly

Additionally, the inspectors reviewed the following radiological outcome evaluations:

RWP 201040, Refueling Work
RWP 201042, Dis-assembly/Re-assembly
RWP 192040, Refueling Work

Implementation of ALARA and Radiological Work Controls (IP Section 03.03) (2 Samples)

The inspectors reviewed as low as reasonably achievable practices and radiological work controls. The inspectors reviewed the following activities:

- (1) RWP 212042, Reactor Dis-assembly/Re-assembly
- (2) RWP 212020, Reactor Coolant Pump Maintenance

Radiation Worker Performance (IP Section 03.04) (1 Sample)

- (1) The removal of the Unit 2 reactor vessel upper internals.

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) Auxiliary Building (el.695') Aerated Drains Sump Pit

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) (2 Samples)

- (1) Unit 1 Safety System Functional Failures (2.04) (April 1, 2020 - September 30, 2021) on December 16, 2021
- (2) Unit 2 Safety System Functional Failures (2.04) (April 1, 2020 - September 30, 2021) on December 16, 2021

MS07: High Pressure Injection Systems (IP Section 02.06) (2 Samples)

- (1) Unit 1 Mitigating Systems Performance Indicator (MSPI): High Press Injection (April 1, 2020 - September 30, 2021) on December 16, 2021
- (2) Unit 2 MSPI: High Press Injection (April 1, 2020 - September 30, 2021) on December 16, 2021

MS08: Heat Removal Systems (IP Section 02.07) (2 Samples)

- (1) Unit 1 MSPI: Heat Removal (October 1, 2020 - September 30, 2021) on December 16, 2021
- (2) Unit 2 MSPI: Heat Removal (October 1, 2020 - September 30, 2021) on December 16, 2021

MS09: Residual Heat Removal Systems (IP Section 02.08) (2 Samples)

- (1) Unit 1 MSPI: RHR (October 1, 2020 - September 30, 2021) on December 16, 2021
- (2) Unit 2 MSPI: RHR (October 1, 2020 - September 30, 2021) on December 16, 2021

MS10: Cooling Water Support Systems (IP Section 02.09) (2 Samples)

- (1) Unit 1 MSPI: Cooling Water Support Systems (October 1, 2020 - September 31, 2021) on December 16, 2021
- (2) Unit 2 MSPI: Cooling Water Support Systems (October 1, 2020 - September 31, 2021) on December 16, 2021

71152 - Problem Identification and Resolution (PI&R)

Annual Follow-Up of Selected Issues (IP Section 02.03) (4 Samples)

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

- (1) Actions associated with T.S. 5.6.6 and LAR on October 21, 2021
- (2) Annual review of D6 EDG corrective actions on November 17, 2021
- (3) Cooling water system leaks on December 13, 2021
- (4) RHR void issues on December 13, 2021

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

Event Report (IP Section 03.02) (2 Samples)

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

- (1) LER 50/306-2021-001-00 22 Turbine Driven Auxiliary Feedwater Pump Actuation Signal Due to Procedure Error, L-PI-21-043 (ADAMS Accession No. ML21322A283). The circumstances surrounding this LER are documented in the Results section.
- (2) LER 50/282-2021-002-00 Loss of Electrical Bus Results in 121 Motor Driven Cooling Water Pump Auto Start L-PI-21-044 (ADAMS Accession No. ML21347A972). The circumstances surrounding this LER are documented in the Results section.

Personnel Performance (IP Section 03.03) (1 Sample)

- (1) The inspectors evaluated (AP 501000057355) RCE for Loss of 2RY, and licensee's performance on December 14, 2021. The circumstances surrounding this LER are documented in the Results section.

INSPECTION RESULTS

Unresolved Item (Open)	Unresolved Issue Associated with 10 CFR 50.9, "Completeness and Accuracy of Information" URI 05000282,05000306/2021004-01	71111.13
<u>Description:</u> The inspectors identified an unresolved issue (URI) associated with 10 CFR 50.9, "Completeness and Accuracy of Information". The inspectors identified three licensee submittals with potentially inaccurate and incomplete information that had been provided to the NRC. Specifically, on April 11, 2008, December 28, 2009, and June 13, 2019, the licensee provided information to the Commission that was potentially not complete and accurate in that, the fluence values provided in these records for Circumferential Weld-Intermediate Shell forging C to Lower Shell Forging D and Circumferential Weld - Nozzle Shell Forging B to Intermediate Shell Forging C (a.k.a. Welds W-3 and W-2) and related parameters (upper shelf energy (USE) at 54 Effective Full Power Years (EFPY), RTNDT, ARTNDT and RTPTS- End of Operating Life (EOL)) were not accurate. Specifically, in these documents, the fluence values reported for circumferential reactor vessel welds W-2 and W-3 were not correct and consequently the values reported for the related parameters derived/based on these incorrect fluence values were also incorrect. Because this erroneous		

information was non-conservative and necessary to demonstrate compliance with NRC regulations (e.g., 10 CFR 50.60 and/or 10 CFR50.61) it was considered a potential 50.9 "Completeness and Accuracy of Information" issue.

This issue is unresolved because the inspectors will need to consult with the Office of Nuclear Reactor Regulation to verify the "materiality" of each of the submittals as well as determining if "substantial further inquiry" will be needed. This information is necessary to determine if a violation of regulatory requirements exists.

Planned Closure Actions: The inspectors will discuss the information obtained during the inspection with the Office of Nuclear Reactor Regulation (NRR) to determine the "materiality" and if "substantial further inquiry" is needed for the information per 10 CFR 50.9 and the enforcement manual.

Licensee Actions: The licensee has completed an Extent of Condition (EOC) and is implementing actions in their Corrective Action Program.

Corrective Action References: The Licensee is tracking this issue in their Corrective Action Program (CAP) under QIM 501000056729-500000317453

Failure to Meet ASME OM Code requirements for Accumulator Check Valve

Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Initiating Events	Green NCV 05000306/2021004-02 Open/Closed	[H.14] - Conservative Bias	71111.15

The inspectors identified a green finding and associated non-cited violation of Title 10 of the Code of Federal Regulations (10 CFR) Part 50.55a(f)(4) for the failure to meet the in-service testing requirements set forth in the American Society of Mechanical Engineers (ASME) Operations and Maintenance Code and Addenda after Check Valve 2SI-6-4 exceeded its ASME Code leakage acceptance criteria. Specifically, the licensee failed to repair or replace the check valve prior to returning the valve to service. The licensee entered this issue into their corrective action program and plan on repairing or replacing the valve during the next refueling outage.

Description:

On October 24, 2021, the licensee performed a Reactor Coolant System Integrity Test on Accumulator Check Valve 2SI-6-4. During this test, the 0 to 5.3 gallon per minute (gpm) flow meter used to measure the internal valve leakage was off scale high and the valve leakage acceptance criteria of 1.8 gpm was exceeded. The licensee estimated the internal valve leakage was approximately 5.9 gpm. The licensee reperformed the test at a higher pressure to apply back seat pressure to the valve and lower the valve's leakage. The valve leakage acceptance criteria was exceeded again during the second test. The licensee entered this issue into their corrective action program, performed an operability determination, concluded the failed leakage test did not impact any Technical Specification (TS) requirements, and proceeded with plant restart activities.

The inspectors reviewed the Prairie Island Technical Specifications and agreed with the licensee's conclusion that 2SI-6-4 was not included in any specification. A subsequent review of the Updated Safety Analysis Report (USAR) found that Check Valve 2SI-6-4 was

used to accomplish multiple safety functions. Section 6.2.1.1 of the USAR states 2SI-6-4 opens to provide a flow path for the Emergency Core Cooling System (ECCS) accumulators. Based on testing performed during the outage, the open function of 2SI-6-4 was not impacted by the failed leakage test. Additionally, USAR Section 4.6.1.2.1 designates Check Valve 2SI-6-4 as a pressure isolation valve. This designation is reserved for configurations where two normally closed valves in series valves are used to protect a lower pressure system (in this case the ECCS accumulator) from an over pressurization failure caused by the attached Reactor Coolant System (RCS). The inspectors determined this function was impacted by the failed leakage test since the valve did not meet the leakage acceptance criteria.

As part of this review, the inspectors also reviewed the ASME Operations and Maintenance (OM) Code to determine if code requirements were met. The inspectors determined the licensee's code of record was ASME OM 2004, 2006 addenda, and leakage testing of 2SI-6-4 was being performed to satisfy ASME OM Code In-service Testing (IST) requirements. The inspectors also reviewed licensee procedure H10.1 "ASME Inservice Testing Program." This procedure described the licensee's ASME IST program and classified 2SI-6-4 as a Category A valve for the closed direction/function. The basis for categorizing a valve as Category A is that leakage past the valve is considered consequential to the achievement of a safety function. Per ASME OM Code, Section ISTC-3630, "Leakage Rate for Other Than Containment Isolation Valves," Category A valves with leakage requirements not based on an Owner's 10 CFR 50, Appendix J program shall be tested to verify their seat leakages are within the acceptable limits. Based on the inspectors review of procedure H.10, they concluded 2SI-6-4 was not part of the licensee's 10 CFR 50, Appendix J program. As a result, the valve leakage acceptance criteria were governed by ASME OM Code, Section ISTC-3630(e), "Analysis of Leakage Rates," which stated, "Leakage rate measurements shall be compared with permissible leakage rates specified by the Owner, the following rates shall be permissible: (1) for water, 0.5 times the pipe diameter or 5 gpm, whichever is less at function differential pressure." Because 2SI-6-4's measured leakage rate exceeded the criteria specified in Section ISTC 3630(e), the inspectors determined ISTC Section-3630(f) applied. Section ISTC-3630(f), "Corrective Action," stated, valves or valve combinations with leakage rates exceeding the values specified by the Owner per ISTC-3630 shall be declared inoperable and either repaired or replaced. A retest demonstrating acceptable operation shall be performed following any required corrective action before the valve is returned to service."

When the licensee exceeded the leakage acceptance criteria for 2SI-6-4, the valve was not in-service, because the reactor was not operating in a mode where 2SI-6-4 was required to meet its safety function. The licensee did declare 2SI-6-4 code inoperable when its leakage rate was exceeded and entered the issue into their corrective action program, but they did not repair or replace the valve prior to returning the valve to service. Specifically, the licensee did not repair or replace the valve prior to placing the reactor in an operating mode where 2SI-6-4 would need to perform its safety function of protecting the low-pressure accumulator system from the high-pressure RCS. The licensee did not believe they needed to perform any actions prior to returning 2SI-6-4 to service because the check valve in series with it had successfully passed a leakage test. The licensee believed that a successful leakage test of one out of two check valves was sufficient, the code allowed them to repair 2SI-6-4 at a later date, and a request for relief from the ASME Code requirements from the NRC was not required. The licensee started up Unit 2 on October 28, 2021.

The inspectors reviewed the licensee's position and determined it did not fully meet the requirements of ASME OM Code. Although the licensee performed leakage testing of 2SI-6-4 as required by ASME OM Code Subsection ISTC-3630, the licensee did not repair or replace 2SI-6-4 after identifying the valve failed to meet its ISTC-3630 leakage value and did not perform a retest demonstrating acceptable operation prior to returning the valve to service. In addition, the licensee did not request relief from the code via an ASME Code relief request to the NRC which, if approved, would have allowed the valve to be returned to service without performing the required repair or replacement.

Corrective Actions: The licensee entered the issue into their corrective action program and plans to repair or replace the valve during the next refueling outage.

Corrective Action References: 501000057644, 2SI-6-4 leakage during SP 2070

Performance Assessment:

Performance Deficiency: The licensee failed to meet the in-service testing requirements in the ASME OM code as required by 10 CFR 50.55a (f)(4). Specifically, the licensee failed to repair or replace accumulator check valve 2SI-6-4 when the valve failed its leakage test.

Screening: The inspectors determined the performance deficiency was more than minor because it was associated with the Equipment Performance attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the failure to repair or replace check valve 2SI-6-4 as required by the ASME OM Code impacts the valve's ability to perform the function of preventing back leakage from a high pressure rated system to a low pressure rated system.

Significance: The inspectors assessed the significance of the finding using Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." The issued screened as "Green" because the inspectors answered no to all the questions.

Cross-Cutting Aspect: H.14 - Conservative Bias: Individuals use decision-making practices that emphasize prudent choices over those that are simply allowable. A proposed action is determined to be safe in order to proceed, rather than unsafe in order to stop. Specifically, when faced with uncertainty regarding the ASME OM Code requirements, the licensee decision making practices resulted in a non-conservative decision.

Enforcement:

Violation: 10 CFR 50.55a (f)(4) states, "Throughout the service life of a boiling or pressurized water-cooled nuclear power facility, pumps and valves that are within the scope of the ASME OM Code must meet the in-service test requirements set forth in the ASME OM Code and addenda that become effective subsequent to editions and addenda specified in paragraphs (f)(2) and (3) of this section and that are incorporated by reference in paragraph (a)(1)(iv) of this section, to the extent practical within the limitations of design, geometry, and materials of construction of the components."

The ASME OM Code 2004, 2006 Addenda, Section ISTC-3630, "Leakage Rate for Other Than Containment Isolation Valves," states, "Category A valves with leakage requirements not based on an Owner's 10 CFR 50, Appendix J program shall be tested to verify their seat leakages are within the acceptable limits."

The ASME Code 2004, 2006 Addenda, Section ISTC-3630(e), "Analysis of Leakage Rates," states, "Leakage rate measurements shall be compared with the permissible leakage rates specified by the plant Owner for a specific valve or valve combination. If leakage rates are not specified by the Owner, the following rates shall be permissible: (1) for water, 0.5D gpm or 5 gpm, whichever is less, at function differential pressure."

The ASME OM Code 2004, 2006 Addenda, Section ISTC-3630(f) "Corrective Action" states, "Valves or valve combinations with leakage rates exceeding the values specified by the Owner per ISTC -3630(e) shall be declared inoperable and either repaired or replaced. A retest demonstrating acceptable operation shall be performed following any required corrective action before the valve is returned to service." Contrary to the above, on October 28, 2021, the licensee failed to meet the in-service test requirements set forth in ASME OM Code and addenda. Specifically, the licensee failed to either repair or replace the 2SI-6-4 check valve after the valve failed the ASME OM Code, Subsection 3630(e) leakage requirements.

Enforcement Action: This violation is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.

Observation: Annual Review of Cooling Water System Leaks	71152
Inspectors conducted an annual review of Cooling Water System leaks and leak related degradation initiated within the last 12 months. The inspectors identified 19 Corrective Action Program (CAP) items that were applicable to the review. Of the 19 items, 10 had been resolved, 4 were in "Working" status and 5 were in "Open" status. The oldest of the "Open" items reviewed was initiated in April of 2021. The inspectors concluded that the licensee appeared to be appropriately identifying, prioritizing, and resolving leaks and leak related degradation associated with the Cooling Water System. All deficiencies were entered into the Corrective Action Program and were being tracked to resolution. The inspectors did not identify any adverse trends or non-compliances with licensee or regulatory requirements. No findings or violations of NRC requirements of more than minor safety significance were identified by the inspectors in the course of this review	

Observation: Review of Actions Associated with Technical Specification 5.6.6 and Related License Amendment Request	71152
<p>The inspectors reviewed actions associated with Technical Specification 5.5.6 and the License Amendment Request (LAR) to implement Revision 4 of the Westinghouse calculation (WCAP 14040) for developing the Pressure and Temperature Limits curves (PTLR).</p> <p>In 2009, the station identified the need to implement Revision 4 of Westinghouse Calculation WCAP 14040 to change the PTLR development methodology, and it was included in the MUR (Measurement Uncertainty Recapture) LAR.</p> <p>In February of 2010, the change in PTLR Methodology was withdrawn from the MUR LAR due to the additional length of time it would take to obtain approval and the need to expedite the MUR LAR.</p> <p>In 2015, the licensee identified that the Reactor Vessel Fluence Calculations were non-conservative and that the then current calculated fluence values would be exceeded in mid- to late-2020. It was also identified that plant calculations/procedures/documents should be updated prior to exceeding the fluence values so that the PTLR curves could be updated</p>	

as required.

On December 11, 2018, a LAR to Revise TS 5.6.6 Reference to Westinghouse WCAP 14040 Revision 4 methodology was created. (Change Request 607000000341). This Change Request indicated that it needed to be submitted by August 21, 2020, however, the submittal date has been extended to 2023.

On October 10, 2021, Westinghouse provided a letter to Xcel Energy indicating that there was an error in WCAP 14040 Revision 2 (their current methodology for determining PTLR curves) resulting in non-conservative PTLR curves and recommending implementation of the WCAP 14040 Revision 4 methodology. Because the previously identified and initiated LARs to allow use of the Revision 4 methodology had not been completed, the station was required to implement NEI 15-03 Non-conservative Technical Specification Actions until such time as the LAR to use Revision 4 methodology can be approved.

The inspectors did not identify any non-compliances with licensee or regulatory requirements. No findings or violations of NRC requirements of more than minor safety significance were identified by the inspectors in the course of this review.

Observation: Annual Review of D6 EDG Corrective Action Documents	71152
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Inspectors selected a potential trend of corrective action documents related to leaks on the D6 Emergency Diesel Generator Fuel Oil System for review. The licensee had entered a series of small leaks in the corrective action program. The site addressed the leaks in maintenance notifications and a prompt operability determination. The licensee found the collection of leaks did not have an adverse effect on the system and D6 EDG maintained Operability. The leakage was reduced or corrected in a D6 EDG work window and the site has scheduled some final corrective actions for another upcoming D6 EDG work window. The inspectors determined that the licensee's corrective actions were adequate to address the trend. No Findings or Violations were identified.

Observation: Annual Review of Corrective Actions Associated with Voids Found in A Train RHR system	71152
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Inspectors selected a series of void issues exceeding the Operability Limits in the Unit 2 RHR A train subsystem. These issues had been identified by the licensee and entered into the CAP as required by the H64 (GAMP) Gas Accumulation Management Program. The inspectors verified that each of these issues were properly addressed as required by the GAMP and CAP. The CAP directed the Engineering department to complete a Condition Evaluation of the processes, procedures, and schedule order of operations restoring the RHR system from outage to online to identify any issues with procedure order. Although this evaluation, was not completed during this review, the inspectors determined that the licensee was taking the appropriate actions to address the identified voids. No findings or violations were identified.

LER 2021-002-00 Inadvertent Operation of Switchyard Disconnect Resulting in Loss of Electrical Buses and Actuation of a Safety System			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Initiating Events	Green NCV 05000282,05000306/2021004-03 Open/Closed	[H.8] - Procedure Adherence	71153
<p>On October 17, 2021, licensee personnel failed to implement Human Performance (HU) tools during the implementation of a switching procedure leading to procedural non-compliance resulting in a loss of non-vital loads, loss of redundancy to vital buses, actuation of a safety system, and a downpower of the online unit.</p> <p><u>Description:</u></p> <p>On October 17, 2021, with Unit 1 at 100 percent and Unit 2 in Mode 6, 2RY Transformer was inadvertently de-energized when operations personnel opened the 2RSY/B DISC SW disconnect instead of closing the 2RSX/B DISC SW disconnect per procedure 2D20.5.2RS XFMR U2 SD, "2RS Transformer Isolation and Restoration with Unit 2 Shutdown". Unit 2 impacts included a loss of non-safeguards loads and impacts to several systems including D5 and D6 Emergency Diesel Generators (EDG) and 121 Motor Driven Cooling Water Pump. In addition, Unit 1 performed a rapid downpower to approximately 95 percent due to a loss of efficiency from the lockout of the Heater Drain Tank Pumps.</p> <p>The proximity of the components challenged the two non-licensed Operators (NLO) performing the switching operations in the Switchyard. After closing the 2RSX/A DISC SW, one of the NLOs failed to identify that the other went to 2RSY/B DISC instead of the 2RSX/B DISC. As a result, 2RSY/B DISC SW was opened instead of the required action to close the 2RSX/B DISC SW, causing arcing between the disconnects. Opening of the 2RSY/B DISC SW also de-energized the 2RY XFMR resulting in a loss of power to the supported loads as well as other plant impacts as stated.</p> <p>Corrective Actions: 501000057355 Loss of Power to 2RY Transformer</p> <p>Corrective Action References: 501000057355 Loss of Power to 2RY Transformer Root Cause Evaluation</p> <p><u>Performance Assessment:</u></p> <p>Performance Deficiency: On October 17, 2021, with Unit 1 at 100 percent and Unit 2 in Mode 6, Operations personnel failed to utilize Human Performance Tools while performing an electrical switching procedure. This resulted in the 2RY Transformer de-energization when Operations personnel opened the 2RSY/B DISC SW disconnect instead of closing the 2RSX/B DISC SW disconnect per procedure 2D20.5.2RS XFMR U2 SD, "2RS Transformer Isolation and Restoration with Unit 2 Shutdown". This resulted in a loss of redundancy to safety related buses, loss of non-safeguards loads, impacted several systems including D5 and D6 Emergency Diesel Generators (EDG), caused initiation of a safety system, and a power reduction of the online unit.</p> <p>Screening: The inspectors determined the performance deficiency was more than minor because it was associated with the Human Performance attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as</p>			

power operations. Licensee personnel failed to utilize Human Performance (HU) Tools to ensure procedural compliance during the performance of a switching procedure 2D20.5.2RS XFMR U2 SD, "2RS Transformer Isolation and Restoration with Unit 2 Shutdown".

Significance: The inspectors assessed the significance of the finding using Appendix G, "Shutdown Safety SDP." The Inspectors determined that this issue screened to Green in accordance with Inspection Manual Chapter 0609 Appendix G Attachment 1, "Shutdown Operations Significance Determination Process Phase 1 Initial Screening and Characterization of Findings", Exhibit 2 "Initiating Events Screening Questions."

Cross-Cutting Aspect: H.8 - Procedure Adherence: Individuals follow processes, procedures, and work instructions. Licensee personnel failed to utilize Human Performance (HU) Tools to ensure procedural compliance while implementing a substation switching procedure.

Enforcement:

Violation: 10 CFR 50 Appendix B Criterion V, "Instructions, Procedures and Drawings" requires in part that "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings. Instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished." Contrary to the above, on October 17, 2021, the licensee failed to complete activities affecting quality in accordance with approved instructions, procedures, or drawings to ensure satisfactory accomplishment. Specifically, Non-Licensed Operators (NLOs) failed to ensure procedural compliance while performing a switching procedure, resulting in a loss of non-vital loads, a loss of redundancy to vital buses, initiation of a safety system, and a power reduction of the online unit.

Enforcement Action: This violation is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.

Minor Violation: LER 2021-001-00 for Prairie Island Nuclear Generating Plant, Unit 2, 22 Turbine Driven Auxiliary Feedwater Pump Actuation Signal Due to Procedure Error	71153
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Minor Violation: On October 3, 2021, with Prairie Island Nuclear Generating Plant (PINGP) Unit 2 in Cold Shutdown, the 22 Turbine Driven Auxiliary Feedwater (AFW) Pump received a valid actuation signal. While performing the prerequisite checklists for a Surveillance Procedure, the 22 Turbine Driven Auxiliary Feedwater (AFW) Pump selector switch in the Main Control Room was placed in Shutdown Auto from Manual. This, combined with having the Non-Safety Related 4160 Volt buses 21 and 22 isolated for maintenance, completed the automatic start signal. 10 CFR 50 Appendix B Criterion V, "Instructions, Procedures, and Drawings", requires in part that "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings. Instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished." Contrary to above, on October 3, 2021, the Licensee failed to ensure activities affecting quality were accomplished in accordance with instructions and procedures appropriate for the circumstances to ensure the activities were satisfactorily accomplished.

Screening: The inspectors determined the performance deficiency was minor. This issue was determined to be minor due to the system being secured for maintenance/testing when the event occurred. The safety system did not initiate and there were no actual consequences.

Enforcement: This failure to comply with 10 CFR 50 Appendix B Criterion V constitutes a minor violation that is not subject to enforcement action in accordance with the NRC's Enforcement Policy.

EXIT MEETINGS AND DEBRIEFS

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

- On October 15, 2021, the inspectors presented the radiation protection baseline inspection results to Mr. C. Domingos, Site Vice President, and other members of the licensee staff.
- On October 19, 2021, the inspectors presented the Inservice Inspection results to Mr. C. Domingos, Site Vice President, and other members of the licensee staff.
- On December 14, 2021, the inspectors presented the EP Inspection results to Ms. A. Jepson, Director, Site Performance and Operation Support, and other members of the licensee staff.
- On January 12, 2022, the inspectors presented the integrated inspection results to Mr. C. Domingos, Site Vice President, and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.04	Work Orders	700066008	SP 2168 Rx Coolant Systems Press Test	10/03/2021
71111.07A	Work Orders	700064576	SP 2304 Unit 2 CC HX Performance Test	10/03/2021
		700064576	SP 2304-Unit 2 CC HX Performance Test	10/03/2021
71111.08P	Corrective Action Documents	501000033934	SP 2168.1 RCS Pressure Test ISI 2R31	10/25/2019
		501000034434	Active Leaks from 2FT-924	11/07/2019
		501000034613	Error in RV ISI NRC Submittal	11/12/2019
		501000036213	Active BA Leak on 2VC-15-40	01/01/2020
		501000042915	Packing leak on CV-31462	08/05/2020
	Miscellaneous		Personal Certification VT-1/ VT-3, PT and UT A. Jenson, Level III	08/15/2021
			Personal Certification VT-3 – R. Shultz, Level II	09/11/2021
			Personal Certification VT-1/ VT-3, PT A. Stevermer, Level II	08/15/2021
		KNPP-GMP 102-311-E70	Procedure Qualification Record	0
		B31-P1P1-SM-003	Welding Procedure Specification	4
		DAEC-PrQR-W-1 2	Procedure Qualification Record	1
		DAEC-W-66	Procedure Qualification Record	0
		III-P8P8-GTSM-062	Welding Procedure Specification	4
		KNPP-GMP 102-311 -GS-PQR	Procedure Qualification Record	0
		NRP-21-BOB-C	ETSS - Bobbin 12IPS	1
		NRP-21-OXP-100-22	ETSS - X-Probe Array 22IPS	0
		NRP-21-OXP-100-36	ETSS-X-Probe Array 36IPS	0
		NSP-PQR-1 270/1271	Procedure Qualification Record	0
		PAL-SM-8-8(2)	Procedure Qualification Record	0
		SG-SGMP-18-5	Prairie Island Unit 2 Steam Generator Operational Assessment Extension to 2R32 Outage	1

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		700010019-0010-01	Weld Control Record	01/26/2018
	NDE Reports	2021P001	Integral Attachment H-2/IA	10/06/2021
		2021P002	Integral Attachment H-2/IA	10/09/2021
		2021U001	CRD-22 Latch Housing and Head Adapter CRD22-4	10/08/2021
		2021U002	CRD-26 Latch Housing and Head Adapter CRD26-4	10/08/2021
		2021V029	Integral Attachment CWH-36/IA	10/05/2021
		2021V033	Spring Hanger H-2	10/06/2021
		2021V045,	Reactor Vessel Closure Head Bare Metal Visual Exam	10/13/2021
		BOP-MT-18-001	MT Install Window patch WCR 700010019-0010-01 Welds 1,2,3	01/26/2018
		BOP-PT-19-013	PT Weld 1	09/05/2019
		BOP-VT-17-018	VT-2 Window Patch Weld Repair P9	01/26/2018
	Procedures	2D27.42.1	21 Steam Generator Secondary Side Outage Activities	11
		2D27.42.2	22 Steam Generator Secondary Side Outage Activities	12
		FP-PE-NDE-200	Solvent Removable Visible Dye Penetrant Examination	2
		FP-PE-NDE-410	Ultrasonic Examination of Dissimilar Metal Welds – Supplement 10	6
		FP-PE-NDE-510	Visual Examination, VT-1	8
		FP-PE-NDE-530	Visual Examination, VT-3	10
		H10.7.3	ASME Section XI Inservice Inspection and Pressure Testing	0
		H2	Boric Acid Corrosion Control Program	29
		H25.1	Assessment of Steam Generator Tube Degradation Mechanisms	23
		H25.2	Steam Generator Condition Monitoring,	14
		PI-400-001	Multifrequency Eddy Current Examination of Non-Ferromagnetic Steam Generator Tubing Prairie Island Nuclear Generating Station	16
		PI-SG-010	Rolled Mechanical Tube Plugging and Stabilizer Installation at Prairie Island Unit 1 & 2,	5
		SP 2534A	Unit 2 Steam Generator 21 Internals Inspection	4
		SP 2534B	Unit 2 Steam Generator 22 Internals Inspection	3

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		SWI NDE-ET-6	Array Coil Data Analysis	5
		SWI NDE-VT-6.0	Visual Examination for Leakage on Reactor Vessel Penetrations (VT-2)	5
71111.13	Corrective Action Documents	501000055874	PTLR 54 EFPY Fluence Not Bounding	09/08/2021
		501000056729	Fluence Analysis Unexpected High W2 Weld	10/05/2021
		501000056798	U1 Capsule Report/Fluence Impacts on U2	10/06/2021
		501000056862	PTLR Revision 8 Not Submitted to NRC	10/07/2021
		501000056932	NOS Finding: PTLR Rev 8 Not Submitted	10/08/2021
		501000057560	Rev 8 or PTLR Submitted with Error	10/21/2021
		501000058227	CAP 501000057650 Closed Inappropriately	11/10/2021
71111.15	Calculations	Framatome BUCLPR/NGV3345	Post Weld Heat Treatment Evaluation for Prairie Island Unit 2 Replacement Steam Generator-ASME Section III	10/07/2019
	Corrective Action Documents	500001365018	Discrepancy Identified Between IST Progr.	01/02/2013
		50001365473	AT-0175 ARR-Failure to Leak Test CATA PIVs Per ASME OM Code and GL 87-06	3
		50100001457166	ACE Confusion Regarding SI-6-4 Past Operability	11/21/2014
		501000031647	Framatome SG Welding Issues	09/11/2019
		501000055874	PTLR 54 EFPY Fluence Not Bounding	09/08/2021
		501000056729	Prompt Operability Determination - Fluence Analysis Unexpected High W2 Weld	0
		501000056729	Fluence Analysis Unexpected High W2 Weld	10/05/2021
		501000056798	U1 Capsule Report/Fluence Impacts on U2	0
		501000056917	Breakers Found to be in Wrong Cubicle G7	10/07/2021
		501000057644	Prompt Operability Determination	0
		501000057644	21 ACCUM LOOP A Check Valve Downstream	10/24/2021
		501000057820	Operability Process and Regulatory Req. (FP-OP-OL-01)	10/28/2021
		501000058607	Condition Evaluation: Void After Running 21 RHR Pump on 11-26-21	0
		501000058607	GAMP: Recurrence of Void at 2RH-01 11/26	11/26/2021
		501000059179	Question About One Year Turbine Valve Testing	12/17/2021
	Drawings	Westinghouse Non-Proprietary Class 3 LTR-SDA-	Figure 3: Comparison of the PTLR Heat Up Limits (Solid Lines) with 43.1 EFPY P-T Curves Based WCAP-14040-NP-A, Rev. 2 with Corrected Fluence	0

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		21-075-NP	(Dashed Lines) (Without Margins for Instrumentation Errors)	
	Miscellaneous	Letter Framatome 19-01770	Framatome Replacement Steam Generators Installed at Prairie Island Unit 1	09/20/2019
		Letter Framatome CMOP 19-120	Framatome Replacement Steam Generators Installed at Prairie Island Unit 2	09/20/2019
		Letter Framatome PCMOP 20-005	Notification of Continued Operability of Framatome Replacement Steam Generators Installed at Prairie Island Unit 2	01/23/2020
		LTR 87-06	Northern States Power Company Response to Generic Letter 87-06	06/11/1987
		NEI 15-03	Licensee Actions to Address Nonconservative Technical Specifications-March 2020	3
		NRC SER WCAP-11525	NRC Safety Evaluation Report	02/07/1989
		Record of Revisions	Pressure and Temperature Limits Report	10/21/2002
		RV 1 and 2 Information No. 21-36	Operating Information PINGP 791 (Rev 17)	10/23/2021
		Tech Spec	Prairie Island Nuclear Generating Plant Technical Requirements Manual	36
		Westinghouse LTR-SDA-21-075-NP	Impact Assessment for Prairie Island Units 1 and 2-PTLR Non-Conservatism	0
	Operability Evaluations	500000301195	Framatome SG Welding Issues	0
		501000058196	Past Operability Review	12/08/2021
		602000017425	Prompt Operability Determination (AR 501000058269)	0
		608000000772	Review of Void at 2RH-01-492IN3	12/02/2021
	Work Orders	7000066637	SP 2269 SI Accmul CKVS Refueling Leak Test	10/28/2021
		7000973499	PMT #1 for CV-31116 During SP 2099	10/21/2021
71111.18	Work Orders	7000054968	Breaker 25-1 SPCM ECR 6MOD00028667	10/08/2021
		7000093569	U2 Westinghouse NIS Power Range BTI Panels	10/07/2021
		700054968	BRK 25-1 SPCM ERC 6MOD00028667	10/10/2020

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.19	Corrective Action Documents	700085077	Remove Bypass and Repair Breaker 212J-2	08/31/2021
		700093569	U2 Westinghouse NIS PWR Range BTI Panels	09/03/2021
		50100005723	2R32 Seal Table Active Leak E6	10/27/2021
		501000057482	CV-31116 Didn't Close During SP 2099	10/19/2021
		501000057644	2SI-6-4 Leakage During SP 2070	10/27/2021
		501000057752	2R32 ISI SP 2168.1 RCS Test	10/27/2021
	Procedures	SP 2092A-SI	Check Valve Test (Head Off) Part A	10/10/2016
		SP 2177	Core Inventory Verification (WO 700065219)	10/18/2021
	Work Orders	7000052762	21 Battery Replacement	05/12/2021
		7000064583	SP 2406 MSIV Inservice Test Down to CSD	10/02/2021
		7000065676	SP 2099 MS Isolation Valve Closure CSD Test	08/12/2021
		7000066008	SP 2168,1 RX Coolant System Press Test	10/23/2021
		7000097349	PMT #1 for CV-31116 During SP 2099	10/21/2021
		700037391	CS Pump Suction HX to 21 211J-16) RHR BKR	05/13/2021
		700052762	21 Battery, All Cell Replacement	05/12/2021
		700064583	SP 2406-MSIV Inservice Test Down to CSD	10/02/2021
		700065892	SP 2072.2-LLRT Pen2 Ore-Outage	08/17/2021
		700095602-0020	1 Turb E-H Contr Kernel C CPU	11/21/2021
71111.20	Work Orders	700041821	SP 2082-RHR Systems Refueling Outage Leakage Test	10/23/2021
71111.22	Corrective Action Documents	500001532474	D6 Voltage Regulator Rectifier Fail Alarm	11/10/2015
		50001561323	D6 Voltage Regulator Rectifier Fail Alarm	06/18/2017
		501000052165	D6 Voltage Regulator Rectifier Failure Alarm	05/17/2021
		501000054180	D6 Voltage Regulator Rectifier Failure Alarm	07/19/2021
	Work Orders	7000066036	SP 2092-SI CKV Test (Head Off) Part A	08/12/2021
		7000085077	Remove Bypass and Repair Breaker 212J-2	08/31/2021
71114.04	Corrective Action Documents	501000044692	Questionable Offsite Dose Calculation	09/25/2020
	Miscellaneous	PI-2020-724	10 CFR 50.54(q) Review Form	11/20/2020
		PI-2020-731	10 CFR 50.54(q) Review Form	11/25/2020
		PI-2020-732	10 CFR 50.54(q) Review Form	11/24/2020
		PI-2020-733	10 CFR 50.54(q) Review Form	02/16/2021
		PI-2021-736	10 CFR 50.54(q) Review Form	03/10/2021
		PI-2021-742	10 CFR 50.54(q) Review Form	05/20/2021

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		PI-2021-748	10 CFR 50.54(q) Review Form	06/03/2021
71124.01	Corrective Action Documents	501000047444	Low Level Activity Quantified in Weekly Sampling of U2 Cattle Tank	01/16/2021
		501000050540	Aging Rados RCA Exit Monitors	04/15/2021
		501000056675	Wrong RWP Task Used	10/03/2021
		501000057074	Unexpected Dose Rate Alarm	10/12/2021
	Miscellaneous		2021 Prairie Island Isotopic Mix Evaluation	Undated
	Procedures	FP-RP-NISP-02	Radiation and Contamination Surveys	2
		FP-RP-NISP-07	Control of Radioactive Material	5
		FP-RP-SEN-02	Radiological Work Planning and Controls	12
		RPIP 1302	Technical Guidelines for Unconditional Release of Materials	34
	Radiation Surveys		Bulk Material Gamma Spectroscopy Survey	06/16/2021
			C2R32 Outage Radiological Air Sample Data 10/01/2021 - 10/06/2021	Various
			2R32 Containment Refueling Outage Shutdown Surveys	10/01/2021
		PI-M-20211002-2	U2 Regen Heat Exchanger Room	10/01/2021
		PI-M-20211006-19	22 RCP Seal Removal	10/06/2021
		PI-M-20211006-2	Reactor Head Lift Survey	10/06/2021
	Radiation Work Permits (RWPs)	212020	RWP and Associated ALARA Plans - Reactor Coolant Pump Maintenance	0
		212042	RWP and Associated ALARA Plans - Reactor Dis-Assembly/Re-Assembly	0
		212071	RWP and Associated ALARA Plans - Steam Generator Primary Side Maintenance	0
		212072	RWP and Associated ALARA Plans - Steam Generator Secondary Side Maintenance	0
71124.02	ALARA Plans		1R32 Radiation Protection Post Outage Report	12/01/2020
			2R31 Radiation Protection Post Outage Report	11/20/2019
		212030-01	2R32 Seal Table and Eddy Current Testing Work	0
	Corrective Action Documents	501000049405	WO #700085319-0020 Overdose Goal	03/15/2021
		501000055714	Trend - ISFSI Daily Dose Goal Challenges	09/03/2021
		501000056603	9/30/2021 - SAC Agenda Enhancements Needed	10/01/2021
		501000057117	Dose Revision to RWP 212070	10/12/2021

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71152	Corrective Action Documents	500001211681	Errors Found in MUR Draft LAR Using Fin	12/23/2009
		500001219689	Withdrawal of PTLR Methodology from MUR	02/24/2010
		500001473878	Reactor Vessel Fluence Calculations Non-Conservative	04/11/2015
		501000015525	Oil Leak Identified on 2EG-9-55 (FO)	08/11/2018
		501000015532	(D6) FO Leak Near 2EG-21-4	08/12/2018
		501000016016	Minor FO Leak Identified on 2EG-9-38	08/23/2018
		501000016023	Minor FO Leak Identified on 2EG-9-33	08/23/2018
		5010000166035	Minor FO Leak Identified on 2EG-9-53	08/23/2018
		501000016952	D6-Minor FO Leak Identified on 2EG-9-46	08/23/2018
		501000018949	FO Leak at Valve Stem Seal	10/22/2018
		501000019369	ACMP for D6 FO Leak on 2 EG-9-63	10/30/2018
		501000022173	Minor Fuel Oil Leak on 2EG-9-57	01/19/2019
		501000022174	Minor Fuel Oil Leak on 2EG-9-56	01/20/2019
		501000022183	Fuel Oil Leak on 2EG-9-53 Increased Rate	01/20/2019
		501000036918	Fuel Oil Leak From 2EG-22-3	01/24/2020
		501000056917	Past Operability Review (POR): BKR 212E-5 and BRK 211J-2 MCC	10/07/2021
		607000000341	LAR to Revise TS 5.6.6 Reference	12/11/2018
	Work Orders	7000041821	SP 2082 RHR System Refueling Outage Leakage Test	10/23/2021
		7000057752	2R32 ISI SP 2168,1 RCS Test	10/27/2021
71153	Calibration Records	501000056932	NOS Finding: PRLE Ewc 8 Not Submitted	10/08/2021
	Corrective Action Documents	501000056862	PTLR Revision 8 Not Submitted to NRC	10/07/2021
		501000057355	Root Cause Evaluation Report - Loss of 2RY Transformer	1
	Miscellaneous	L-PI-21-043	Prairie Island Nuclear Generating Plant (PINGP) Unit 2 Licensee Event Report 2021-001-00	0
		L-PI-21-044	Prairie Island Nuclear Generating Plant (PINGP) Unit 1 Licensee Event Report 2021-002-00	0